[MS-OXWSMSHR]:
Folder Sharing Web Service Protocol Specification

Revision Summary

Date	Revision History	Revision Class	Comments
11/04/2009	1.0	Major	Initial availability.

Table of Contents

1 Introduction

This document specifies the Folder Sharing Web Service protocol, which is responsible for managing **Calendar folders** that are shared between users in separate organizations. Clients use the Folder Sharing Web Service protocol to share **folders**, get **shared folders**, and update shared folders. Clients use the SOAP [Soap1.1] protocol to contact the folder sharing service.

1.1 Glossary

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

Hypertext Transfer Protocol over Secure Sockets Layer (HTTPS)
SOAP body
SOAP fault
SOAP header
Web Services Description Language (WSDL)
WSDL message
WSDL port type
XML
XML namespace
XML schema

The following terms are specific to this document:

shared folder: A folder for which a sharing relationship has been created to share the items in the folder between two servers.

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

1.2 References

1.2.1 Normative References

We conduct frequent surveys of the normative references to assure their continued availability. If you have any issue with finding a normative reference, please contact dochelp@microsoft.com. We will assist you in finding the relevant information. Please check the archive site, http://msdn2.microsoft.com/en-us/library/E4BD6494-06AD-4aed-9823-445E921C9624, as an additional source.

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

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

[RFC2396] Berners-Lee, T., Fielding, R., and Masinter, L., "Uniform Resource Identifiers (URI): Generic Syntax", RFC 2396, August 1998, http://www.ietf.org/rfc/rfc2396.txt.

[RFC2616] Fielding, R., et al., "Hypertext Transfer Protocol -- HTTP/1.1", RFC 2616, June 1999, http://www.ietf.org/rfc/rfc2616.txt.

[RFC2818] Rescorla, E., "HTTP over TLS", RFC 2818, May 2000, http://www.ietf.org/rfc/rfc2818.txt.

[SOAP1.1] Box, D., et al., "Simple Object Access Protocol (SOAP) 1.1", May 2000, http://www.w3.org/TR/2000/NOTE-SOAP-20000508/.

[WSDL] Christensen, E., Curbera, F., Meredith, G., and Weerawarana, S., "Web Services Description Language (WSDL) 1.1", W3C Note, March 2001, http://www.w3.org/TR/2001/NOTE-wsdl-20010315.

[XMLNS] World Wide Web Consortium, "Namespaces in XML 1.0 (Second Edition)", August 2006, http://www.w3.org/TR/REC-xml-names/.

[XMLSCHEMA1] Thompson, H.S., Ed., Beech, D., Ed., Maloney, M., Ed., and Mendelsohn, N., Ed., "XML Schema Part 1: Structures", W3C Recommendation, May 2001, http://www.w3.org/TR/2001/REC-xmlschema-1-20010502/.

[XMLSCHEMA2] Biron, P.V., Ed., and Malhotra, A., Ed., "XML Schema Part 2: Datatypes", W3C Recommendation, May 2001, http://www.w3.org/TR/2001/REC-xmlschema-2-20010502/.

[MS-OXWSCDATA] Microsoft Corporation, "Common Web Service Data Types", July 2009.

[MS-OXWSFOLD] Microsoft Corporation, "Folders and Folder Permissions Web Service Protocol Specification", July 2009.

[MS-OXWSLVID] Microsoft Corporation, "Federated Internet Authentication Web Service Protocol Specification", July 2009.

[MS-OXWSSYNC] Microsoft Corporation, "Mailbox Contents Synchronization Protocol Specification", July 2009.

1.2.2 Informative References

None.

1.3 Protocol Overview (Synopsis)

The Folder Sharing Web Service protocol specifies data types and operations that enable client applications to manage cross-organization sharing of folder items. This sharing enables a client in one organization to access information from another organization, such as calendar free/busy information. This protocol is applicable to person-to-person sharing scenarios; it does not address organizations sharing information on behalf of the entire organization. The protocol defines operations to create an opaque data structure that authorizes sharing, get shared folder information, and initiate synchronization of shared folders.

The Folder Sharing protocol uses a sharing message as defined in [MS-OXSHRMSG] to establish folder sharing. The GetSharingMetadata operation gets the EncryptedSharedFolderDataType elements required to populate the SharingMessage element in the XML sharing message as specified in [MS-OXWSLVID] section 2.3.6.

The Folder Sharing protocol requires two clients, a publishing client that is sharing information on behalf of a user, and a subscribing client that is accessing the shared information. To establish the relationship, the two clients perform the following actions.

Publisher actions:

- Call the GetSharingMetadata operation to get an opaque authentication token that identifies the sharing invitation.
- Construct a Sharing Message Metadata XML document as specified in [MS-OXWSLVID] from the response from the GetSharingMetadata operation. The <<EncryptedSharedFolderDataCollection>> element of the <<GetSharingMetatDataResponse>> element is inserted into the Sharing Message Metadata XML document as the

<<EncryptedSharedFolderDataCollection>> element of the <<ProvidersType>> element as specified in [MS-OXWSLVID] section 2.3.4.

- Use the GetFolder operation as specified in [MS-OXWSFOLD] section 3.1.4.5 to get the permission list for the shared folder.
- Use the UpdateFolder operation as specified in [MS-OXWSFOLD] section 3.1.4.7 to add the new subscriber to the permission list.
- Send the Sharing Message Metadata XML document to the subscriber as an attachment on an e-mail. The attachment requires the following headers:
  - `Content-Type: application/x-sharing-metadata-xml;`
  - `Content-Disposition: attachment; filename="sharing_metadata.xml"`

Subscriber actions:

- Call the CreateItem operation as specified in [MS-OXWSCORE] section 3.1.4.2 with an AcceptSharingInvitationType element as specified in [MS-OXCDATA] section 2.2.3.3.
- Get the local sharing folder identifier by calling the GetSharingFolder operation. The local sharing folder is created by the previous call to the CreateItem operation.
- Start synchronizing the local sharing folder on the server by calling the RefreshSharingFolder operation with the local sharing folder identifier returned by the GetSharingFolder operation

1.4 Relationship to Other Protocols

The Folder Sharing Web Service protocol uses SOAP over **HTTPS** as shown in the following layer diagram:

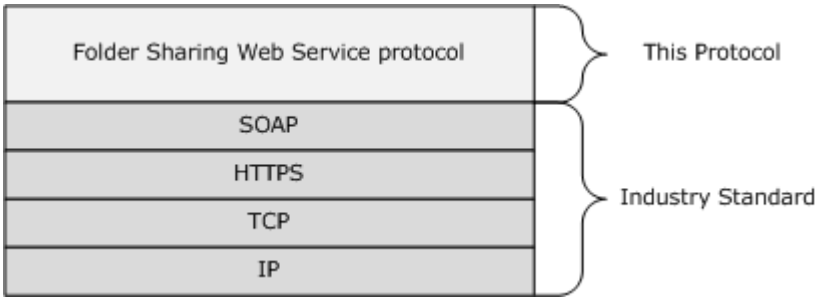

Figure 1: Folder Sharing Web Service protocol HTTPS stack.

