[MS-OXWSDLGM]:

Delegate Access Management Web Service Protocol

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Revision Summary

Date	Revision History	Revision Class	Comments
7/15/2009	1.0	Major	Initial Availability.
11/4/2009	1.1.0	Minor	Updated the technical content.
2/10/2010	1.2.0	Minor	Updated the technical content.
5/5/2010	1.2.1	Editorial	Revised and edited the technical content.
8/4/2010	2.0	Major	Significantly changed the technical content.
11/3/2010	3.0	Major	Significantly changed the technical content.
3/18/2011	4.0	Major	Significantly changed the technical content.
8/5/2011	4.1	Minor	Clarified the meaning of the technical content.
10/7/2011	4.1	None	No changes to the meaning, language, or formatting of the technical content.
1/20/2012	5.0	Major	Significantly changed the technical content.
4/27/2012	5.0	None	No changes to the meaning, language, or formatting of the technical content.
7/16/2012	5.1	Minor	Clarified the meaning of the technical content.
10/8/2012	5.2	Minor	Clarified the meaning of the technical content.
2/11/2013	5.2	None	No changes to the meaning, language, or formatting of the technical content.
7/26/2013	5.2	None	No changes to the meaning, language, or formatting of the technical content.
11/18/2013	5.2	None	No changes to the meaning, language, or formatting of the technical content.
2/10/2014	5.2	None	No changes to the meaning, language, or formatting of the technical content.
4/30/2014	5.3	Minor	Clarified the meaning of the technical content.
7/31/2014	5.4	Minor	Clarified the meaning of the technical content.
10/30/2014	5.4	None	No changes to the meaning, language, or formatting of the technical content.
5/26/2015	5.4	None	No changes to the meaning, language, or formatting of the technical content.
9/14/2015	5.4	None	No changes to the meaning, language, or formatting of the technical content.
6/13/2016	5.4	None	No changes to the meaning, language, or formatting of the technical content.
9/14/2016	5.4	None	No changes to the meaning, language, or formatting of the technical content.
12/15/2016	5.5	Minor	Clarified the meaning of the technical content.

Table of Contents

1 Introduction

The Delegate Access Management Web Service Protocol is used to manage delegate access to mailbox and calendar information that is stored on a server.

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

1.1 Glossary

This document uses the following terms:

Calendar folder: A Folder object that contains Calendar objects.

Contacts folder: A Folder object that contains Contact objects.

delegate: A user or resource that has permissions to act on behalf of another user or resource.

delegate access: The access that is granted by a delegator to a delegate and is used by the delegate to access the delegator's account.

Deleted Items folder: A special folder that is the default location for objects that have been deleted.

endpoint: A communication port that is exposed by an application server for a specific shared service and to which messages can be addressed.

Hypertext Transfer Protocol (HTTP): An application-level protocol for distributed, collaborative, hypermedia information systems (text, graphic images, sound, video, and other multimedia files) on the World Wide Web.

Hypertext Transfer Protocol Secure (HTTPS): An extension of HTTP that securely encrypts and decrypts web page requests. In some older protocols, "Hypertext Transfer Protocol over Secure Sockets Layer" is still used (Secure Sockets Layer has been deprecated). For more information, see [SSL3] and [RFC5246].

Inbox folder: A special folder that is the default location for Message objects received by a user or resource.

Journal folder: A Folder object that contains Journal objects.

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

meeting request: An instance of a Meeting Request object.

Notes folder: A Folder object that contains Note objects.

permission: A rule that is associated with an object and that regulates which users can gain access to the object and in what manner. See also rights.

security identifier (SID): An identifier for security principals in Windows that is used to identify an account or a group. Conceptually, the **SID** is composed of an account authority portion (typically a domain) and a smaller integer representing an identity relative to the account authority, termed the relative identifier (RID). The **SID** format is specified in [MS-DTYP] section 2.4.2; a string representation of **SIDs** is specified in [MS-DTYP] section 2.4.2 and [MS-AZOD] section 1.1.1.2.

SOAP: A lightweight protocol for exchanging structured information in a decentralized, distributed environment. **SOAP** uses **XML** technologies to define an extensible messaging framework,

which provides a message construct that can be exchanged over a variety of underlying protocols. The framework has been designed to be independent of any particular programming model and other implementation-specific semantics. SOAP 1.2 supersedes SOAP 1.1. See [SOAP1.2-1/2003].

SOAP action: The HTTP request header field used to indicate the intent of the **SOAP** request, using a URI value. See [SOAP1.1] section 6.1.1 for more information.

SOAP body: A container for the payload data being delivered by a **SOAP message** to its recipient. See [SOAP1.2-1/2007] section 5.3 for more information.

SOAP header: A mechanism for implementing extensions to a **SOAP message** in a decentralized manner without prior agreement between the communicating parties. See [SOAP1.2-1/2007] section 5.2 for more information.

SOAP message: An **XML** document consisting of a mandatory SOAP envelope, an optional **SOAP header**, and a mandatory **SOAP body**. See [SOAP1.2-1/2007] section 5 for more information.

Tasks folder: A Folder object that contains Task objects.

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

web server: A server computer that hosts websites and responds to requests from applications.

Web Services Description Language (WSDL): An XML format for describing network services as a set of endpoints that operate on messages that contain either document-oriented or procedure-oriented information. The operations and messages are described abstractly and are bound to a concrete network protocol and message format in order to define an endpoint. Related concrete endpoints are combined into abstract endpoints, which describe a network service. WSDL is extensible, which allows the description of endpoints and their messages regardless of the message formats or network protocols that are used.

WSDL message: An abstract, typed definition of the data that is communicated during a WSDL operation [WSDL]. Also, an element that describes the data being exchanged between web service providers and clients.

WSDL port type: A named set of logically-related, abstract **Web Services Description Language (WSDL)** operations and messages.

XML: The Extensible Markup Language, as described in [XML1.0].

XML namespace: A collection of names that is used to identify elements, types, and attributes in XML documents identified in a URI reference [RFC3986]. A combination of XML namespace and local name allows XML documents to use elements, types, and attributes that have the same names but come from different sources. For more information, see [XMLNS-2ED].

XML namespace prefix: An abbreviated form of an **XML namespace**, as described in [XML].

XML schema: A description of a type of XML document that is typically expressed in terms of constraints on the structure and content of documents of that type, in addition to the basic syntax constraints that are imposed by **XML** itself. An XML schema provides a view of a document type at a relatively high level of abstraction.

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

1.2   References

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

1.2.1   Normative References

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

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

[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

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

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

[RFC3066] Alvestrand, H., "Tags for the Identification of Languages", BCP 47, RFC 3066, January 2001, http://www.ietf.org/rfc/rfc3066.txt

[SOAP1.1] Box, D., Ehnebuske, D., Kakivaya, G., et al., "Simple Object Access Protocol (SOAP) 1.1", W3C Note, 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] Bray, T., Hollander, D., Layman, A., et al., Eds., "Namespaces in XML 1.0 (Third Edition)", W3C Recommendation, December 2009, http://www.w3.org/TR/2009/REC-xml-names-20091208/

[XMLSCHEMA1] Thompson, H., Beech, D., Maloney, M., and Mendelsohn, N., Eds., "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/

1.2.2   Informative References

[MS-OXDSCLI] Microsoft Corporation, "Autodiscover Publishing and Lookup Protocol".

[MS-OXWSADISC] Microsoft Corporation, "Autodiscover Publishing and Lookup SOAP-Based Web Service Protocol".

1.3   Overview

Delegates are **mailbox** owners who are authorized to act on behalf of other mailbox owners. Client applications can use the Delegate Access Management Web Service Protocol to add, update, and remove delegates, and to query the server to determine whether a specific delegate is authorized to act on a specific mailbox.

1.4 Relationship to Other Protocols

A client that implements this protocol can use the Autodiscover Publishing and Lookup SOAP-Based Web Service Protocol, as described in [MS-OXWSADISC], or the Autodiscover Publishing and Lookup Protocol, as described in [MS-OXDSCLI], to identify the target **endpoint** to use for each operation.

This protocol uses the SOAP Protocol, as described in [SOAP1.1], to specify the structure information exchanged between the client and server. This protocol uses the **XML** Protocol, as described in [XMLSCHEMA1] and [XMLSCHEMA2], to describe the message content sent to and from the server.

This protocol uses **SOAP** over **HTTP**, as described in [RFC2616], and SOAP over **HTTPS**, as described in [RFC2818], as shown in the following figure.

```
┌──────────────────────────────────────────┐ ┐
│  Delegate Access Management                │ ┝ This Protocol
│  Web Service Protocol                      │ ┘
├──────────────────────────────────────────┤ ┐
│  SOAP                                      │ │
├──────────────────────────────────────────┤ │
│  HTTP | HTTPS                              │ ┝ Industry Standard
├──────────────────────────────────────────┤ │
│  TCP                                       │ │
├──────────────────────────────────────────┤ │
│  IP                                        │ ┘
└──────────────────────────────────────────┘
```
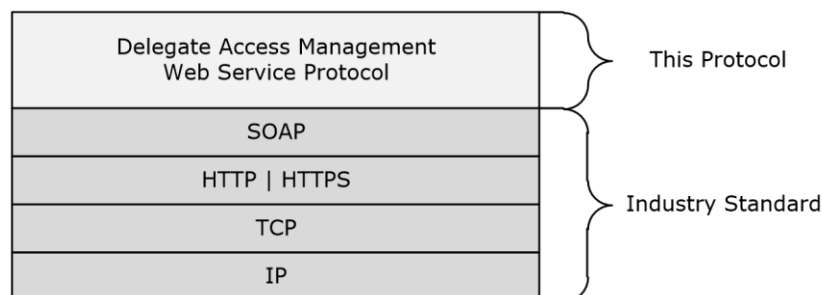
Figure 1: This protocol in relation to other protocols

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

1.5 Prerequisites/Preconditions

The **endpoint URL** that is returned by either the Autodiscover Publishing Lookup SOAP-Based Web Service Protocol, as described in [MS-OXWSADISC], or the Autodiscover Publishing and Lookup Protocol, as described in [MS-OXDSCLI], is required to form the **HTTP** request to the web server that hosts this protocol. The operations that this protocol defines cannot be accessed unless the correct endpoint is identified in the HTTP Web requests that target this protocol.

1.6 Applicability Statement

This protocol is applicable to client applications that manage **mailbox delegates** on a server.

1.7 Versioning and Capability Negotiation

This document covers versioning issues in the following areas:

- **Supported Transports:** This protocol uses multiple transports with SOAP 1.1, as specified in section 2.1.

- **Protocol Versions:** This protocol has only one **WSDL port type** version. The **WSDL** version of the request is identified by using the **t:RequestServerVersion** element, as described in [MS-OXWSCDATA] section 2.2.3.11, and the version of the server responding to the request is identified by using the **t:ServerVersionInfo** element, as described in [MS-OXWSCDATA] section 2.2.3.12.

- **Security and Authentication Methods:** This protocol relies on the **web server** that is hosting it to perform authentication.

- **Localization:** This protocol includes text strings in various messages. Localization considerations for such strings are specified in sections 2.2 and 3.1.4.

- **Capability Negotiation:** This protocol does not support version negotiation.

1.8   Vendor-Extensible Fields

None.

1.9   Standards Assignments

None.

2 Messages

In the following sections, the schema definition might differ from the processing rules imposed by the protocol. The **WSDL** in this specification provides a base description of the protocol. The schema in this specification provides a base description of the message syntax. The text that specifies the WSDL and schema might specify restrictions that reflect actual protocol behavior. For example, the schema definition might allow for an element to be **empty**, **null**, or **not present** but the behavior of the protocol as specified restricts the same elements to being **non-empty**, **not null**, or **present**.