Clients that implement this protocol use operations from other protocols to perform work.

Protocol	Description
[MS-OXWSCORE]	Subscribing clients can use the CreateItem operation to create the local sharing folder.
[MS-OXWSFOLD]	Clients can use the GetFolder operation to retrieve information about folders to be shared and the UpdateFolder operation to update permissions on shared folders.
[MS-OXWSSYNC]	Clients can use operations in [MS-OXWSSYNC] to synchronize the local shared folder on the server with the client's local data store.

Protocol	Description
[MS-OXWSLVID]	Servers can use the client operations in [MS-OXWSLVID] to obtain authentication tokens to establish sharing relationships between users.

1.5 Prerequisites/Preconditions

None.

1.6 Applicability Statement

The Folder Sharing Web Service protocol is applicable to SOAP-based clients [SOAP1.1].

1.7 Versioning and Capability Negotiation

This document covers versioning in the following areas:

- **Supported Transports:** This protocol uses [SOAP1.1] as specified in section 2.1.
- **Protocol Versions:** This protocol specifies only one **WSDL** portType version.
- **Security and Authentication Methods:** This protocol relies on the Web server that is hosting it to perform authentication.
- **Capability Negotiation:** None.

1.8 Vendor-Extensible Fields

None.

1.9 Standards Assignments

None.

2 Messages

2.1 Transport

The SOAP version supported is SOAP 1.1. For details, see [SOAP1.1].

2.2 Common Message Syntax

This section contains common definitions that are used by this protocol. The syntax of the definitions uses **XML schema** as defined in [XMLSCHEMA1] and [XMLSCHEMA2], and Web Services Description Language (WSDL) as defined in [WSDL].

2.2.1 Namespaces

This specification defines and references various XML namespaces using the mechanisms specified in [XMLNS]. Although this specification associates a specific XML namespace prefix for each XML namespace that is used, the choice of any particular XML namespace prefix is implementation-specific and not significant for interoperability.

Prefix	Namespace URI	Reference
soap	http://schemas.xmlsoap.org/wsdl/soap/	[SOAP1.1]
tns	http://schemas.microsoft.com/exchange/services/2006/messages	[MS-OXWSMSHR]
s	http://www.w3.org/2001/XMLSchema	[XMLSCHEMA1]
targetNamespace	http://schemas.microsoft.com/exchange/services/2006/messages	[MS-OXWSMSHR]
wsdl	http://schemas.xmlsoap.org/wsdl/	[WSDL]
t	http:/./schemas.microsoft.com/exchange/services/2006/types	[MS-OXWSMSHR]

2.2.2 Simple Types

The following table summarizes the set of common XML schema simple type definitions defined by this specification. XML schema simple type definitions that are specific to a particular operation are described with the operation.

Simple Type	Description
t:SharingDataType	Specifies the type of data that is shared by a shared folder.

2.2.2.1 t:SharingDataType Simple Type

The SharingDataType simple type specifies the type of data that is shared by the shared folder.

```
<xs:simpleType>
  <xs:restriction
    base="xs:string"
  >
```

```
      <xs:enumeration
        value="Calendar"
       />
      <xs:enumeration
        value="Contacts"
       />
    </xs:restriction>
  </xs:simpleType>
```

Enumeration

The following values are defined by the simple type:

Value	Description
Calendar	Specifies that the shared folder contains calendar information.
Contacts	Specifies that the shared folder contains contact information.

2.2.2.2 t:InvalidRecipientResponseCodeType Simple Type

The InvalidRecipientResponseCodeType simple type specifies the reason why a recipient of a folder sharing request was invalid.

```
<xs:simpleType name="InvalidRecipientResponseCodeType">
  <xs:restriction
    base="xs:string"
  >
    <xs:enumeration
      value="CannotObtainTokenFromSTS"
     />
    <xs:enumeration
      value="RecipientOrganizationNotFederated"
     />
    <xs:enumeration
      value="SystemPolicyBlocksSharingWithThisRecipient"
     />
  </xs:restriction>
</xs:simpleType>
```

Enumeration

The following values are defined by the **InvalidRecipientResponseCodeType** simple type:

Value	Description
CannotObtainTokenFromSTS	Specifies that there was a problem obtaining a security token from the token server.
RecipientOrganizationNotFederated	Specifies that a sharing relationship is not available with the organization specified in the recipient's SMTP e-mail address.

Value	Description
SystemPolicyBlocksSharingWithThisRecipient	Specifies that the system administrator has set a system policy that blocks sharing with the specified recipient.

2.2.3 Complex Types

The following table summarizes the set of common XML schema complex type definitions that are defined by this specification. XML schema complex type definitions that are specific to a particular operation are defined with the operation.

Complex Type	Description
m:GetSharingFolderResponseMessageType	S the response from the GetSharingFolder operation.
m:GetSharingMetadataResponseMessageType	Specifies the response message from the GetSharingMetadata operation.
m:RefreshSharingFolderResponseMessageType	Specifies the response message from the RefreshSharingFolder operation.
t:ArrayOfEncryptedSharedFolderDataType	Specifies an array of encrypted folder data that is passed between servers by the client.
t:ArrayOfInvalidRecipientsType	Specifies a list of sharing request recipients with whom a sharing relationship could not be created.
t:EncryptedDataContainerType	Specifies an opaque container for encrypted data passed between servers by the client.
t:EncryptedSharedFolderDataType	Specifies encrypted folder information that is passed between servers by the client.
t:InvalidRecipientType	Specifies a recipient with whom a sharing relationship could not be created.

2.2.3.1 m:GetSharingFolderResponseMessageType Complex Type

The GetSharingFolderResponseMessageType complex type specifies the response message from the GetSharingFolder operation. The GetSharingFolderResponseMessageType complex type extends the ResponseMessageType complex type.

```
<xs:complexType name="GetSharingFolderResponseMessageType">
  <xs:complexContent>
    <xs:extension
      base="m:ResponseMessageType"
    >
      <xs:sequence
        minOccurs="0"
      >
        <xs:element name="SharingFolderId"
          type="t:FolderIdType"
        />
      </xs:sequence>
    </xs:extension>
  </xs:complexContent>
```

```
</xs:complexType>
```

Child Elements

Element	Type	Description
SharingFolderId	t:FolderIdType	Specifies the local folder identifier for a shared folder.