2.1 Transport

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

This protocol relies on the **web server** that hosts the application to perform authentication. The protocol MUST support SOAP over **HTTP**, as specified in [RFC2616]. The protocol SHOULD use secure communications via **HTTPS**, as defined in [RFC2818].

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 **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	
wsdl	http://schemas.xmlsoap.org/wsdl/	[WSDL]
t	http://schemas.microsoft.com/exchange/services/2006/types	
m	http://schemas.microsoft.com/exchange/services/2006/messages	
xs	http://www.w3.org/2001/XMLSchema	[XMLSCHEMA1]

2.2.2 Messages

This specification does not define any common WSDL message definitions.

2.2.3 Elements

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

2.2.4 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 name	Description
ArrayOfDelegateUserResponseMessageType	Specifies one or more **delegates** for a **mailbox**.
BaseDelegateResponseMessageType	Specifies the base type for all Delegate Access Management Web Service Protocol response types.
BaseDelegateType	Specifies the base type for derived types that specify all delegate management requests.
DelegateUserResponseMessageType	Specifies a response message for a single delegate.
ArrayOfDelegateUserType	Specifies one or more responses from a Delegate Access Management Web Service Protocol operation.
ArrayOfUserIdType	Specifies one or more user identifiers.
DelegatePermissionsType	Specifies the delegate **permissions** for a mailbox delegate.
DelegateUserType	Specifies a single delegate to add or update in a mailbox, or a delegate that is returned in a delegate management response.

2.2.4.1 m:ArrayOfDelegateUserResponseMessageType Complex Type

The **ArrayOfDelegateUserResponseMessageType** complex type specifies one or more responses from a Delegate Access Management Web Service Protocol operation.

```
<xs:complexType name="ArrayOfDelegateUserResponseMessageType">
  <xs:sequence>
    <xs:element name="DelegateUserResponseMessageType"
      type="m:DelegateUserResponseMessageType"
      maxOccurs="unbounded"
    />
  </xs:sequence>
</xs:complexType>
```

The following table lists the child elements of the **ArrayOfDelegateUserResponseMessageType** complex type.

Element name	Type	Description
DelegateUserResponseMessageType	**m:DelegateUserResponseMessageType** (section 2.2.4.4).	Specifies a response from a Delegate Access Management Web Service Protocol operation.

The **ArrayOfDelegateUserResponseMessageType** complex type is used in the **BaseDelegateResponseMessageType** complex type, as specified in section 2.2.4.2.

2.2.4.2 m:BaseDelegateResponseMessageType Complex Type

The **BaseDelegateResponseMessageType** complex type is the base type for all Delegate Access Management Web Service Protocol response types. The **BaseDelegateResponseMessageType** complex type extends the **ResponseMessageType** complex type, as specified in [MS-OXWSCDATA] section 2.2.4.67.

```
<xs:complexType name="BaseDelegateResponseMessageType"
  abstract="true"
>
  <xs:complexContent>
    <xs:extension
      base="m:ResponseMessageType"
    >
      <xs:sequence>
        <xs:element name="ResponseMessages"
          type="m:ArrayOfDelegateUserResponseMessageType" minOccurs="0"/>
      </xs:sequence>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>
```

The following table lists the child elements of the **BaseDelegateResponseMessageType** complex type.

Element name	Type	Description
ResponseMessages	**m:ArrayOfDelegateUserResponseMessageType** (section 2.2.4.1)	Specifies one or more response messages from a Delegate Access Management Web Service Protocol operation. Can be present.

2.2.4.3 m:BaseDelegateType Complex Type

The **BaseDelegateType** complex type specifies the base type for derived types that specify all delegate management requests. The **BaseDelegateType** complex type extends the **BaseRequestType** complex type, as specified in [MS-OXWSCDATA] section 2.2.4.17.

```
<xs:complexType name="BaseDelegateType"
  abstract="true"
>
  <xs:complexContent>
    <xs:extension
      base="m:BaseRequestType"
    >
      <xs:sequence>
        <xs:element name="Mailbox"
          type="t:EmailAddressType"
          />
      </xs:sequence>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>
```

The following table lists the child elements of the **BaseDelegateType** complex type.

Element name	Type	Description
Mailbox	**t:EmailAddressType (**[MS-OXWSCDATA] section 2.2.4.31)	Specifies an e-mail address that defines the target of the delegate management operation.

2.2.4.4 m:DelegateUserResponseMessageType Complex Type

The **DelegateUserResponseMessageType** complex type specifies a response message for a single **delegate**. The **DelegateUserResponseMessageType** complex type extends the **ResponseMessageType** complex type, as specified in [MS-OXWSCDATA] section 2.2.4.67.

```
<xs:complexType name="DelegateUserResponseMessageType">
  <xs:complexContent>
    <xs:extension
      base="m:ResponseMessageType">
      <xs:sequence>
        <xs:element name="DelegateUser"
          type="t:DelegateUserType" minOccurs="0"/>
      </xs:sequence>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>
```

The following table lists the child elements of the **DelegateUserResponseMessageType** complex type.

Element name	Type	Description
DelegateUser	**t:DelegateUserType** (section 2.2.4.8)	Specifies a single delegate that is associated with a **mailbox** that is returned by a delegate management operation.

2.2.4.5 t:ArrayOfDelegateUserType Complex Type

The **ArrayOfDelegateUser** complex type specifies one or more **delegates** for a **mailbox**.

```
<xs:complexType name="ArrayOfDelegateUserType">
  <xs:sequence>
    <xs:element name="DelegateUser"
      type="t:DelegateUserType"
      maxOccurs="unbounded"
    />
  </xs:sequence>
</xs:complexType>
```

The following table lists the child elements of the **ArrayOfDelegateUser** complex type.

Element name	Type	Description
DelegateUser	**t:DelegateUserType** (section 2.2.4.8)	Specifies one or more mailbox delegates.

2.2.4.6 t:ArrayOfUserIdType Complex Type

The **ArrayOfUserIdType** complex type specifies one or more user identifiers.

```
<xs:complexType name="ArrayOfUserIdType">
  <xs:sequence>
    <xs:element name="UserId"
      type="t:UserIdType"
      maxOccurs="unbounded"
    />
  </xs:sequence>
</xs:complexType>
```

The following table lists the child elements of the **ArrayOfUserIdType** complex type.

Element name	Type	Description
UserId	**t:UserIdType** ([MS-OXWSCDATA] section 2.2.4.75)	Specifies one user identifier.

2.2.4.7 t:DelegatePermissionsType Complex Type

The **DelegatePermissionsType** complex type specifies the **delegate permissions** for a **mailbox** delegate.

```
<xs:complexType name="DelegatePermissionsType">
  <xs:sequence>
    <xs:element name="CalendarFolderPermissionLevel"
      type="t:DelegateFolderPermissionLevelType"
      minOccurs="0"
    />
    <xs:element name="TasksFolderPermissionLevel"
      type="t:DelegateFolderPermissionLevelType"
      minOccurs="0"
    />
    <xs:element name="InboxFolderPermissionLevel"
      type="t:DelegateFolderPermissionLevelType"
      minOccurs="0"
    />
    <xs:element name="ContactsFolderPermissionLevel"
      type="t:DelegateFolderPermissionLevelType"
      minOccurs="0"
    />
    <xs:element name="NotesFolderPermissionLevel"
      type="t:DelegateFolderPermissionLevelType"
      minOccurs="0"
    />
    <xs:element name="JournalFolderPermissionLevel"
      type="t:DelegateFolderPermissionLevelType"
      minOccurs="0"
    />
  </xs:sequence>
</xs:complexType>
```

The following table lists the child elements of the **DelegatePermissionsType** complex type.

Element name	Type	Description
CalendarFolderPermissionLevel	**t:DelegateFolderPermissionLevelType** (section 2.2.5.1)	Specifies the delegate permissions for the default **Calendar folder**. Can be present.
TasksFolderPermissionLevel	**t:DelegateFolderPermissionLevelType**	Specifies the delegate permissions for the default **Tasks folder**. Can be present.
InboxFolderPermissionLevel	**t:DelegateFolderPermissionLevelType**	Specifies the delegate permissions for the default **Inbox folder**. Can be present.
ContactsFolderPermissionLevel	**t:DelegateFolderPermissionLevelType**	Specifies the delegate permissions for the default **Contacts folder**. Can be present.
NotesFolderPermissionLevel	**t:DelegateFolderPermissionLevelType**	Specifies the delegate permissions for the default **Notes folder**. Can be present.
JournalFolderPermissionLevel	**t:DelegateFolderPermissionLevelType**	Specifies the delegate permissions for the default **Journal folder**. Can be present.

2.2.4.8 t:DelegateUserType Complex Type

The **DelegateUserType** complex type specifies a single **delegate** to add or update in a **mailbox**, or a delegate that is returned in a delegate management response.

```
<xs:complexType name="DelegateUserType">
  <xs:sequence>
    <xs:element name="UserId"
      type="t:UserIdType"
     />
    <xs:element name="DelegatePermissions"
      type="t:DelegatePermissionsType"
      minOccurs="0"
     />
    <xs:element name="ReceiveCopiesOfMeetingMessages"
      type="xs:boolean"
      minOccurs="0"
     />
    <xs:element name="ViewPrivateItems"
      type="xs:boolean"
      minOccurs="0"
     />
  </xs:sequence>
</xs:complexType>
```

The following table lists the child elements of the **DelegateUserType** complex type.

Element name	Type	Description
UserId	**t:UserIdType** ([MS-	Specifies the user identifier for the

Element name	Type	Description
	OXWSCDATA] section 2.2.4.75)	delegate user.
DelegatePermissions	**t:DelegatePermissionsType** (section 2.2.4.7)	Specifies the delegate **permissions** for the delegate user. Can be present.
ReceiveCopiesOfMeetingMessages	**xs:boolean** [XMLSCHEMA2]	Specifies a Boolean value that indicates whether the delegate receives copies of meeting-related messages that are addressed to the primary account.
ViewPrivateItems	**xs:boolean**	Specifies a Boolean value that indicates whether the delegate can view private calendar items on the primary account's calendar.

2.2.5 Simple Types

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

Simple type name	Description
DelegateFolderPermissionLevelType	Specifies the **permissions** that are granted on a folder to a **delegate**.
DeliverMeetingRequestType	Specifies whether a delegate receives **meeting requests** on behalf of a primary account.

2.2.5.1 t:DelegateFolderPermissionLevelType Simple Type

The **DelegateFolderPermissionLevelType** simple type specifies the **permissions** that are granted on a folder to a **delegate**.

```
<xs:simpleType name="DelegateFolderPermissionLevelType">
  <xs:restriction
    base="xs:string"
  >
    <xs:enumeration
      value="None"
     />
    <xs:enumeration
      value="Editor"
     />
    <xs:enumeration
      value="Reviewer"
     />
    <xs:enumeration
      value="Author"
     />
    <xs:enumeration
      value="Custom"
     />
  </xs:restriction>
```

```
      </xs:simpleType>
```

The following table lists the values that are defined by the **DelegateFolderPermissionLevelType** simple type.

Value	Description
None	Delegate has no permissions on the folder.
Editor	Delegate can read, create, and modify items in the folder.
Reviewer	Delegate can read items in the folder.
Author	Delegate can read and create items in the folder.
Custom	This setting is not applicable to this protocol.