2.2.3.2 m:GetSharingMetadataResponseMessageType Complex Type

The **GetSharingMetadataResponseMessageType** complex type specifies the response message from the **GetSharingMetadata** operation as specified in section 3.1.4.4. The **GetSharingMetadataResponseMessageType** complex type extends the **ResponseMessageType** complex type as specified [MS-OXWSCORE] section 2.2.3.49.

```
<xs:complexType name="GetSharingMetadataResponseMessageType">
  <xs:complexContent>
    <xs:extension
      base="m:ResponseMessageType"
    >
      <xs:sequence
        minOccurs="0"
      >
        <xs:element name="EncryptedSharedFolderDataCollection"
          type="t:ArrayOfEncryptedSharedFolderDataType"
         />
        <xs:element name="InvalidRecipients"
          type="t:ArrayOfInvalidRecipientsType"
         />
      </xs:sequence>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>
```

Child Elements

Element	Type	Description
EncryptedSharedFolderDataCollection	**t:ArrayOfEncryptedSharedFolderDataType**	Specifies an encrypted payload from the server.
InvalidRecipients	**t:ArrayOfInvalidRecipientsType**	Specifies recipients that belong to an organization that does not enable sharing.

2.2.3.3 m:RefreshSharingFolderResponseMessageType Complex Type

The m:RefreshSharingFolderResponseMessageType complex type specifies the response from the RefreshSharingFolder operation. The m:RefreshSharingFolderResponseMessageType complex type extends the ResponseMessageType complex type.

```
<xs:complexType name="RefreshSharingFolderResponseMessageType">
  <xs:complexContent>
    <xs:extension
      base="m:ResponseMessageType"
     />
  </xs:complexContent>
</xs:complexType>
```

2.2.3.4 t:ArrayOfEncryptedSharedFolderDataType Complex Type

The ArrayOfEncryptedSharedFolderDataType complex type specifies an array of encrypted folder data that is passed between servers by the client.

```
<xs:complexType name="tArrayOfEncryptedSharedFolderDataType">
  <xs:choice
    maxOccurs="unbounded"
    minOccurs="0"
  >
    <xs:element name="EncryptedSharedFolderData"
      type="t:EncryptedSharedFolderDataType"
     />
  </xs:choice>
</xs:complexType>
```

Child Elements

Element	Type	Description
EncryptedSharedFolderData	t:EncryptedSharedFolderDataType	Specifies zero or more encrypted shared folder data items.

2.2.3.5 t:ArrayOfInvalidRecipientsType Complex Type

The ArrayOfInvalidRecipientsType complex type specifies a list of sharing request recipients with whom a sharing relationship could not be created.

```
<xs:complexType name="ArrayOfInvalidRecipientsType">
  <xs:choice
    maxOccurs="unbounded"
  >
    <xs:element name="InvalidRecipient"
      type="t:InvalidRecipientType"
     />
  </xs:choice>
</xs:complexType>
```

Child Elements

Element	Type	Description
InvalidRecipient	t:InvalidRecipientType	Specifes a recipient whose organization is not enabled for folder sharing.

2.2.3.6 t:EncryptedDataContainerType Complex Type

The EncryptedDataContainerType complex type specifies an opaque container for encrypted data passed between servers by the client.

```
<xs:complexType name="EncryptedDataContainerType">
  <xs:sequence>
    <xs:any
      process_contents="skip"
     />
  </xs:sequence>
</xs:complexType>
```

2.2.3.7 t:EncryptedSharedFolderDataType Complex Type

The EncryptedSharedFolderDataType complex type specifies encrypted folder information that is passed between servers by the client.

```
<xs:complexType name="EncryptedSharedFolderDataType">
  <xs:sequence>
    <xs:element name="Token"
      type="t:EncryptedDataContainerType"
     />
    <xs:element name="Data"
      type="t:EncryptedDataContainerType"
     />
  </xs:sequence>
</xs:complexType>
```

Child Elements

Element	Type	Description
Token	t:EncryptedDataContainerType	Specifies an identification token.
Data	t:EncryptedDataContainerType	Specifies the encrypted data.

2.2.3.8 t:InvalidRecipientType Complex Type

The InvalidRecipientType complex type specifies a recipient with whom a sharing relationship could not be created.

```
<xs:complexType name="InvalidRecipientType">
  <xs:sequence>
    <xs:element name="SmtpAddress"
      type="t:NonEmptyStringType"
     />
    <xs:element name="ResponseCode"
      type="t:InvalidRecipientResponseCodeType"
     />
    <xs:element name="MessageText"
      type="xs:string"
      minOccurs="0"
     />
  </xs:sequence>
</xs:complexType>
```

Child Elements

Element	Type	Description
SmtpAddress	t:NonEmptyStringType	Specifies the SMTP e-mail address of the recipient.
ResponseCode	t:InvalidRecipientResponseCodeType	Specifies the reason why the recipient is invalid.
MessageText	xs:string	Specifies the text of an error message. Can be present.

2.2.4 Elements

This specification does not define any common **XML schema** element definitions.

2.2.5 Attributes

This specification does not define any common **XML schema** attribute definitions.

2.2.6 Groups

This specification does not define any common **XML schema** group definitions.

2.2.7 Attribute Groups

This specification does not define any common **XML schema** attribute group definitions.

2.2.8 Messages

This specification does not define any common **XML schema** message definitions.

3 Protocol Details

The client side of this protocol is simply a pass-through. That is, no additional timers or other state is required on the client side of this protocol. Calls made by the higher-layer protocol or application are passed directly to the transport, and the results returned by the transport are passed directly back to the higher-layer protocol or application.

3.1 ExchangeServicePortType Server Details

The Folder Sharing Web service protocol defines a single port type with 5 operations.

```
<wsdl:portType name="ExchangeServicePortType">
     <wsdl:operation name="GetSharingMetadata">
          <wsdl:input message="tns:GetSharingMetadataSoapIn"/>
          <wsdl:output message="tns:GetSharingMetadataSoapOut"/>
     </wsdl:operation>
     <wsdl:operation name="RefreshSharingFolder">
          <wsdl:input message="tns:RefreshSharingFolderSoapIn"/>
          <wsdl:output message="tns:RefreshSharingFolderSoapOut"/>
     </wsdl:operation>
     <wsdl:operation name="GetSharingFolder">
          <wsdl:input message="tns:GetSharingFolderSoapIn"/>
          <wsdl:output message="tns:GetSharingFolderSoapOut"/>
     </wsdl:operation>
     <wsdl:operation name="CreateItem">
          <wsdl:input message="tns:CreateItemSoapIn"/>
          <wsdl:output message="tns:CreateItemSoapOut"/>
     </wsdl:operation>
     <wsdl:operation name="UpdateFolder">
          <wsdl:input message="tns:UpdateFolderSoapIn"/>
          <wsdl:output message="tns:UpdateFolderSoapOut"/>
     </wsdl:operation>
</wsdl:portType>
```

Operation	Description
CreateItem	Creates a shared folder. The CreateItem operation is defined in [MS-OXWSCORE] section 3.1.4.2.
GetFolder	Gets the current permissions of the shared folder.
GetSharingFolder	Gets the folder identifier of a specified shared folder.
GetSharingMetadata	Requests an encrypted XML payload that identifies the participants in a shared folder exchange.
RefreshSharingFolder	Requests that the server update shared folder information.
UpdateFolder	Updates a specified shared folder. The UpdateFolder operation is defined in [MS-OXWSFOLD] section 3.1.4.7.