2.2.5.2 t:DeliverMeetingRequestsType Simple Type

The **DeliverMeetingRequestsType** simple type specifies how **meeting requests** are handled between the **delegate** and the primary account.

```
<xs:simpleType name="DeliverMeetingRequestsType">
  <xs:restriction
    base="xs:string"
  >
    <xs:enumeration
      value="DelegatesOnly"
     />
    <xs:enumeration
      value="DelegatesAndMe"
     />
    <xs:enumeration
      value="DelegatesAndSendInformationToMe"
     />
    <xs:enumeration
      value="NoForward"
     />
  </xs:restriction>
</xs:simpleType>
```

The following table lists the values that are defined by the **DeliverMeetingRequestsType** simple type.

Value	Description
DelegatesOnly	Specifies that meeting requests are forwarded to the delegate and moved to the **Deleted Items folder** in the primary account's **mailbox**.
DelegatesAndMe	Specifies that meeting requests are forwarded to the delegate and remain in the Inbox folder in the primary account's mailbox.
DelegatesAndSendInformationToMe	Specifies that meeting requests are forwarded to the delegate and remain in the **Inbox folder** in the primary account's mailbox.
NoForward	Specifies that meeting requests are not to be forwarded to delegates. <1>

2.2.6 Attributes

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

2.2.7 Groups

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

2.2.8 Attribute Groups

This specification does not define any common **XML schema** attribute group 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 that are returned by the transport are passed directly back to the higher-layer protocol or application.

3.1 ExchangeServicePortType Server Details

The Delegate Access Management Web Service Protocol defines a single port type with four operations. The operations enable client implementations to create, review, update, and delete **delegates** for a primary account.

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 specified in this document.

The Delegate Access Management Web Service Protocol is used to set, retrieve, update, and delete delegate access permissions on a primary account's **mailbox** on the server. The server maintains the delegate access permissions and modifies them as requested.

The client is not required to maintain the state of delegate access permissions on the server and can retrieve the current set of permissions at any time. If more than one client is changing delegate access permissions, there is no requirement that the server lock the existing set of permissions for changes.

3.1.2 Timers

None.

3.1.3 Initialization

None.

3.1.4 Message Processing Events and Sequencing Rules

This protocol includes the operations that are listed in the following table.

Operation	Description
AddDelegate	Adds one or more **delegates** to a primary account's **mailbox**.
GetDelegate	Gets the delegates that are associated with a primary account's mailbox, if any.
RemoveDelegate	Removes one or more delegates from the primary account's mailbox.
UpdateDelegate	Modifies one or more delegates.

3.1.4.1 AddDelegate Operation

The **AddDelegate** operation adds one or more **delegates** to a **mailbox**.

The following is the WSDL port type specification of the operation.

```
<wsdl:operation name="AddDelegate">
    <wsdl:input message="tns:AddDelegateSoapIn" />
    <wsdl:output message="tns:AddDelegateSoapOut" />
</wsdl:operation>
```

The following is the WSDL binding specification of the operation.

```
<wsdl:operation name="AddDelegate">
   <soap:operation
soapAction="http://schemas.microsoft.com/exchange/services/2006/messages/AddDelegate" />
   <wsdl:input>
      <soap:header message="tns:AddDelegateSoapIn" part="Impersonation" use="literal"/>
      <soap:header message="tns:AddDelegateSoapIn" part="MailboxCulture" use="literal"/>
      <soap:header message="tns:AddDelegateSoapIn" part="RequestVersion" use="literal"/>
      <soap:body parts="request" use="literal" />
   </wsdl:input>
   <wsdl:output>
      <soap:body parts="AddDelegateResult" use="literal" />
      <soap:header message="tns:AddDelegateSoapOut" part="ServerVersion" use="literal"/>
   </wsdl:output>
</wsdl:operation>
```

3.1.4.1.1 Messages

The following table lists the **WSDL message** definitions that are specific to this operation.

Message name	Description
AddDelegateSoapIn	Specifies the **SOAP message** that adds one or more **delegates** to the **mailbox**.
AddDelegateSoapOut	Specifies the SOAP message that is returned by the server in response.

3.1.4.1.1.1   tns:AddDelegateSoapIn Message

The **AddDelegateSoapIn WSDL message** specifies the **AddDelegate** operation request to add one or more **delegates** to a **mailbox**.

```
<wsdl:message name="AddDelegateSoapIn">
   <wsdl:part name="request" element="tns:AddDelegate" />
   <wsdl:part name="Impersonation" element="t:ExchangeImpersonation"/>
   <wsdl:part name="MailboxCulture" element="t:MailboxCulture"/>
   <wsdl:part name="RequestVersion" element="t:RequestServerVersion"/>
</wsdl:message>
```

The **AddDelegateSoapIn** WSDL message is the input message for the **SOAP action**
http://schemas.microsoft.com/exchange/services/2006/messages/AddDelegate.

The parts of the **AddDelegateSoapIn** WSDL message are described in the following table.

Part name	Element/type	Description
request	**tns:AddDelegate** (section 3.1.4.1.2.1)	Specifies the **SOAP body** of the request to add one or more delegates to a mailbox.
Impersonation	**t:ExchangeImpersonation** ([MS-OXWSCDATA] section 2.2.3.3)	Specifies a **SOAP header** that identifies the user whom the client application is impersonating.
MailboxCulture	**t:MailboxCulture** ([MS-OXWSCDATA] section 2.2.3.7)	Specifies a SOAP header that identifies the culture to use for accessing the mailbox. The cultures are defined by [RFC3066].
RequestVersion	**t:RequestServerVersion** ([MS-OXWSCDATA] section 2.2.3.11)	Specifies a SOAP header that identifies the schema version for the **AddDelegate** operation request.

3.1.4.1.1.2   tns:AddDelegateSoapOut Message

The **AddDelegateSoapOut WSDL message** specifies the server response to the **AddDelegate** operation request to add one or more **delegates** to a **mailbox**.

```
<wsdl:message name="AddDelegateSoapOut">
    <wsdl:part name="AddDelegateResult" element="tns:AddDelegateResponse" />
    <wsdl:part name="ServerVersion" element="t:ServerVersionInfo"/>
</wsdl:message>
```

The **AddDelegateSoapOut** WSDL message is the output message for the **SOAP action** http://schemas.microsoft.com/exchange/services/2006/messages/AddDelegate.

The parts of the **AddDelegateSoapOut** WSDL message are described in the following table.

Part name	Element/type	Description
AddDelegateResult	**tns:AddDelegateResponse** (section 3.1.4.1.2.2)	Specifies the **SOAP body** of the response to an **AddDelegate** operation request.
ServerVersion	**t:ServerVersionInfo** ([MS-OXWSCDATA] section 2.2.3.12)	Specifies a **SOAP header** that identifies the server version for the response.

The **AddDelegate** operation returns an **AddDelegateResponse** element with the **ResponseClass** attribute set to "Success". The **ResponseCode** element of the **AddDelegateResponse** element is set to "NoError".

The operation returns the **ResponseMessages** element of the **AddDelegateResponse** element. A **DelegateUserResponseMessageType** element of the **ResponseMessages** element is returned for each **DelegateUser** element in the **AddDelegate** request. If the delegate was added successfully, the **ResponseClass** attribute of the **DelegateUserResponseMessageType** element is set to "Success". The **ResponseCode** element of the **DelegateUserResponseMessageType** is set to "NoError".

Each successful **DelegateUserResponseMessageType** element includes a **DelegateUser** element, which includes a **UserId** element, a **ReceiveCopiesOfMeetingRequests** element, and a **ViewPrivateItems** element.

If the delegate was not added successfully, the **ResponseClass** attribute of the **DelegateUserResponseMessageType** element is set to "Error". The **ResponseCode** element of the

DelegateUserResponseMessageType can be one of the error values listed in the following table. These errors and other common errors are defined in [MS-OXWSCDATA] section 2.2.5.24.

Error Value	Description
ErrorAddDelegatesFailed	Occurs when a list with added delegates cannot be saved.
ErrorDelegateAlreadyExists	Occurs in an **AddDelegate** operation when the specified user already exists in the list of delegates.
ErrorDelegateCannotAddOwner	Occurs in an **AddDelegate** operation when the specified user to be added is the owner of the mailbox.
ErrorDelegateValidationFailed	Occurs in an **AddDelegate** operation when an added delegate user is not valid.
ErrorInvalidDelegatePermission	Specifies that the specified folder permissions are invalid.

3.1.4.1.2 Elements

The following table lists the **XML schema** element definitions that are specific to this operation.

Element name	Description
AddDelegate	Specifies a request to add one or more **delegates** to a **mailbox**.
AddDelegateResponse	Specifies the response body content from a request to add one or more delegates to a mailbox.

3.1.4.1.2.1   AddDelegate Element

The **AddDelegate** element specifies the request message for an **AddDelegate** operation.

```
<xs:element name="AddDelegate"
  type="m:AddDelegateType"
 />
```

3.1.4.1.2.2   AddDelegateResponse Element

The **AddDelegateResponse** element specifies the response message for an **AddDelegate** operation.

```
<xs:element name="AddDelegateResponse"
  type="m:AddDelegateResponseMessageType"
 />
```

3.1.4.1.3 Complex Types

The following table lists the **XML schema** complex type definitions that are specific to this operation.

Complex type name	Description
AddDelegateResponseMessageType	Specifies the response message for the **AddDelegate** operation.

Complex type name	Description
AddDelegateType	Specifies the request message for the **AddDelegate** operation.

3.1.4.1.3.1   m:AddDelegateResponseMessageType Complex Type

The **AddDelegateResponseMessageType** complex type specifies the response message from the **AddDelegate** operation. The **AddDelegateResponseMessageType** complex type extends the **BaseDelegateResponseMessageType** complex type, as specified in section 2.2.4.2.

```
<xs:complexType name="AddDelegateResponseMessageType">
  <xs:complexContent>
    <xs:extension
      base="m:BaseDelegateResponseMessageType"
    />
  </xs:complexContent>
</xs:complexType>
```

3.1.4.1.3.2   m:AddDelegateType Complex Type

The **AddDelegateType** complex type specifies a request to add one or more **delegates** to a primary account's **mailbox** by using the **AddDelegate** operation. The **AddDelegateType** complex type extends the **BaseDelegateType** complex type, as specified in section 2.2.4.3.

```
<xs:complexType name="AddDelegateType">
  <xs:complexContent>
    <xs:extension
      base="m:BaseDelegateType"
    >
      <xs:sequence>
        <xs:element name="DelegateUsers"
          type="t:ArrayOfDelegateUserType"
        />
        <xs:element name="DeliverMeetingRequests"
          type="t:DeliverMeetingRequestsType" minOccurs="0"
        />
      </xs:sequence>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>
```

The following table lists the child elements of the **AddDelegateType** complex type.

Element name	Type	Description
DelegateUsers	**t:ArrayOfDelegateUserType** (section 2.2.4.5)	Specifies the delegates to add to the mailbox.
DeliverMeetingRequests	**t:DeliverMeetingRequestsType** (section 2.2.5.2)	Specifies how meeting-related messages are handled between the delegate and the primary account.

3.1.4.1.4 Simple Types

None.

3.1.4.1.5 Attributes

None.

3.1.4.1.6 Groups

None.

3.1.4.2 GetDelegate Operation

The **GetDelegate** operation gets one or more **delegates** that are assigned to a **mailbox**.

The following is the WSDL port type specification for the operation.

```
<wsdl:operation name="GetDelegate">
     <wsdl:input message="tns:GetDelegateSoapIn" />
     <wsdl:output message="tns:GetDelegateSoapOut" />
</wsdl:operation>
```

The following is the WSDL binding specification for the operation.

```
<wsdl:operation name="GetDelegate">
   <soap:operation
soapAction="http://schemas.microsoft.com/exchange/services/2006/messages/GetDelegate" />
   <wsdl:input>
      <soap:header message="tns:GetDelegateSoapIn" part="Impersonation" use="literal"/>
      <soap:header message="tns:GetDelegateSoapIn" part="MailboxCulture" use="literal"/>
      <soap:header message="tns:GetDelegateSoapIn" part="RequestVersion" use="literal"/>
      <soap:body parts="request" use="literal" />
   </wsdl:input>
   <wsdl:output>
      <soap:body parts="GetDelegateResult" use="literal" />
      <soap:header message="tns:GetDelegateSoapOut" part="ServerVersion" use="literal"/>
   </wsdl:output>

</wsdl:operation>
```

3.1.4.2.1 Messages

The following table lists the **WSDL message** definitions that are specific to this operation.

Message name	Description
GetDelegateSoapIn	Specifies the **SOAP message** that requests one or more **delegates** to the **mailbox**.
GetDelegateSoapOut	Specifies the SOAP message that is returned by the server in response.

3.1.4.2.1.1   tns:GetDelegateSoapIn Message

The **GetDelegateSoapIn WSDL message** specifies the **GetDelegate** operation request to return one or more **delegates** to a **mailbox**.

```
<wsdl:message name="GetDelegateSoapIn">
   <wsdl:part name="request" element="tns:GetDelegate" />
```

```
    <wsdl:part name="Impersonation" element="t:ExchangeImpersonation"/>
    <wsdl:part name="MailboxCulture" element="t:MailboxCulture"/>
    <wsdl:part name="RequestVersion" element="t:RequestServerVersion"/>
</wsdl:message>
```

The **GetDelegateSoapIn** WSDL message is the input message for the **SOAP action**
http://schemas.microsoft.com/exchange/services/2006/messages/GetDelegate.

The parts of the **GetDelegateSoapIn** WSDL message are described in the following table.

Part name	Element/type	Description
request	**tns:GetDelegate** (section 3.1.4.2.2.1)	Specifies the **SOAP body** of the request to return one or more mailbox delegates.
Impersonation	**t:ExchangeImpersonation** ([MS-OXWSCDATA] section 2.2.3.3)	Specifies a **SOAP header** that identifies the user whom the client application is impersonating.
MailboxCulture	**t:MailboxCulture** ([MS-OXWSCDATA] section 2.2.3.7)	Specifies a SOAP header that identifies the culture to use for accessing the mailbox. The cultures are specified by [RFC3066].
RequestVersion	**t:RequestServerVersion** ([MS-OXWSCDATA] section 2.2.3.11)	Specifies a SOAP header that identifies the schema version for the **GetDelegate** operation request.

3.1.4.2.1.2   tns:GetDelegateSoapOut Message

The **GetDelegateSoapOut WSDL message** specifies the server response to the **GetDelegate**
operation request to return one or more **mailbox delegates**.

```
    <wsdl:message name="GetDelegateSoapOut">
        <wsdl:part name="GetDelegateResult" element="tns:GetDelegateResponse" />
        <wsdl:part name="ServerVersion" element="t:ServerVersionInfo"/>
    </wsdl:message>
```

The **GetDelegateSoapOut** WSDL message is the output message for the **SOAP action**
http://schemas.microsoft.com/exchange/services/2006/messages/GetDelegate.

The parts of the **GetDelegateSoapOut** WSDL message are described in the following table.

Part name	Element/type	Description
GetDelegateResult	**tns:GetDelegateResponse** (section 3.1.4.2.2.2)	Specifies the **SOAP body** of the response to a **GetDelegate** operation request.
ServerVersion	**t:ServerVersionInfo** ([MS-OXWSCDATA] section 2.2.3.12)	Specifies a **SOAP header** that identifies the server version for the response.

The **GetDelegate** operation returns a **GetDelegateResponse** element with the **ResponseClass**
attribute set to "Success". The **ResponseCode** element of the **GetDelegateResponse** element is set
to "NoError".

If there are delegates assigned to the mailbox, the operation returns the **ResponseMessages**
element of the **GetDelegateResponse** element. A **DelegateUserResponseMessageType** element
of the **ResponseMessages** element is returned for each delegate returned. If a delegate was

retrieved successfully, the **ResponseClass** attribute of the **DelegateUserResponseMessageType** element is set to "Success". The **ResponseCode** element of the **DelegateUserResponseMessageType** is set to "NoError".

Each successful **DelegateUserResponseMessageType** element includes a **UserId** element, a **DelegatePermissions** element, a **RecceiveCopiesOfMeetingMessages** element, and a **ViewPrivateItems** element.

If the request was not successful, the **ResponseClass** attribute of the **DelegateUserResponseMessageType** element is set to "Error". The **ResponseCode** element of the **DelegateUserResponseMessageType** is set to a value of the **ResponseCodeType** simple type, as specified in [MS-OXWSCDATA] section 2.2.5.24.

3.1.4.2.2 Elements

The following table lists the **XML schema** element definitions that are specific to this operation.

Element name	Description
GetDelegate	Specifies a request to get one or more **delegates** to a **mailbox**.
GetDelegateResponse	Specifies the response body content from a request to get delegates to a mailbox.

3.1.4.2.2.1   GetDelegate Element

The **GetDelegate** element specifies the base element for a **GetDelegate** operation.

```
<xs:element name="GetDelegate"
  type="m:GetDelegateType"
 />
```

3.1.4.2.2.2   GetDelegateResponse Element

The **GetDelegateResponse** element specifies the response message for a **GetDelegate** operation.

```
<xs:element name="GetDelegateResponse"
  type="m:GetDelegateResponseMessageType"
 />
```

3.1.4.2.3 Complex Types

The following table lists the **XML schema** complex type definitions that are specific to this operation.

Complex type name	Description
GetDelegateResponseMessageType	Specifies the response message for the **GetDelegate** operation.
GetDelegateType	Specifies the request message for the **GetDelegate** operation.

3.1.4.2.3.1   m:GetDelegateResponseMessageType Complex Type

The **GetDelegateResponseMessageType** complex type specifies the response message from the **GetDelegate** operation. The **GetDelegateResponseMessageType** complex type extends the **BaseDelegateResponseMessageType** complex type, as specified in section 2.2.4.2.

```
<xs:complexType name="GetDelegateResponseMessageType">
  <xs:complexContent>
    <xs:extension
      base="m:BaseDelegateResponseMessageType"
    >
      <xs:sequence>
        <xs:element name="DeliverMeetingRequests"
          type="t:DeliverMeetingRequestsType"
          minOccurs="0"
        />
      </xs:sequence>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>
```

The following table lists the child elements of the **GetDelegateResponseMessageType** complex type.

Element name	Type	Description
DeliverMeetingRequests	**t:DeliverMeetingRequestsType** (section 2.2.5.2)	Specifies how meeting-related messages are handled between the **delegates** in the response and the primary account. This element can be present.<2>

3.1.4.2.3.2   m:GetDelegateType Complex Type

The **GetDelegateType** complex type specifies a request to return the **delegates** that are users associated with a primary account's mailbox. The **GetDelegateType** complex type extends the **BaseDelegateType** complex type, as specified in section 2.2.4.3.

```
<xs:complexType name="GetDelegateType">
  <xs:complexContent>
    <xs:extension
      base="m:BaseDelegateType"
    >
      <xs:sequence>
        <xs:element name="UserIds"
          type="t:ArrayOfUserIdType"
          minOccurs="0"
        />
      </xs:sequence>
      <xs:attribute name="IncludePermissions"
        type="xs:boolean"
        use="required"
      />
    </xs:extension>
  </xs:complexContent>
</xs:complexType>
```

The following table lists the child elements of the **GetDelegateType** complex type.

Element name	Type	Description
UserIds	**t:ArrayOfUserIdType** (section 2.2.4.6)	Specifies one or more user identifiers of the delegates to be returned for the primary account's mailbox.

3.1.4.2.4 Simple Types

None.

3.1.4.2.5 Attributes

None.

3.1.4.2.6 Groups

None.

3.1.4.3 RemoveDelegate Operation

The **RemoveDelegate** operation removes one or more **delegates** from a **mailbox**.

The following is the **WSDL** port type specification of the operation.

```
<wsdl:operation name="RemoveDelegate">
    <wsdl:input message="tns:RemoveDelegateSoapIn" />
    <wsdl:output message="tns:RemoveDelegateSoapOut" />
</wsdl:operation>
```

The following is the WSDL binding specification of the operation.

```
<wsdl:operation name="RemoveDelegate">
   <soap:operation
soapAction="http://schemas.microsoft.com/exchange/services/2006/messages/RemoveDelegate" />
   <wsdl:input>
      <soap:header message="tns:RemoveDelegateSoapIn" part="Impersonation" use="literal"/>
      <soap:header message="tns:RemoveDelegateSoapIn" part="MailboxCulture" use="literal"/>
      <soap:header message="tns:RemoveDelegateSoapIn" part="RequestVersion" use="literal"/>
      <soap:body parts="request" use="literal" />
   </wsdl:input>
   <wsdl:output>
      <soap:body parts="RemoveDelegateResult" use="literal" />
      <soap:header message="tns:RemoveDelegateSoapOut" part="ServerVersion" use="literal"/>
   </wsdl:output>
</wsdl:operation>
```

3.1.4.3.1 Messages

The following table lists the **WSDL message** definitions that are specific to this operation.

Message name	Description
RemoveDelegateSoapIn	Specifies the **SOAP message** that removes one or more **delegates** from the **mailbox**.
RemoveDelegateSoapOut	Specifies the SOAP message that is returned by the server in response.

3.1.4.3.1.1   tns:RemoveDelegateSoapIn Message

The **RemoveDelegateSoapIn WSDL message** specifies the **RemoveDelegate** operation request to remove one or more **delegates** from a **mailbox**.

```
<wsdl:message name="RemoveDelegateSoapIn">
    <wsdl:part name="request" element="tns:RemoveDelegate" />
    <wsdl:part name="Impersonation" element="t:ExchangeImpersonation"/>
    <wsdl:part name="MailboxCulture" element="t:MailboxCulture"/>
    <wsdl:part name="RequestVersion" element="t:RequestServerVersion"/>
</wsdl:message>
```

The **RemoveDelegateSoapIn** WSDL message is the input message for the **SOAP action** http://schemas.microsoft.com/exchange/services/2006/messages/RemoveDelegate.

The parts of the **RemoveDelegateSoapIn** WSDL message are described in the following table.

Part name	Element/type	Description
request	**tns:RemoveDelegate** (section 3.1.4.3.2.2)	Specifies the **SOAP body** of the request to remove one or more delegates from a mailbox.
Impersonation	**t:ExchangeImpersonation** ([MS-OXWSCDATA] section 2.2.3.3)	Specifies a **SOAP header** that identifies the user whom the client application is impersonating.
MailboxCulture	**t:MailboxCulture** ([MS-OXWSCDATA] section 2.2.3.7)	Specifies a SOAP header that identifies the culture to use for accessing the mailbox. The cultures are defined by [RFC3066].
RequestVersion	**t:RequestServerVersion** ([MS-OXWSCDATA] section 2.2.3.11)	Specifies a SOAP header that identifies the schema version for the **RemoveDelegate** operation request.