3.1.1 Abstract Data Model

The Folder Sharing Web service protocol is a stateless protocol.

3.1.2 Timers

None.

3.1.3 Initialization

None.

3.1.4 Message Processing Events and Sequencing Rules

This protocol defines the following operations.

Operation	Description
GetSharingFolder	Gets the folder identifier of a specified sharing folder.
GetSharingMetadata	Requests an encrypted XML payload that identifies the participants in a shared folder exchange.
RefreshSharingFolder	Requests that the server update shared folder information.

This protocol uses the following operations specified by other protocols.

Operation	Protocol	Description
CreateItem	[MS-OXWSCORE] section 3.1.4.1	Creates a folder sharing response message.
GetFolder	[MS-OXWSFOLD]section 3.1.4.5	Gets a folder so that the access permissions can be changed.
UpdateFolder	[MS-OXWSFOLD]section 3.1.4.7	Updates the access permissions on the folder to enable folder sharing.

3.1.4.1 CreateItem

This protocol uses the **CreateItem** operation specified in [MS-OXWSCORE] section 3.1.4.2 to create AcceptSharingInvitationType elements.

```
<wsdl:operation name="CreateItem">
     <wsdl:input message="tns:CreateItemSoapIn" />
     <wsdl:output message="tns:CreateItemSoapOut" />
</wsdl:operation>
```

Request

Message Format	Description
tns:CreateItemSoapIn	Specifies the SOAP message that defines the item to create. The Items child element of the CreateItem child element that specifies the XML request MUST contain one AcceptSharingInvitationType element. All other elements MUST be empty.

Response

Message Format	Description
tns:CreateItemSoapOut	Specifies the [SOAP] message returned by the server in response.

3.1.4.2 GetFolder

This protocol uses the GetFolder operation specified in [MS-OXWSFOLD] section 3.1.4.5 to get a shared folder so that the access permissions on a shared folder can be modified.

Request

Message Format	Description
tns:GetFolderSoapIn	Specifies the [SOAP] message that gets folders from the server store.

Response

Message Format	Description
tns:GetFolderSoapOut	Specifies the [SOAP] message returned by the server in response.

3.1.4.3 GetSharingFolder

The GetSharingFolder operation gets the local folder identifier of a specified shared folder.

```
<wsdl:operation name="GetSharingFolder">
     <wsdl:input message="tns:GetSharingFolderSoapIn"/>
     <wsdl:output message="tns:GetSharingFolderSoapOut"/>
</wsdl:operation>
```

Request

Message Format	Description
tns:GetSharingFolderSoapIn	Defines the SOAP message that specifies the local folder to return.

Response

Message Format	Description
tns:GetSharingFolderSoapOut	Defines the SOAP message that returns the shared folder.

The GetSharingFolder operation returns the local folder identifier of a specified shared folder. After the local folder identifier is returned, use the RefreshSharingFolder operation as specified in section 3.1.4.5 to request that the server synchronize the shared folder information.

3.1.4.3.1 Complex Types

The following **XML schema** complex type definitions are specific to this operation.

3.1.4.3.1.1 t:GetSharingFolderType Complex Type

The GetSharingFolderType complex type specifies the shared folder to return from the GetSharingFolder operation.

```
<xs:complexType name="GetSharingFolderType">
  <xs:complexContent>
    <xs:extension
      base="m:BaseRequestType"
    >
      <xs:sequence>
        <xs:element name="SmtpAddress"
          type="t:NonEmptyStringType"
         />
        <xs:element name="DataType"
          type="t:SharingDataType"
          minOccurs="0"
         />
        <xs:element name="SharedFolderId"
          type="t:NonEmptyStringType"
          minOccurs="0"
         />
      </xs:sequence>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>
```

Child Elements

Element	Type	Description
SmtpAddress	t:NonEmptyStringType	Specifies the SMTP e-mail address of the other party in the sharing relationship.
DataType	t:SharingDataType	Specifies the type of folder to return. Can be present.
SharedFolderId	t:NonEmptyStringType	Specifies the identifier of the shared folder whose local folder should be returned. Can be present.

A GetSharingFolderType element MUST include either the **SmtpAddress** and <DataType> element, or the <SharedFolderId> element. The GetSharingFolderType element MUST NOT contain both.

3.1.4.3.2 Elements

The following **XML schema** element definitions are specific to this operation.

3.1.4.3.2.1 GetSharingFolderResponse Element

The tns:GetSharingFolderResponse element specifies the response message from the GetSharingFolder operation.

```
<xs:element name="GetSharingFolderResponse"
  type="m:GetSharingFolderResponseMessageType"
 />
```

3.1.4.3.2.2 GetSharingFolder Element

The tns:GetSharingFolder element specifies the base request element for the GetSharingFolder operation.

```
<xs:element name="GetSharingFolder"
  type="m:GetSharingFolderType"
 />
```

3.1.4.3.3 Messages

The following **WSDL** message definitions are specific to this operation.

3.1.4.3.3.1 tns:GetSharingFolderSoapIn Message

The GetSharingFolderSoapIn message contains two parts, as described in the following table.

Part Name	Element/Type	Description
request	tns:GetSharingFolder	Specifies the request.
RequestVersion	t:RequestServerVersion	Specifies the schema version for the GetSharingFolder request.

3.1.4.3.3.2 tns:GetSharingFolderSoapOut Message

The GetSharingFolderSoapOut message contains two parts, as described in the following table.

Part Name	Element/Type	Description
GetSharingFolderResult	tns:GetSharingFolderResponse	This part specifies the response.
ServerVersion	t:ServerVersionInfo	This part specifies the server version for the response.

3.1.4.4 GetSharingMetadata

The GetSharingMetadata operation specifies an operation that requests an encrypted XML payload that identifies the participants in a shared folder exchange.

```
<wsdl:operation name="GetSharingMetadata">
     <wsdl:input message="tns:GetSharingMetadataSoapIn"/>
     <wsdl:output message="tns:GetSharingMetadataSoapOut"/>
</wsdl:operation>
```

Request

Message Format	Description
tns:GetSharingMetadataSoapIn	Specifies the [SOAP] message that requests the folder sharing metadata.

Response

Message Format	Description
tns:GetSharingMetadataSoapOut	Specifies the [SOAP] message returned by the server in response.

3.1.4.4.1 Complex Types

The following **XML schema** complex type definitions are specific to this operation.

3.1.4.4.1.1 t:ArrayOfSmtpAddressType Complex Type

The t:ArrayOfSmtpAddressType complex type specifies an array of SMTP e-mail addresses.

```
<xs:complexType name="ArrayOfSmtpAddressType">
  <xs:choice
    maxOccurs="unbounded"
  >
    <xs:element name="SmtpAddress"
      type="t:NonEmptyStringType"
     />
  </xs:choice>
</xs:complexType>
```

Child Elements

Element	Type	Description
SmtpAddress	t:NonEmptyStringType	Specifies an SMTP e-mail address.