3.1.4.3.1.2   tns:RemoveDelegateSoapOut Message

The **RemoveDelegateSoapOut WSDL message** specifies the server response to the **RemoveDelegate** operation request to remove one or more **delegates** from a **mailbox**.

```
<wsdl:message name="RemoveDelegateSoapOut">
    <wsdl:part name="RemoveDelegateResult" element="tns:RemoveDelegateResponse" />
    <wsdl:part name="ServerVersion" element="t:ServerVersionInfo"/>
</wsdl:message>
```

The **RemoveDelegateSoapOut** WSDL message is the output message for the **SOAP action** http://schemas.microsoft.com/exchange/services/2006/messages/RemoveDelegate.

The parts of the **RemoveDelegateSoapOut** WSDL message are described in the following table.

Part name	Element/type	Description
RemoveDelegateResult	**tns:RemoveDelegateResponse** (section 3.1.4.3.2.1)	Specifies the **SOAP body** of the response to a **RemoveDelegate** request.
ServerVersion	**t:ServerVersionInfo** ([MS-OXWSCDATA]	Specifies a **SOAP header** that

Part name	Element/type	Description
	section 2.2.3.12)	identifies the server version for the response.

The **RemoveDelegate** operation returns a **RemoveDelegateResponse** element with the **ResponseClass** attribute set to "Success". The **ResponseCode** element of the **RemoveDelegateResponse** element is set to "NoError".

The operation returns the **ResponseMessages** element of the **RemoveDelegateResponse** element. A **DelegateUserResponseMessageType** element of the **ResponseMessages** element is returned for each **DelegateUser** element in the **RemoveDelegate** request. If the delegate was removed successfully, the **ResponseClass** attribute of the **DelegateUserResponseMessageType** element is set to "Success". The **ResponseCode** element of the D**elegateUserResponseMessageType** is set to "NoError".

If the delegate was not removed successfully, the **ResponseClass** attribute of the **DelegateUserResponseMessageType** element is set to "Error". The **ResponseCode** element of the **DelegateUserResponseMessageType** can be "ErrorRemoveDelegatesFailed". This error and other common errors are specified in [MS-OXWSCDATA] section 2.2.5.24.

3.1.4.3.2 Elements

The following table lists the **XML schema** element definitions that are specific to this operation.

Element name	Description
RemoveDelegate	Specifies a request to remove one or more **delegates** from a **mailbox**.
RemoveDelegateResponse	Specifies the response body content from a request to remove delegates from a mailbox.

3.1.4.3.2.1   RemoveDelegateResponse Element

The **RemoveDelegateResponse** element specifies the response message for a **RemoveDelegate** operation.

```
<xs:element name="RemoveDelegateResponse"
  type="m:RemoveDelegateResponseMessageType"
 />
```

3.1.4.3.2.2   RemoveDelegate Element

The **RemoveDelegate** element specifies the base element for a **RemoveDelegate** operation.

```
<xs:element name="RemoveDelegate"
  type="m:RemoveDelegateType"
 />
```

3.1.4.3.3 Complex Types

The following table lists the **XML schema** complex type definitions that are specific to this operation.

Complex type name	Description
RemoveDelegateResponseMessageType	Specifies the response message for the **RemoveDelegate** operation.
RemoveDelegateType	Specifies the request message for the **RemoveDelegate** operation.

3.1.4.3.3.1   m:RemoveDelegateType Complex Type

The **RemoveDelegateType** complex type specifies a request to remove **delegates** from a primary account's **mailbox** by using the **RemoveDelegate** operation. The **RemoveDelegateType** complex type extends the **BaseDelegateType** complex type, as specified in section 2.2.4.3.

```
<xs:complexType name="RemoveDelegateType">
  <xs:complexContent>
    <xs:extension
      base="m:BaseDelegateType"
    >
      <xs:sequence>
        <xs:element name="UserIds"
          type="t:ArrayOfUserIdType"
        />
      </xs:sequence>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>
```

The following table lists the child elements of the **RemoveDelegateType** complex type.

Element name	Type	Description
UserIds	**t:ArrayOfUserIdType** (section 2.2.4.6)	Specifies a list of user identifiers of the delegates to remove from the mailbox.

3.1.4.3.3.2   m:RemoveDelegateResponseMessageType Complex Type

The **RemoveDelegateResponseMessageType** complex type specifies the response message from the **RemoveDelegate** operation. The **RemoveDelegateResponseMessageType** complex type extends the **BaseDelegateResponseMessageType** complex type, as specified in section 2.2.4.2.

```
<xs:complexType name="RemoveDelegateResponseMessageType">
  <xs:complexContent>
    <xs:extension
      base="m:BaseDelegateResponseMessageType"
    />
  </xs:complexContent>
</xs:complexType>
```

3.1.4.3.4 Simple Types

None.

3.1.4.3.5 Attributes

None.

3.1.4.3.6 Groups

None.

3.1.4.4 UpdateDelegate Operation

The **UpdateDelegate** operation updates one or more **delegates** to a **mailbox**.

The following is the **WSDL** port type specification of the operation.

```
<wsdl:operation name="UpdateDelegate">
     <wsdl:input message="tns:UpdateDelegateSoapIn" />
     <wsdl:output message="tns:UpdateDelegateSoapOut" />
</wsdl:operation>
```

The following is the WSDL binding specification of the operation.

```
<wsdl:operation name="UpdateDelegate">
   <soap:operation
soapAction="http://schemas.microsoft.com/exchange/services/2006/messages/UpdateDelegate" />
   <wsdl:input>
      <soap:header message="tns:UpdateDelegateSoapIn" part="Impersonation" use="literal"/>
      <soap:header message="tns:UpdateDelegateSoapIn" part="MailboxCulture" use="literal"/>
      <soap:header message="tns:UpdateDelegateSoapIn" part="RequestVersion" use="literal"/>
      <soap:body parts="request" use="literal" />
   </wsdl:input>
   <wsdl:output>
      <soap:body parts="UpdateDelegateResult" use="literal" />
      <soap:header message="tns:UpdateDelegateSoapOut" part="ServerVersion" use="literal"/>
   </wsdl:output>
</wsdl:operation>
```

3.1.4.4.1 Messages

The following table lists the **WSDL message** definitions that are specific to this operation.

Message name	Description
UpdateDelegateSoapIn	Specifies the **SOAP message** that requests that one or more **delegates** to a **mailbox** be updated.
UpdateDelegateSoapOut	Specifies the SOAP message that is returned by the server in response.

3.1.4.4.1.1   tns:UpdateDelegateSoapIn Message

The **UpdateDelegateSoapIn WSDL message** specifies the **UpdateDelegate** operation request to modify one or more **delegates** to a **mailbox**.

```
<wsdl:message name="UpdateDelegateSoapIn">
   <wsdl:part name="request" element="tns:UpdateDelegate" />
   <wsdl:part name="Impersonation" element="t:ExchangeImpersonation"/>
   <wsdl:part name="MailboxCulture" element="t:MailboxCulture"/>
   <wsdl:part name="RequestVersion" element="t:RequestServerVersion"/>
```

```
       </wsdl:message>
```

The **UpdateDelegateSoapIn** WSDL message is the input message for the **SOAP action** http://schemas.microsoft.com/exchange/services/2006/messages/UpdateDelegate.

The parts of the **UpdateDelegateSoapIn** WSDL message are described in the following table.

Part name	Element/type	Description
request	**tns:UpdateDelegate** (section 3.1.4.4.2.2)	Specifies the **SOAP body** of the request to modify one or more delegates to a mailbox.
Impersonation	**t:ExchangeImpersonation** ([MS-OXWSCDATA] section 2.2.3.3)	Specifies a **SOAP header** that identifies the user whom the client application is impersonating.
MailboxCulture	**t:MailboxCulture** ([MS-OXWSCDATA] section 2.2.3.7)	Specifies a SOAP header that identifies the culture to use for accessing the mailbox. The cultures are defined by [RFC3066].
RequestVersion	**t:RequestServerVersion** ([MS-OXWSCDATA] section 2.2.3.11)	Specifies a SOAP header that identifies the schema version for the **UpdateDelegate** operation request.

3.1.4.4.1.2   tns:UpdateDelegateSoapOut message

The **UpdateDelegateSoapOut WSDL message** specifies the server response to the **UpdateDelegate** operation request to modify one or more **delegates** to a **mailbox**.

```
<wsdl:message name="UpdateDelegateSoapOut">
   <wsdl:part name="UpdateDelegateResult" element="tns:UpdateDelegateResponse" />
   <wsdl:part name="ServerVersion" element="t:ServerVersionInfo"/>
</wsdl:message>
```

The **UpdateDelegateSoapOut** WSDL message is the output message for the **SOAP action** http://schemas.microsoft.com/exchange/services/2006/messages/UpdateDelegate.

The parts of the **UpdateDelegateSoapOut** WSDL message are described in the following table.

Part name	Element/type	Description
UpdateDelegateResult	**tns:UpdateDelegateResponse** (section 3.1.4.4.2.1)	Specifies the **SOAP body** of the response to the request to modify one or more delegates to a mailbox.
ServerVersion	**t:ServerVersionInfo** ([MS-OXWSCDATA] section 2.2.3.12)	Specifies a **SOAP header** that identifies the server version for the response.

The **UpdateDelegate** operation returns an **UpdateDelegateResponse** element with the **ResponseClass** attribute set to "Success". The **ResponseCode** element of the **UpdateDelegateResponse** element is set to "NoError".

The operation returns the **ResponseMessages** element of the **UpdateDelegateResponse** element. A **DelegateUserResponseMessageType** element of the **ResponseMessages** element is returned for each **DelegateUser** element in the **UpdateDelegate** request. If the delegate was updated successfully, the **ResponseClass** attribute of the **DelegateUserResponseMessageType** element is

set to "Success". The **ResponseCode** element of the **DelegateUserResponseMessageType** is set to "NoError".

Each successful **DelegateUserResponseMessageType** element includes a **DelegateUser** element, which includes a **UserId** element, a **ReceiveCopiesOfMeetingRequests** element, and a **ViewPrivateItems** element.

If the delegate was not updated successfully, the **ResponseClass** attribute of the **DelegateUserResponseMessageType** element is set to "Error". The **ResponseCode** element of the **DelegateUserResponseMessageType** can be one of the error values listed in the following table. These errors and other common errors are specified in [MS-OXWSCDATA] section 2.2.5.24.

Error Value	Description
ErrorInvalidDelegatePermission	Specifies that the specified folder permissions are invalid.
ErrorUpdateDelegatesFailed	Specifies that the delegate list failed to be saved after delegates were updated.

3.1.4.4.2 Elements

The following table lists the **XML schema** element definitions that are specific to this operation.

Element name	Description
UpdateDelegate	Specifies a request to update one or more **delegates** to a **mailbox**.
UpdateDelegateResponse	Specifies the response body content from a request to update delegates to a mailbox.

3.1.4.4.2.1   UpdateDelegateResponse Element

The **UpdateDelegateResponse** element specifies the response message for an **UpdateDelegate** operation.

```
<xs:element name="UpdateDelegateResponse"
  type="m:UpdateDelegateResponseMessageType"
 />
```

3.1.4.4.2.2   UpdateDelegate Element

The **UpdateDelegate** element specifies the base element for an **UpdateDelegate** operation request.

```
<xs:element name="UpdateDelegate"
  type="m:UpdateDelegateType"
 />
```

3.1.4.4.3 Complex Types

The following table lists the **XML schema** complex type definitions that are specific to this operation.

Complex type name	Description
UpdateDelegateResponseMessageType	Specifies the response message for the **UpdateDelegate** operation.
UpdateDelegateType	Specifies the request message for the **UpdateDelegate** operation.