3.1.4.4.1.2 m:GetSharingMetadataType Complex Type

The GetSharingMetadataType complex type specifies the sharing folder and recipients for the GetSharingMetadata operation. The GetSharingMetadataType complex type extends the BaseRequestType complex type.

```
<xs:complexType name="GetSharingMetadataType">
  <xs:complexContent>
    <xs:extension
      base="m:BaseRequestType"
    >
      <xs:sequence>
        <xs:element name="IdOfFolderToShare"
          type="t:FolderIdType"
         />
        <xs:element name="SenderSmtpAddress"
          type="t:NonEmptyStringType"
         />
```

```
        <xs:element name="Recipients"
          type="t:ArrayOfSmtpAddressType"
         />
       </xs:sequence>
     </xs:extension>
   </xs:complexContent>
 </xs:complexType>
```

Child Elements

Element	Type	Description
IdOfFolderToShare	t:FolderIdType	Specifies the identifier for an existing folder on the server that will be shared.
SenderSmtpAddress	t:NonEmptyStringType	Specifies a user e-mail address. The address must correspond to the **mailbox** that contains the folder identified in the **IdOfFolderToShare** element.
Recipients	t:ArrayOfSmtpAddressType	Specifies the e-mail addresses of one or more entities that will be granted access to the mailbox folder.

3.1.4.4.2 Elements

The following **XML schema** element definitions are specific to this operation.

3.1.4.4.2.1 GetSharingMetadata Element

The GetSharingMetadata element specifies the base request for the GetSharingMetadata operation.

```
<xs:element name="GetSharingMetadata"
  type="m:GetSharingMetadataType"
 />
```

3.1.4.4.2.2 GetSharingMetadataResponse Element

The tns:GetSharingMetadataResponse element specifies the response from the GetSharingMetadata operation.

```
<xs:element name="GetSharingMetadataResponse"
  type="m:GetSharingMetadataResponseMessageType"
 />
```

3.1.4.4.3 Messages

The following **WSDL** message definitions are specific to this operation.

3.1.4.4.3.1 tns:GetSharingMetadataSoapIn Message

The tns: GetSharingMetadataSoapIn message contains two parts, as described in the following table.

Part Name	Element/Type	Description
request	tns:GetSharingMetadata	Specifies the request.
RequestVersion	t:RequestServerVersion	Specifies the schema version for the GetSharingMetadata request.

3.1.4.4.3.2 tns:GetSharingMetadataSoapOut Message

The GetSharingMetadataSoapOut message contains two parts, as described in the following table.

Part Name	Element/Type	Description
GetSharingMetadataResult	tns:GetSharingMetadataResponse	This part specifies the response.
ServerVersion	t:ServerVersionInfo	This part specifies the server version for the response.

3.1.4.5 RefreshSharingFolder

The RefreshSharingFolder operation requests that the server synchronize shared folder information to the local sharing folder.

```
<wsdl:operation name="RefreshSharingFolder">
     <wsdl:input message="tns:RefreshSharingFolderSoapIn"/>
     <wsdl:output message="tns:RefreshSharingFolderSoapOut"/>
</wsdl:operation>
```

Request

Message Format	Description
tns:RefreshSharingFolderSoapIn	Defines the SOAP message that specifies the shared folder to refresh.

Response

Message Format	Description
tns:RefreshSharingFolderSoapOut	Defines the SOAP message that specifies the response.

3.1.4.5.1 Complex Types

The following **XML schema** complex type definitions are specific to this operation.

3.1.4.5.1.1 m:RefreshSharingFolderType Complex Type

The RefreshSharingFolderType complex type specifies the request for the RefreshSharingFolder operation. The RefreshSharingFolderType complex type extends the BaseRequestType complex type.

```
<xs:complexType name="RefreshSharingFolderType">
  <xs:complexContent>
    <xs:extension
      base="m:BaseRequestType"
    >
      <xs:sequence>
        <xs:element name="SharingFolderId"
          type="t:FolderIdType"
         />
      </xs:sequence>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>
```

Child Elements

Element	Type	Description
SharingFolderId	t:FolderIdType	Specifies the local identifier of the sharing folder to refresh from the associated server.

3.1.4.5.2 Elements

The following **XML schema** element definitions are specific to this operation.

3.1.4.5.2.1 RefreshSharingFolder Element

The RefreshSharingFolder element specifies the base request for the RefreshSharingFolder operation.

```
<xs:element name="RefreshSharingFolder"
  type="m:RefreshSharingFolderType"
 />
```

3.1.4.5.2.2 RefreshSharingFolderResponse Element

The tns:RefreshSharingFolderResponse element specifies the response from the RefreshSharingFolder operation.

```
<xs:element name="RefreshSharingFolderResponse"
  type="m:RefreshSharingFolderResponseMessageType"
 />
```

3.1.4.5.3 Messages

The following **WSDL** message definitions are specific to this operation.

3.1.4.5.3.1 tns:RefreshSharingFolderSoapIn Message

The tns:RefreshSharingFolderSoapIn message contains two parts, as described in the following table.

Part Name	Element/Type	Description
request	tns:RefreshSharingFolder	Specifies the request.
RequestVersion	t:RequestServerVersion	Specifies the schema version for the RefreshSharingFolder request.

3.1.4.5.3.2 tns:RefreshSharingFolderSoapOut Message

The RefreshSharingFolderSoapOut message contains two parts, as described in the following table.

Part Name	Element/Type	Description
RefreshSharingFolderResult	**tns:RefreshSharingFolderResponse**	This part specifies the response.
ServerVersion	t:ServerVersionInfo	This part specifies the server version for the response.

3.1.4.6 UpdateFolder

This protocol uses the **UpdateFolder** operation specified in [MS-OXWSFOLD]: section 3.1.4.7 to update the access permissions on a shared folder when creating a sharing relationship.

```
<wsdl:operation name="UpdateFolder">
     <wsdl:input message="tns:UpdateFolderSoapIn"/>
     <wsdl:output message="tns:UpdateFolderSoapOut"/>
</wsdl:operation>
```

Request

Message Format	Description
tns:UpdateFolderSoapIn	Specifies the [SOAP] message that modifies properties of an existing item in the server store.

Response

Message Format	Description
tns:UpdateFolderSoapOut	Specifies the [SOAP] message returned by the server in response.

3.1.5 Timer Events

None.

3.1.6 Other Local Events

None.

3.2 Client Details

The client side of this protocol is simply a pass-through. That is, no additional timers or other state is required on the client side of this protocol. Calls made by the higher-layer protocol or application are passed directly to the transport, and the results returned by the transport are passed directly back to the higher-layer protocol or application.

3.2.1 Abstract Data Model

None.

3.2.2 Timers

None.

3.2.3 Initialization

None.

3.2.4 Message Processing Events and Sequencing Rules

None.

3.2.5 Timer Events

None.

3.2.6 Other Local Events

None.

4 Protocol Examples

None.

5 Security

5.1 Security Considerations for Implementers

The Folder Sharing Web service protocol does not use any additional security mechanisms.

5.2 Index of Security Parameters

None.

6 Appendix A: Full WSDL

The following table lists the **XML** files that are required to implement the functionality that is specified in this document. The contents of each file are included in this section.

Section	File name	Description
6.1	MS-OXWSMSHR.wsdl	Contains the WSDL for the implementation of this protocol.
6.2	MS-OXWSMSHR-types.xsd	Contains the XML schema type definitions that are used in this protocol.
6.3	MS-OXWSMSHR-messages.xsd	Contains the XML schema message definitions that are used in this protocol.

These files MUST be placed in a common folder for the WSDL to validate and operate. Also, any schema files that are included in or imported into the MS-OXWSMSHR-types.xsd or MS-OXWSMSHR-messages.xsd schemas MUST be placed in the common folder with the files.

6.1 WSDL

This section contains the contents of the MS-OXWSMSHR.wsdl file and information about additional files that this schema file requires to operate correctly.

MS-OXWSMSHR.wsdl includes the files listed in the following table. For the schema file to operate correctly, these files MUST be present in the folder that contains the WSDL, types schema, and messages schema files for this protocol.