3.1.4.4.3.1   m:UpdateDelegateType Complex Type

The **UpdateDelegateType** complex type specifies a request to update **delegates** to a primary account's **mailbox** by using the **UpdateDelegate** operation. The **UpdateDelegateType** complex type extends the **BaseDelegateType** complex type, as specified in section 2.2.4.3.

```
<xs:complexType name="UpdateDelegateType">
  <xs:complexContent>
    <xs:extension
      base="m:BaseDelegateType"
    >
      <xs:sequence>
        <xs:element name="DelegateUsers"
          type="t:ArrayOfDelegateUserType"
          minOccurs="0"
         />
        <xs:element name="DeliverMeetingRequests"
          type="t:DeliverMeetingRequestsType"
          minOccurs="0"
         />
      </xs:sequence>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>
```

The following table lists the child elements of the **UpdateDelegateType** complex type.

Element name	Type	Description
DelegateUsers	**t:ArrayOfDelegateUserType** (section 2.2.4.5)	Specifies the identities of the delegates to update on a mailbox. This element can be present.
DeliverMeetingRequests	**t:DeliverMeetingRequestsType** (section 2.2.5.2)	Specifies how meeting-related messages are handled between the delegate and the primary account. This element can be present.

3.1.4.4.3.2   m:UpdateDelegateResponseMessageType Complex Type

The **UpdateDelegateResponseMessageType** complex type specifies the response message from the **UpdateDelegate** operation. The **UpdateDelegateResponseMessageType** complex type extends the **BaseDelegateResponseMessageType** complex type, as specified in section 2.2.4.2.

```
<xs:complexType name="UpdateDelegateResponseMessageType">
  <xs:complexContent>
    <xs:extension
      base="m:BaseDelegateResponseMessageType"
     />
```

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

3.1.4.4.4 Simple Types

None.

3.1.4.4.5 Attributes

None.

3.1.4.4.6 Groups

None.

3.1.5   Timer Events

None.

3.1.6   Other Local Events

None.

4   Protocol Examples

The examples in section [4.1](#) through section [4.4](#) show the operations of this protocol.

4.1   AddDelegate Operation

The following example shows an **AddDelegate** request to give user1 **delegate permissions** on folders that are owned by user2. User1 is given Author-level permissions to user2's **Calendar folder** and Reviewer-level permissions to user2's **Contacts folder**. User1 will not receive copies of meeting messages and will be unable to view private items in user2's **mailbox**. **Meeting requests** will be sent to both user1 and user2.

```xml
<?xml version="1.0" encoding="utf-8"?>
<soap:Envelope xmlns:soap="http://schemas.xmlsoap.org/soap/envelope/"
               xmlns:t="http://schemas.microsoft.com/exchange/services/2006/types">
  <soap:Header>
    <t:RequestServerVersion Version="Exchange2013"/>
  </soap:Header>
  <soap:Body xmlns="http://schemas.microsoft.com/exchange/services/2006/messages">
    <AddDelegate>
      <Mailbox>
        <t:EmailAddress>user2@example.com</t:EmailAddress>
      </Mailbox>
      <DelegateUsers>
        <t:DelegateUser>
          <t:UserId>
            <t:PrimarySmtpAddress>user1@example.com</t:PrimarySmtpAddress>
          </t:UserId>
          <t:DelegatePermissions>
            <t:CalendarFolderPermissionLevel>Author</t:CalendarFolderPermissionLevel>
            <t:ContactsFolderPermissionLevel>Reviewer</t:ContactsFolderPermissionLevel>
          </t:DelegatePermissions>
          <t:ReceiveCopiesOfMeetingMessages>false</t:ReceiveCopiesOfMeetingMessages>
          <t:ViewPrivateItems>false</t:ViewPrivateItems>
        </t:DelegateUser>
      </DelegateUsers>
      <DeliverMeetingRequests>DelegatesAndMe</DeliverMeetingRequests>
    </AddDelegate>
  </soap:Body>
</soap:Envelope>
```

The following example shows a successful **AddDelegate** response to an **AddDelegate** request.

```xml
<?xml version="1.0" encoding="utf-8"?>
<soap:Envelope xmlns:soap="http://schemas.xmlsoap.org/soap/envelope/"
               xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
               xmlns:xsd="http://www.w3.org/2001/XMLSchema">
  <soap:Header>
    <t:ServerVersionInfo MajorVersion="8"
            MinorVersion="1"
            MajorBuildNumber="206"
            MinorBuildNumber="0"
            Version="Exchange2013"
            xmlns:t="http://schemas.microsoft.com/exchange/services/2006/types"/>
  </soap:Header>
  <soap:Body>
    <m:AddDelegateResponse
          xmlns:t="http://schemas.microsoft.com/exchange/services/2006/types"
          ResponseClass="Success"
          xmlns:m="http://schemas.microsoft.com/exchange/services/2006/messages">
      <m:ResponseCode>NoError</m:ResponseCode>
      <m:ResponseMessages>
        <m:DelegateUserResponseMessageType ResponseClass="Success">
```

```
                <m:ResponseCode>NoError</m:ResponseCode>
                <m:DelegateUser>
                   <t:UserId>
                     <t:SID>S-1-5-21-1333220396-2200287332-232816053-1116</t:SID>
                     <t:PrimarySmtpAddress>User1@example.com</t:PrimarySmtpAddress>
                     <t:DisplayName>User1</t:DisplayName>
                   </t:UserId>
                   <t:ReceiveCopiesOfMeetingMessages>false</t:ReceiveCopiesOfMeetingMessages>
                  <t:ViewPrivateItems>false</t:ViewPrivateItems>
                  </m:DelegateUser>
               </m:DelegateUserResponseMessageType>
           </m:ResponseMessages>
        </m:AddDelegateResponse>
     </soap:Body>
   </soap:Envelope>
```

4.2   GetDelegate Operation

The following code example shows how to retrieve the **delegate** settings for all the delegates that are set on user3's **mailbox**. All the **permissions** for each user are returned in the response.

```
   <?xml version="1.0" encoding="utf-8"?>
   <soap:Envelope xmlns:soap="http://schemas.xmlsoap.org/soap/envelope/"
                  xmlns:t="http://schemas.microsoft.com/exchange/services/2006/types">
     <soap:Header>
       <t:RequestServerVersion Version="Exchange2013"/>
     </soap:Header>
     <soap:Body>
       <GetDelegate xmlns="http://schemas.microsoft.com/exchange/services/2006/messages"
                    xmlns:t="http://schemas.microsoft.com/exchange/services/2006/types"
                    IncludePermissions="true">
         <Mailbox>
           <t:EmailAddress>user3@example.com</t:EmailAddress>
         </Mailbox>
       </GetDelegate>
     </soap:Body>
   </soap:Envelope>
```

The following example of a **GetDelegate** response shows a successful response to a **GetDelegate** request. The response contains information about the **delegate access** permissions, whether the delegate can view private items, whether the delegate receives copies of meeting messages, and to whom **meeting requests** were delivered.

```
   <?xml version="1.0" encoding="utf-8"?>
   <soap:Envelope xmlns:soap="http://schemas.xmlsoap.org/soap/envelope/"
                  xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
                  xmlns:xsd="http://www.w3.org/2001/XMLSchema">
     <soap:Header>
       <t:ServerVersionInfo MajorVersion="8"
               MinorVersion="1"
               MajorBuildNumber="206"
               MinorBuildNumber="0"
               Version="Exchange2013"
               xmlns:t="http://schemas.microsoft.com/exchange/services/2006/types"/>
     </soap:Header>
     <soap:Body>
       <m:GetDelegateResponse
             xmlns:t="http://schemas.microsoft.com/exchange/services/2006/types"
             ResponseClass="Success"
             xmlns:m="http://schemas.microsoft.com/exchange/services/2006/messages">
         <m:ResponseCode>NoError</m:ResponseCode>
         <m:ResponseMessages>
           <m:DelegateUserResponseMessageType ResponseClass="Success">
```

```
                     <m:ResponseCode>NoError</m:ResponseCode>
                     <m:DelegateUser>
                        <t:UserId>
                           <t:SID>S-1-5-21-1333220396-2200287332-232816053-1116</t:SID>
                           <t:PrimarySmtpAddress>User1@example.com</t:PrimarySmtpAddress>
                           <t:DisplayName>User1</t:DisplayName>
                        </t:UserId>
                        <t:DelegatePermissions>
                           <t:CalendarFolderPermissionLevel>Author</t:CalendarFolderPermissionLevel>
                           <t:ContactsFolderPermissionLevel>Reviewer</t:ContactsFolderPermissionLevel>
                        </t:DelegatePermissions>
                        <t:ReceiveCopiesOfMeetingMessages>false</t:ReceiveCopiesOfMeetingMessages>
                      <t:ViewPrivateItems>false</t:ViewPrivateItems>
                     </m:DelegateUser>
                  </m:DelegateUserResponseMessageType>
            </m:ResponseMessages>
            <m:DeliverMeetingRequests>DelegatesAndMe</m:DeliverMeetingRequests>
            </m:GetDelegateResponse>
       </soap:Body>
   </soap:Envelope>
```

4.3   RemoveDelegate Operation

The following code example shows how to remove two **delegates** from user1's **mailbox**. In this example, one delegate is removed by using the delegate's primary SMTP address, and the other one is removed by using the delegate's **security identifier (SID)**.

```
<?xml version="1.0" encoding="utf-8"?>
<soap:Envelope xmlns:soap="http://schemas.xmlsoap.org/soap/envelope/"
               xmlns:t="http://schemas.microsoft.com/exchange/services/2006/types">
  <soap:Header>
    <t:RequestServerVersion Version="Exchange2013"/>
  </soap:Header>
  <soap:Body>
    <RemoveDelegate xmlns="http://schemas.microsoft.com/exchange/services/2006/messages"
                    xmlns:t="http://schemas.microsoft.com/exchange/services/2006/types">
      <Mailbox>
        <t:EmailAddress>user1@example.com</t:EmailAddress>
      </Mailbox>
      <UserIds>
        <t:UserId>
          <t:PrimarySmtpAddress>user2@example.com</t:PrimarySmtpAddress>
        </t:UserId>
        <t:UserId>
          <t:SID>S-1-5-21-1333220396-2200287332-232816053-1118</t:SID>
        </t:UserId>
      </UserIds>
    </RemoveDelegate>
  </soap:Body>
</soap:Envelope>
```

The following example of a **RemoveDelegate** response shows a successful response to a **RemoveDelegate** request. The response contains a **DelegateUserResponseMessageType** element for each delegate that is removed from the mailbox.

```
<?xml version="1.0" encoding="utf-8"?>
<soap:Envelope xmlns:soap="http://schemas.xmlsoap.org/soap/envelope/"
               xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
               xmlns:xsd="http://www.w3.org/2001/XMLSchema">
  <soap:Header>
    <t:ServerVersionInfo
            MajorVersion="8"
            MinorVersion="1"
```

```
                    MajorBuildNumber="206"
                    MinorBuildNumber="0"
                    Version="Exchange2013"
                    xmlns:t="http://schemas.microsoft.com/exchange/services/2006/types"/>
        </soap:Header>
        <soap:Body>
          <m:RemoveDelegateResponse
                    xmlns:t="http://schemas.microsoft.com/exchange/services/2006/types"
                    ResponseClass="Success"
                    xmlns:m="http://schemas.microsoft.com/exchange/services/2006/messages">
            <m:ResponseCode>NoError</m:ResponseCode>
            <m:ResponseMessages>
              <m:DelegateUserResponseMessageType ResponseClass="Success">
                <m:ResponseCode>NoError</m:ResponseCode>
              </m:DelegateUserResponseMessageType>
              <m:DelegateUserResponseMessageType ResponseClass="Success">
                <m:ResponseCode>NoError</m:ResponseCode>
              </m:DelegateUserResponseMessageType>
            </m:ResponseMessages>
          </m:RemoveDelegateResponse>
        </soap:Body>
      </soap:Envelope>
```