Defining protocol	File name
[MS-OXWSCORE], section 6.3.	MS-OXWSCORE-messages.xsd
[MS-OXWSFOLD], section 6.1	MS-OXWSFOLD-messages.xsd

```
<?xml version="1.0" encoding="utf-8"?>
<wsdl:definitions xmlns:soap="http://schemas.xmlsoap.org/wsdl/soap/"
xmlns:tns="http://schemas.microsoft.com/exchange/services/2006/messages"
xmlns:s="http://www.w3.org/2001/XMLSchema" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/"
xmlns:t="http://schemas.microsoft.com/exchange/services/2006/types"
targetNamespace="http://schemas.microsoft.com/exchange/services/2006/messages">
     <wsdl:types>
          <xs:schema id="messages" elementFormDefault="qualified" version="Exchange2010"
xmlns:m="http://schemas.microsoft.com/exchange/services/2006/messages"
xmlns:tns="http://schemas.microsoft.com/exchange/services/2006/messages"
xmlns:t="http://schemas.microsoft.com/exchange/services/2006/types"
xmlns:xs="http://www.w3.org/2001/XMLSchema"
targetNamespace="http://schemas.microsoft.com/exchange/services/2006/messages"
xmlns="http://schemas.microsoft.com/exchange/services/2006/messages">
<!--
               <xs:import
namespace="http://schemas.microsoft.com/exchange/services/2006/types" schemaLocation="MS-
OXWSMSHR-types.xsd"/>-->
               <!-- Add global elements and types from messages.xsd -->
                    <xs:include schemaLocation="MS-OXWSMSHR-messages.xsd"/>
                    <xs:include schemaLocation="MS-OXWSCORE-messages.xsd"/>
                    <xs:include schemaLocation="MS-OXWSFOLD-messages.xsd"/>

          </xs:schema>
```

```
          <xs:schema id="types" elementFormDefault="qualified" version="Exchange2010"
  xmlns:t="http://schemas.microsoft.com/exchange/services/2006/types"
  targetNamespace="http://schemas.microsoft.com/exchange/services/2006/types"
  xmlns="http://schemas.microsoft.com/exchange/services/2006/types"
  xmlns:tns="http://schemas.microsoft.com/exchange/services/2006/types"
  xmlns:xs="http://www.w3.org/2001/XMLSchema">
               <xs:import namespace="http://www.w3.org/XML/1998/namespace"/>
               <!-- Add global elements and types from types.xsd -->
          </xs:schema>
     </wsdl:types>
     <wsdl:portType name="ExchangeServicePortType">
          <wsdl:operation name="GetSharingMetadata">
               <wsdl:input message="tns:GetSharingMetadataSoapIn"/>
               <wsdl:output message="tns:GetSharingMetadataSoapOut"/>
          </wsdl:operation>
          <wsdl:operation name="RefreshSharingFolder">
               <wsdl:input message="tns:RefreshSharingFolderSoapIn"/>
               <wsdl:output message="tns:RefreshSharingFolderSoapOut"/>
          </wsdl:operation>
          <wsdl:operation name="GetSharingFolder">
               <wsdl:input message="tns:GetSharingFolderSoapIn"/>
               <wsdl:output message="tns:GetSharingFolderSoapOut"/>
          </wsdl:operation>
          <wsdl:operation name="CreateItem">
               <wsdl:input message="tns:CreateItemSoapIn"/>
               <wsdl:output message="tns:CreateItemSoapOut"/>
          </wsdl:operation>
          <wsdl:operation name="UpdateFolder">
               <wsdl:input message="tns:UpdateFolderSoapIn"/>
               <wsdl:output message="tns:UpdateFolderSoapOut"/>
          </wsdl:operation>
     </wsdl:portType>
     <wsdl:binding name="ExchangeServiceBinding" type="tns:ExchangeServicePortType">
          <wsdl:documentation>
               <wsi:Claim conformsTo="http://ws-i.org/profiles/basic/1.0"
  xmlns:wsi="http://ws-i.org/schemas/conformanceClaim/"/>
          </wsdl:documentation>
          <soap:binding style="document" transport="http://schemas.xmlsoap.org/soap/http"/>
          <wsdl:operation name="GetSharingMetadata">
               <soap:operation
  soapAction="http://schemas.microsoft.com/exchange/services/2006/messages/GetSharingMetadata"/
  >
               <wsdl:input>
                    <soap:body parts="request" use="literal"/>
                    <soap:header message="tns:GetSharingMetadataSoapIn" part="RequestVersion"
  use="literal"/>
               </wsdl:input>
               <wsdl:output>
                    <soap:body parts="GetSharingMetadataResult" use="literal"/>
                    <soap:header message="tns:GetSharingMetadataSoapOut" part="ServerVersion"
  use="literal"/>
               </wsdl:output>
          </wsdl:operation>
          <!-- RefreshSharingFolder -->
          <wsdl:operation name="RefreshSharingFolder">
               <soap:operation
  soapAction="http://schemas.microsoft.com/exchange/services/2006/messages/RefreshSharingFolder
  "/>
               <wsdl:input>
                    <soap:body parts="request" use="literal"/>
```

```
                    <soap:header message="tns:RefreshSharingFolderSoapIn"
part="RequestVersion" use="literal"/>
               </wsdl:input>
               <wsdl:output>
                    <soap:body parts="RefreshSharingFolderResult" use="literal"/>
                    <soap:header message="tns:RefreshSharingFolderSoapOut"
part="ServerVersion" use="literal"/>
               </wsdl:output>
          </wsdl:operation>
          <!-- GetSharingFolder -->
          <wsdl:operation name="GetSharingFolder">
               <soap:operation
soapAction="http://schemas.microsoft.com/exchange/services/2006/messages/GetSharingFolder"/>
               <wsdl:input>
                    <soap:body parts="request" use="literal"/>
                    <soap:header message="tns:GetSharingFolderSoapIn" part="RequestVersion"
use="literal"/>
               </wsdl:input>
               <wsdl:output>
                    <soap:body parts="GetSharingFolderResult" use="literal"/>
                    <soap:header message="tns:GetSharingFolderSoapOut" part="ServerVersion"
use="literal"/>
               </wsdl:output>
          </wsdl:operation>
          <wsdl:operation name="CreateItem">
               <soap:operation
soapAction="http://schemas.microsoft.com/exchange/services/2006/messages/CreateItem"/>
               <wsdl:input>
                    <soap:header message="tns:CreateItemSoapIn" part="Impersonation"
use="literal"/>
                    <soap:header message="tns:CreateItemSoapIn" part="MailboxCulture"
use="literal"/>
                    <soap:header message="tns:CreateItemSoapIn" part="RequestVersion"
use="literal"/>
                    <soap:header message="tns:CreateItemSoapIn" part="TimeZoneContext"
use="literal"/>
                    <soap:body parts="request" use="literal"/>
               </wsdl:input>
               <wsdl:output>
                    <soap:body parts="CreateItemResult" use="literal"/>
                    <soap:header message="tns:CreateItemSoapOut" part="ServerVersion"
use="literal"/>
               </wsdl:output>
          </wsdl:operation>
          <wsdl:operation name="UpdateFolder">
               <soap:operation
soapAction="http://schemas.microsoft.com/exchange/services/2006/messages/UpdateFolder"/>
               <wsdl:input>
                    <soap:header message="tns:UpdateFolderSoapIn" part="Impersonation"
use="literal"/>
                    <soap:header message="tns:UpdateFolderSoapIn" part="MailboxCulture"
use="literal"/>
                    <soap:header message="tns:UpdateFolderSoapIn" part="RequestVersion"
use="literal"/>
                    <soap:header message="tns:UpdateFolderSoapIn" part="TimeZoneContext"
use="literal"/>
                    <soap:body parts="request" use="literal"/>
               </wsdl:input>
               <wsdl:output>
                    <soap:body parts="UpdateFolderResult" use="literal"/>
```

```
                    <soap:header message="tns:UpdateFolderSoapOut" part="ServerVersion"
use="literal"/>
                </wsdl:output>
            </wsdl:operation>
        </wsdl:binding>
        <wsdl:message name="UpdateFolderSoapIn">
            <wsdl:part name="request" element="tns:UpdateFolder"/>
            <wsdl:part name="Impersonation" element="t:ExchangeImpersonation"/>
            <wsdl:part name="MailboxCulture" element="t:MailboxCulture"/>
            <wsdl:part name="RequestVersion" element="t:RequestServerVersion"/>
            <wsdl:part name="TimeZoneContext" element="t:TimeZoneContext"/>
        </wsdl:message>
        <wsdl:message name="UpdateFolderSoapOut">
            <wsdl:part name="UpdateFolderResult" element="tns:UpdateFolderResponse"/>
            <wsdl:part name="ServerVersion" element="t:ServerVersionInfo"/>
        </wsdl:message>
        <wsdl:message name="CreateItemSoapIn">
            <wsdl:part name="request" element="tns:CreateItem"/>
            <wsdl:part name="Impersonation" element="t:ExchangeImpersonation"/>
            <wsdl:part name="MailboxCulture" element="t:MailboxCulture"/>
            <wsdl:part name="RequestVersion" element="t:RequestServerVersion"/>
            <wsdl:part name="TimeZoneContext" element="t:TimeZoneContext"/>
        </wsdl:message>
        <wsdl:message name="CreateItemSoapOut">
            <wsdl:part name="CreateItemResult" element="tns:CreateItemResponse"/>
            <wsdl:part name="ServerVersion" element="t:ServerVersionInfo"/>
        </wsdl:message>
        <wsdl:message name="GetSharingMetadataSoapIn">
            <wsdl:part name="request" element="tns:GetSharingMetadata"/>
            <wsdl:part name="RequestVersion" element="t:RequestServerVersion"/>
        </wsdl:message>
        <wsdl:message name="GetSharingMetadataSoapOut">
            <wsdl:part name="GetSharingMetadataResult"
element="tns:GetSharingMetadataResponse"/>
            <wsdl:part name="ServerVersion" element="t:ServerVersionInfo"/>
        </wsdl:message>
        <wsdl:message name="RefreshSharingFolderSoapIn">
            <wsdl:part name="request" element="tns:RefreshSharingFolder"/>
            <wsdl:part name="RequestVersion" element="t:RequestServerVersion"/>
        </wsdl:message>
        <wsdl:message name="RefreshSharingFolderSoapOut">
            <wsdl:part name="RefreshSharingFolderResult"
element="tns:RefreshSharingFolderResponse"/>
            <wsdl:part name="ServerVersion" element="t:ServerVersionInfo"/>
        </wsdl:message>
        <wsdl:message name="GetSharingFolderSoapIn">
            <wsdl:part name="request" element="tns:GetSharingFolder"/>
            <wsdl:part name="RequestVersion" element="t:RequestServerVersion"/>
        </wsdl:message>
        <wsdl:message name="GetSharingFolderSoapOut">
            <wsdl:part name="GetSharingFolderResult" element="tns:GetSharingFolderResponse"/>
            <wsdl:part name="ServerVersion" element="t:ServerVersionInfo"/>
        </wsdl:message>
</wsdl:definitions>
```

6.2 Types Schema

This section contains the contents of the MS-OXWSMSHR-types.xsd file and information about additional files that this schema file requires to operate correctly.

MS-OXWSMSHR-types.xsd includes the file listed in the following table. For the schema file to operate correctly, this file MUST be present in the folder that contains the WSDL, types schema, and messages schema files for this protocol.

Defining protocol	File name
[MS-OXWSCDATA], section 6.2.	MS-OXWSCDATA-types.xsd

```
<?xml version="1.0" encoding="utf-8"?>
<xs:schema xmlns:t="http://schemas.microsoft.com/exchange/services/2006/types"
xmlns:tns="http://schemas.microsoft.com/exchange/services/2006/types"
xmlns:xs="http://www.w3.org/2001/XMLSchema"
targetNamespace="http://schemas.microsoft.com/exchange/services/2006/types"
elementFormDefault="qualified" version="Exchange2010" id="types">
<xs:import namespace="http://www.w3.org/XML/1998/namespace"/>
<xs:include schemaLocation="MS-OXWSCDATA-types.xsd"/>
<xs:complexType name="ArrayOfSmtpAddressType">
<xs:choice maxOccurs="unbounded">
<xs:element name="SmtpAddress" type="t:NonEmptyStringType"/>
</xs:choice>
</xs:complexType>
<xs:complexType name="ArrayOfEncryptedSharedFolderDataType">
<xs:choice minOccurs="0" maxOccurs="unbounded">
<xs:element name="EncryptedSharedFolderData" type="t:EncryptedSharedFolderDataType"/>
</xs:choice>
</xs:complexType>
<xs:complexType name="EncryptedSharedFolderDataType">
<xs:sequence>
<xs:element name="Token" type="t:EncryptedDataContainerType"/>
<xs:element name="Data" type="t:EncryptedDataContainerType"/>
</xs:sequence>
</xs:complexType>
<xs:complexType name="EncryptedDataContainerType">
<xs:sequence>
<xs:any namespace="##other" processContents="skip"/>
</xs:sequence>
</xs:complexType>
<xs:complexType name="ArrayOfInvalidRecipientsType">
<xs:choice minOccurs="0" maxOccurs="unbounded">
<xs:element name="InvalidRecipient" type="t:InvalidRecipientType"/>
</xs:choice>
</xs:complexType>
<xs:complexType name="InvalidRecipientType">
<xs:sequence>
<xs:element name="SmtpAddress" type="t:NonEmptyStringType"/>
<xs:element name="ResponseCode" type="t:InvalidRecipientResponseCodeType"/>
<xs:element name="MessageText" type="xs:string" minOccurs="0"/>
</xs:sequence>
</xs:complexType>
<xs:simpleType name="InvalidRecipientResponseCodeType">
<xs:restriction base="xs:string">
<xs:enumeration value="RecipientOrganizationNotFederated"/>
<xs:enumeration value="CannotObtainTokenFromSTS"/>
<xs:enumeration value="SystemPolicyBlocksSharingWithThisRecipient"/>
```

```
</xs:restriction>
</xs:simpleType>
<xs:element name="SharingSecurity" type="t:EncryptedDataContainerType"/>
<xs:simpleType name="SharingDataType">
<xs:restriction base="xs:string">
<xs:enumeration value="Calendar"/>
<xs:enumeration value="Contacts"/>
</xs:restriction>
</xs:simpleType>
</xs:schema>
```

6.3 Messages Schema

This section contains the contents of the MS-OXWSMSHR-messages.xsd file and information about additional files that this schema file requires to operate correctly.

MS-OXWSMSHR-messages.xsd includes the file listed in the following table. For the schema file to operate correctly, this file MUST be in the folder that contains the WSDL, types schema, and messages schema files for this protocol.

Defining protocol	File name
[MS-OXWSCDATA], section 6.3.	MS-OXWSCDATA-messages.xsd

```
<?xml version="1.0" encoding="utf-8"?>
<xs:schema xmlns:m="http://schemas.microsoft.com/exchange/services/2006/messages"
xmlns:tns="http://schemas.microsoft.com/exchange/services/2006/messages"
xmlns:t="http://schemas.microsoft.com/exchange/services/2006/types"
xmlns:xs="http://www.w3.org/2001/XMLSchema"
targetNamespace="http://schemas.microsoft.com/exchange/services/2006/messages"
elementFormDefault="qualified" version="Exchange2010" id="messages">
<xs:import namespace="http://schemas.microsoft.com/exchange/services/2006/types"
schemaLocation="MS-OXWSMSHR-types.xsd"/>
<xs:include schemaLocation="MS-OXWSCDATA-messages.xsd"/>

<xs:complexType name="GetSharingFolderType">
<xs:complexContent>
<xs:extension base="m:BaseRequestType">
<xs:sequence>
<xs:element name="SmtpAddress" type="t:NonEmptyStringType"/>
<xs:element name="DataType" type="t:SharingDataType" minOccurs="0"/>
<xs:element name="SharedFolderId" type="t:NonEmptyStringType" minOccurs="0"/>
</xs:sequence>
</xs:extension>
</xs:complexContent>
</xs:complexType>
<xs:element name="GetSharingFolder" type="m:GetSharingFolderType"/>
<xs:complexType name="GetSharingFolderResponseMessageType">
<xs:complexContent>
<xs:extension base="m:ResponseMessageType">
<xs:sequence minOccurs="0">
<xs:element name="SharingFolderId" type="t:FolderIdType"/>
</xs:sequence>
</xs:extension>
</xs:complexContent>
</xs:complexType>
```

```
<xs:element name="GetSharingFolderResponse" type="m:GetSharingFolderResponseMessageType"/>
<xs:complexType name="GetSharingMetadataType">
<xs:complexContent>
<xs:extension base="m:BaseRequestType">
<xs:sequence>
<xs:element name="IdOfFolderToShare" type="t:FolderIdType"/>
<xs:element name="SenderSmtpAddress" type="t:NonEmptyStringType"/>
<xs:element name="Recipients" type="t:ArrayOfSmtpAddressType"/>
</xs:sequence>
</xs:extension>
</xs:complexContent>
</xs:complexType>
<xs:element name="GetSharingMetadata" type="m:GetSharingMetadataType"/>
<xs:complexType name="GetSharingMetadataResponseMessageType">
<xs:complexContent>
<xs:extension base="m:ResponseMessageType">
<xs:sequence minOccurs="0">
<xs:element name="EncryptedSharedFolderDataCollection"
type="t:ArrayOfEncryptedSharedFolderDataType"/>
<xs:element name="InvalidRecipients" type="t:ArrayOfInvalidRecipientsType"/>
</xs:sequence>
</xs:extension>
</xs:complexContent>
</xs:complexType>
<xs:element name="GetSharingMetadataResponse"
type="m:GetSharingMetadataResponseMessageType"/>
<xs:complexType name="RefreshSharingFolderType">
<xs:complexContent>
<xs:extension base="m:BaseRequestType">
<xs:sequence>
<xs:element name="SharingFolderId" type="t:FolderIdType"/>
</xs:sequence>
</xs:extension>
</xs:complexContent>
</xs:complexType>
<xs:element name="RefreshSharingFolder" type="m:RefreshSharingFolderType"/>
<xs:complexType name="RefreshSharingFolderResponseMessageType">
<xs:complexContent>
<xs:extension base="m:ResponseMessageType"/>
</xs:complexContent>
</xs:complexType>
<xs:element name="RefreshSharingFolderResponse"
type="m:RefreshSharingFolderResponseMessageType"/>
</xs:schema>
```

7 Appendix B: Product Behavior

The information in this specification is applicable to the following product versions. References to product versions include released service packs.

- Microsoft Exchange Server 2010

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

Unless otherwise specified, any statement of optional behavior in this specification prescribed using the terms SHOULD or SHOULD NOT implies product behavior in accordance with the SHOULD or SHOULD NOT prescription. Unless otherwise specified, the term MAY implies that product does not follow the prescription.

8 Change Tracking

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

9 Index