4.4   UpdateDelegate Operation

The following example of an **UpdateDelegate** request shows how to update **delegate permissions** on user1's account. User2 is granted the None permission level for the **Tasks folder** and is granted permission to view private items. User3 is granted Reviewer permissions for the **Journal folder**. **Meeting requests** are sent to the delegates, and information about the request is sent to user1.

```
        <?xml version="1.0" encoding="utf-8"?>
        <soap:Envelope xmlns:soap="http://schemas.xmlsoap.org/soap/envelope/"
                    xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
                    xmlns:xsd="http://www.w3.org/2001/XMLSchema">
          <soap:Header>
            <t:ServerVersionInfo MajorVersion="8"
                    MinorVersion="1"
                    MajorBuildNumber="206"
                    MinorBuildNumber="0"
                    Version="Exchange2013"
                    xmlns:t="http://schemas.microsoft.com/exchange/services/2006/types"/>
          </soap:Header>
          <soap:Body>
            <m:UpdateDelegateResponse
                    xmlns:t="http://schemas.microsoft.com/exchange/services/2006/types"
                    ResponseClass="Success"
                    xmlns:m="http://schemas.microsoft.com/exchange/services/2006/messages">
              <m:ResponseCode>NoError</m:ResponseCode>
              <m:ResponseMessages>
                <m:DelegateUserResponseMessageType ResponseClass="Success">
                  <m:ResponseCode>NoError</m:ResponseCode>
                  <m:DelegateUser>
                    <t:UserId>
                      <t:SID>S-1-5-21-1333220396-2200287332-232816053-1117</t:SID>
                      <t:PrimarySmtpAddress>User2@example.com</t:PrimarySmtpAddress>
                      <t:DisplayName>User2</t:DisplayName>
                    </t:UserId>
                    <t:ReceiveCopiesOfMeetingMessages>true</t:ReceiveCopiesOfMeetingMessages>
                    <t:ViewPrivateItems>true</t:ViewPrivateItems>
                  </m:DelegateUser>
                </m:DelegateUserResponseMessageType>
                <m:DelegateUserResponseMessageType ResponseClass="Success">
                  <m:ResponseCode>NoError</m:ResponseCode>
                  <m:DelegateUser>
                    <t:UserId>
```

```
                  <t:SID>S-1-5-21-1333220396-2200287332-232816053-1118</t:SID>
                  <t:PrimarySmtpAddress>User3@example.com</t:PrimarySmtpAddress>
                  <t:DisplayName>User3</t:DisplayName>
                </t:UserId>
                <t:ReceiveCopiesOfMeetingMessages>true</t:ReceiveCopiesOfMeetingMessages>
                <t:ViewPrivateItems>false</t:ViewPrivateItems>
              </m:DelegateUser>
            </m:DelegateUserResponseMessageType>
          </m:ResponseMessages>
        </m:UpdateDelegateResponse>
      </soap:Body>
    </soap:Envelope>
```

The following example shows a successful response to an **UpdateDelegate** operation.

```
    <?xml version="1.0" encoding="utf-8"?>
    <soap:Envelope xmlns:soap="http://schemas.xmlsoap.org/soap/envelope/"
                   xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
                   xmlns:xsd="http://www.w3.org/2001/XMLSchema">
      <soap:Header>
        <t:ServerVersionInfo MajorVersion="8"
                  MinorVersion="1"
                  MajorBuildNumber="206"
                  MinorBuildNumber="0"
                  Version="Exchange2013"
                  xmlns:t="http://schemas.microsoft.com/exchange/services/2006/types"/>
      </soap:Header>
      <soap:Body>
        <m:UpdateDelegateResponse
                xmlns:t="http://schemas.microsoft.com/exchange/services/2006/types"
                ResponseClass="Success"
                xmlns:m="http://schemas.microsoft.com/exchange/services/2006/messages">
          <m:ResponseCode>NoError</m:ResponseCode>
          <m:ResponseMessages>
            <m:DelegateUserResponseMessageType ResponseClass="Success">
              <m:ResponseCode>NoError</m:ResponseCode>
              <m:DelegateUser>
                <t:UserId>
                  <t:SID>S-1-5-21-1333220396-2200287332-232816053-1117</t:SID>
                  <t:PrimarySmtpAddress>User2@example.com</t:PrimarySmtpAddress>
                  <t:DisplayName>User2</t:DisplayName>
                </t:UserId>
                <t:ReceiveCopiesOfMeetingMessages>true</t:ReceiveCopiesOfMeetingMessages>
                <t:ViewPrivateItems>true</t:ViewPrivateItems>
              </m:DelegateUser>
            </m:DelegateUserResponseMessageType>
            <m:DelegateUserResponseMessageType ResponseClass="Success">
              <m:ResponseCode>NoError</m:ResponseCode>
              <m:DelegateUser>
                <t:UserId>
                  <t:SID>S-1-5-21-1333220396-2200287332-232816053-1118</t:SID>
                  <t:PrimarySmtpAddress>User3@example.com</t:PrimarySmtpAddress>
                  <t:DisplayName>User3</t:DisplayName>
                </t:UserId>
                <t:ReceiveCopiesOfMeetingMessages>true</t:ReceiveCopiesOfMeetingMessages>
                <t:ViewPrivateItems>false</t:ViewPrivateItems>
              </m:DelegateUser>
            </m:DelegateUserResponseMessageType>
          </m:ResponseMessages>
        </m:UpdateDelegateResponse>
      </soap:Body>
    </soap:Envelope>
```

5 Security

5.1 Security Considerations for Implementers

None.

5.2 Index of Security Parameters

None.

6 Appendix A: Full WSDL

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

File name	Description	Section
MS-OXWSDLGM.wsdl	Contains the WSDL for the implementation of this protocol.	6
MS-OXWSDLGM-messages.xsd	Contains the XML schema message definitions that are used in this protocol.	7.1
MS-OXWSDLGM-types.xsd	Contains the XML schema type definitions that are used in this protocol.	7.2

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

This section contains the contents of the MS-OXWSDLGM.wsdl file.

```
<?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="Exchange2016"
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:include schemaLocation="MS-OXWSDLGM-messages.xsd"/>
    </xs:schema>
    <xs:schema id="types" elementFormDefault="qualified" version="Exchange2016"
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"/>
    </xs:schema>
  </wsdl:types>
  <wsdl:message name="GetDelegateSoapIn">
    <wsdl:part name="request" element="tns:GetDelegate" />
    <wsdl:part name="Impersonation" element="t:ExchangeImpersonation"/>
    <wsdl:part name="MailboxCulture" element="t:MailboxCulture"/>
    <wsdl:part name="RequestVersion" element="t:RequestServerVersion"/>
  </wsdl:message>
  <wsdl:message name="GetDelegateSoapOut">
    <wsdl:part name="GetDelegateResult" element="tns:GetDelegateResponse" />
    <wsdl:part name="ServerVersion" element="t:ServerVersionInfo"/>
  </wsdl:message>
  <wsdl:message name="AddDelegateSoapIn">
    <wsdl:part name="request" element="tns:AddDelegate" />
    <wsdl:part name="Impersonation" element="t:ExchangeImpersonation"/>
    <wsdl:part name="MailboxCulture" element="t:MailboxCulture"/>
    <wsdl:part name="RequestVersion" element="t:RequestServerVersion"/>
  </wsdl:message>
  <wsdl:message name="AddDelegateSoapOut">
    <wsdl:part name="AddDelegateResult" element="tns:AddDelegateResponse" />
    <wsdl:part name="ServerVersion" element="t:ServerVersionInfo"/>
```

```
      </wsdl:message>
      <wsdl:message name="RemoveDelegateSoapIn">
        <wsdl:part name="request" element="tns:RemoveDelegate" />
        <wsdl:part name="Impersonation" element="t:ExchangeImpersonation"/>
        <wsdl:part name="MailboxCulture" element="t:MailboxCulture"/>
        <wsdl:part name="RequestVersion" element="t:RequestServerVersion"/>
      </wsdl:message>
      <wsdl:message name="RemoveDelegateSoapOut">
        <wsdl:part name="RemoveDelegateResult" element="tns:RemoveDelegateResponse" />
        <wsdl:part name="ServerVersion" element="t:ServerVersionInfo"/>
      </wsdl:message>
      <wsdl:message name="UpdateDelegateSoapIn">
        <wsdl:part name="request" element="tns:UpdateDelegate" />
        <wsdl:part name="Impersonation" element="t:ExchangeImpersonation"/>
        <wsdl:part name="MailboxCulture" element="t:MailboxCulture"/>
        <wsdl:part name="RequestVersion" element="t:RequestServerVersion"/>
      </wsdl:message>
      <wsdl:message name="UpdateDelegateSoapOut">
        <wsdl:part name="UpdateDelegateResult" element="tns:UpdateDelegateResponse" />
        <wsdl:part name="ServerVersion" element="t:ServerVersionInfo"/>
      </wsdl:message>

      <wsdl:portType name="ExchangeServicePortType">
            <wsdl:operation name="GetDelegate">
                <wsdl:input message="tns:GetDelegateSoapIn" />
                <wsdl:output message="tns:GetDelegateSoapOut" />
            </wsdl:operation>
            <wsdl:operation name="AddDelegate">
                <wsdl:input message="tns:AddDelegateSoapIn" />
                <wsdl:output message="tns:AddDelegateSoapOut" />
            </wsdl:operation>
            <wsdl:operation name="RemoveDelegate">
                <wsdl:input message="tns:RemoveDelegateSoapIn" />
                <wsdl:output message="tns:RemoveDelegateSoapOut" />
            </wsdl:operation>
            <wsdl:operation name="UpdateDelegate">
                <wsdl:input message="tns:UpdateDelegateSoapIn" />
                <wsdl:output message="tns:UpdateDelegateSoapOut" />
            </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="GetDelegate">
                <soap:operation
soapAction="http://schemas.microsoft.com/exchange/services/2006/messages/GetDelegate" />
                <wsdl:input>
                    <soap:header message="tns:GetDelegateSoapIn" part="Impersonation"
use="literal"/>
                    <soap:header message="tns:GetDelegateSoapIn" part="MailboxCulture"
use="literal"/>
                    <soap:header message="tns:GetDelegateSoapIn" part="RequestVersion"
use="literal"/>
                    <soap:body parts="request" use="literal" />
                </wsdl:input>
                <wsdl:output>
                    <soap:body parts="GetDelegateResult" use="literal" />
                    <soap:header message="tns:GetDelegateSoapOut" part="ServerVersion"
use="literal"/>
                </wsdl:output>
        </wsdl:operation>

        <wsdl:operation name="AddDelegate">
                <soap:operation
soapAction="http://schemas.microsoft.com/exchange/services/2006/messages/AddDelegate" />
```

```
            <wsdl:input>
                <soap:header message="tns:AddDelegateSoapIn" part="Impersonation"
use="literal"/>
                <soap:header message="tns:AddDelegateSoapIn" part="MailboxCulture"
use="literal"/>
                <soap:header message="tns:AddDelegateSoapIn" part="RequestVersion"
use="literal"/>
                <soap:body parts="request" use="literal" />
            </wsdl:input>
            <wsdl:output>
                <soap:body parts="AddDelegateResult" use="literal" />
                <soap:header message="tns:AddDelegateSoapOut" part="ServerVersion"
use="literal"/>
            </wsdl:output>
        </wsdl:operation>

        <wsdl:operation name="RemoveDelegate">
            <soap:operation
soapAction="http://schemas.microsoft.com/exchange/services/2006/messages/RemoveDelegate" />
            <wsdl:input>
                <soap:header message="tns:RemoveDelegateSoapIn" part="Impersonation"
use="literal"/>
                <soap:header message="tns:RemoveDelegateSoapIn" part="MailboxCulture"
use="literal"/>
                <soap:header message="tns:RemoveDelegateSoapIn" part="RequestVersion"
use="literal"/>
                <soap:body parts="request" use="literal" />
            </wsdl:input>
            <wsdl:output>
                <soap:body parts="RemoveDelegateResult" use="literal" />
                <soap:header message="tns:RemoveDelegateSoapOut" part="ServerVersion"
use="literal"/>
            </wsdl:output>
        </wsdl:operation>

        <wsdl:operation name="UpdateDelegate">
            <soap:operation
soapAction="http://schemas.microsoft.com/exchange/services/2006/messages/UpdateDelegate" />
            <wsdl:input>
                <soap:header message="tns:UpdateDelegateSoapIn" part="Impersonation"
use="literal"/>
                <soap:header message="tns:UpdateDelegateSoapIn" part="MailboxCulture"
use="literal"/>
                <soap:header message="tns:UpdateDelegateSoapIn" part="RequestVersion"
use="literal"/>
                <soap:body parts="request" use="literal" />
            </wsdl:input>
            <wsdl:output>
                <soap:body parts="UpdateDelegateResult" use="literal" />
                <soap:header message="tns:UpdateDelegateSoapOut" part="ServerVersion"
use="literal"/>
            </wsdl:output>
        </wsdl:operation>

  </wsdl:binding>
</wsdl:definitions>
```

7 Appendix B: Full XML Schema

For ease of implementation, the following sections provide the full XML schema for this protocol.

Schema name	Prefix	Section
Messages schema	m:	7.1
Types schema	t:	7.2

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

7.1 Messages Schema

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

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

File name	Defining specification
MS-OXWSCDATA-messages.xsd	[MS-OXWSCDATA] section 7.1

```xml
<?xml version="1.0" encoding="utf-8"?>
<xs:schema xmlns:m="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="Exchange2016" id="messages">
  <xs:include schemaLocation="MS-OXWSCDATA-messages.xsd"/>
  <xs:import namespace="http://schemas.microsoft.com/exchange/services/2006/types"
schemaLocation="MS-OXWSDLGM-types.xsd"/>
  <xs:complexType name="AddDelegateResponseMessageType">
    <xs:complexContent>
      <xs:extension base="m:BaseDelegateResponseMessageType"/>
    </xs:complexContent>
  </xs:complexType>
  <xs:element name="AddDelegateResponse" type="m:AddDelegateResponseMessageType"/>
  <xs:complexType name="AddDelegateType">
    <xs:complexContent>
      <xs:extension base="m:BaseDelegateType">
        <xs:sequence>
          <xs:element name="DelegateUsers" type="t:ArrayOfDelegateUserType"/>
          <xs:element name="DeliverMeetingRequests" type="t:DeliverMeetingRequestsType"
minOccurs="0"/>
        </xs:sequence>
      </xs:extension>
    </xs:complexContent>
  </xs:complexType>
  <xs:element name="AddDelegate" type="m:AddDelegateType"/>
  <xs:complexType name="ArrayOfDelegateUserResponseMessageType">
    <xs:sequence>
      <xs:element name="DelegateUserResponseMessageType"
type="m:DelegateUserResponseMessageType" maxOccurs="unbounded"/>
    </xs:sequence>
  </xs:complexType>
  <xs:complexType name="BaseDelegateResponseMessageType" abstract="true">
    <xs:complexContent>
```

```
        <xs:extension base="m:ResponseMessageType">
          <xs:sequence>
            <xs:element name="ResponseMessages" type="m:ArrayOfDelegateUserResponseMessageType"
minOccurs="0"/>
          </xs:sequence>
        </xs:extension>
      </xs:complexContent>
    </xs:complexType>
    <xs:complexType name="BaseDelegateType" abstract="true">
      <xs:complexContent>
        <xs:extension base="m:BaseRequestType">
          <xs:sequence>
            <xs:element name="Mailbox" type="t:EmailAddressType"/>
          </xs:sequence>
        </xs:extension>
      </xs:complexContent>
    </xs:complexType>
    <xs:complexType name="DelegateUserResponseMessageType">
      <xs:complexContent>
        <xs:extension base="m:ResponseMessageType">
          <xs:sequence>
            <xs:element name="DelegateUser" type="t:DelegateUserType" minOccurs="0"/>
          </xs:sequence>
        </xs:extension>
      </xs:complexContent>
    </xs:complexType>
    <xs:complexType name="GetDelegateType">
      <xs:complexContent>
        <xs:extension base="m:BaseDelegateType">
          <xs:sequence>
            <xs:element name="UserIds" type="t:ArrayOfUserIdType" minOccurs="0"/>
          </xs:sequence>
          <xs:attribute name="IncludePermissions" type="xs:boolean" use="required"/>
        </xs:extension>
      </xs:complexContent>
    </xs:complexType>
    <xs:element name="GetDelegateResponse" type="m:GetDelegateResponseMessageType"/>
    <xs:complexType name="GetDelegateResponseMessageType">
      <xs:complexContent>
        <xs:extension base="m:BaseDelegateResponseMessageType">
          <xs:sequence>
            <xs:element name="DeliverMeetingRequests" type="t:DeliverMeetingRequestsType"
minOccurs="0"/>
          </xs:sequence>
        </xs:extension>
      </xs:complexContent>
    </xs:complexType>
    <xs:element name="GetDelegate" type="m:GetDelegateType"/>
    <xs:complexType name="RemoveDelegateType">
      <xs:complexContent>
        <xs:extension base="m:BaseDelegateType">
          <xs:sequence>
            <xs:element name="UserIds" type="t:ArrayOfUserIdType"/>
          </xs:sequence>
        </xs:extension>
      </xs:complexContent>
    </xs:complexType>
    <xs:element name="RemoveDelegate" type="m:RemoveDelegateType"/>
    <xs:complexType name="RemoveDelegateResponseMessageType">
      <xs:complexContent>
        <xs:extension base="m:BaseDelegateResponseMessageType"/>
      </xs:complexContent>
    </xs:complexType>
    <xs:element name="RemoveDelegateResponse" type="m:RemoveDelegateResponseMessageType"/>
    <xs:complexType name="UpdateDelegateType">
      <xs:complexContent>
        <xs:extension base="m:BaseDelegateType">
          <xs:sequence>
            <xs:element name="DelegateUsers" type="t:ArrayOfDelegateUserType" minOccurs="0"/>
```

```
              <xs:element name="DeliverMeetingRequests" type="t:DeliverMeetingRequestsType"
    minOccurs="0"/>
          </xs:sequence>
        </xs:extension>
      </xs:complexContent>
    </xs:complexType>
    <xs:element name="UpdateDelegate" type="m:UpdateDelegateType"/>
    <xs:complexType name="UpdateDelegateResponseMessageType">
      <xs:complexContent>
        <xs:extension base="m:BaseDelegateResponseMessageType"/>
      </xs:complexContent>
    </xs:complexType>
    <xs:element name="UpdateDelegateResponse" type="m:UpdateDelegateResponseMessageType"/>
</xs:schema>
```

7.2   Types Schema

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

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

File name	Defining specification
MS-OXWSCDATA-types.xsd	[MS-OXWSCDATA] section 7.2

```
<?xml version="1.0" encoding="utf-8"?>
<xs:schema 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/types"
elementFormDefault="qualified" version="Exchange2016" id="types">
  <xs:import namespace="http://www.w3.org/XML/1998/namespace"/>
<xs:include schemaLocation="MS-OXWSCDATA-types.xsd" />

  <xs:complexType name="ArrayOfDelegateUserType">
    <xs:sequence>
      <xs:element name="DelegateUser" type="t:DelegateUserType" maxOccurs="unbounded"/>
    </xs:sequence>
  </xs:complexType>
  <xs:complexType name="ArrayOfUserIdType">
    <xs:sequence>
      <xs:element name="UserId" type="t:UserIdType" maxOccurs="unbounded"/>
    </xs:sequence>
  </xs:complexType>
  <xs:simpleType name="DeliverMeetingRequestsType">
    <xs:restriction base="xs:string">
      <xs:enumeration value="DelegatesOnly"/>
      <xs:enumeration value="DelegatesAndMe"/>
      <xs:enumeration value="DelegatesAndSendInformationToMe"/>
      <xs:enumeration value="NoForward"/>
    </xs:restriction>
  </xs:simpleType>
  <xs:complexType name="DelegateUserType">
    <xs:sequence>
      <xs:element name="UserId" type="t:UserIdType"/>
      <xs:element name="DelegatePermissions" type="t:DelegatePermissionsType" minOccurs="0"/>
      <xs:element name="ReceiveCopiesOfMeetingMessages" type="xs:boolean" minOccurs="0"/>
      <xs:element name="ViewPrivateItems" type="xs:boolean" minOccurs="0"/>
    </xs:sequence>
  </xs:complexType>
  <xs:complexType name="DelegatePermissionsType">
    <xs:sequence>
```

```
        <xs:element name="CalendarFolderPermissionLevel"
type="t:DelegateFolderPermissionLevelType" minOccurs="0"/>
        <xs:element name="TasksFolderPermissionLevel"
type="t:DelegateFolderPermissionLevelType" minOccurs="0"/>
        <xs:element name="InboxFolderPermissionLevel"
type="t:DelegateFolderPermissionLevelType" minOccurs="0"/>
        <xs:element name="ContactsFolderPermissionLevel"
type="t:DelegateFolderPermissionLevelType" minOccurs="0"/>
        <xs:element name="NotesFolderPermissionLevel"
type="t:DelegateFolderPermissionLevelType" minOccurs="0"/>
        <xs:element name="JournalFolderPermissionLevel"
type="t:DelegateFolderPermissionLevelType" minOccurs="0"/>
    </xs:sequence>
  </xs:complexType>
  <xs:simpleType name="DelegateFolderPermissionLevelType">
    <xs:restriction base="xs:string">
      <xs:enumeration value="None"/>
      <xs:enumeration value="Editor"/>
      <xs:enumeration value="Reviewer"/>
      <xs:enumeration value="Author"/>
      <xs:enumeration value="Custom"/>
    </xs:restriction>
  </xs:simpleType>
</xs:schema>
```

8 Appendix C: 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 Service Pack 1 (SP1)

- Microsoft Exchange Server 2010

- Microsoft Exchange Server 2013

- Microsoft Exchange Server 2016

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 2.2.5.2: Exchange 2007 SP1 and Exchange 2010 do not use the "NoForward" enumeration value.

<2> Section 3.1.4.2.3.1: When the **DeliverMeetingRequests** element is set to "NoForward" for a delegate, Microsoft Exchange Server 2010 Service Pack 1 (SP1), Microsoft Exchange Server 2010 Service Pack 2 (SP2), Exchange 2013, and Exchange 2016 do not include the **DeliverMeetingRequests** element in the response.

9   Change Tracking

This section identifies changes that were made to this document since the last release. Changes are classified as New, Major, Minor, Editorial, or No change.

The revision class **New** means that a new document is being released.

The revision class **Major** means that the technical content in the document was significantly revised. Major changes affect protocol interoperability or implementation. Examples of major changes are:

- A document revision that incorporates changes to interoperability requirements or functionality.

- The removal of a document from the documentation set.

The revision class **Minor** means that the meaning of the technical content was clarified. Minor changes do not affect protocol interoperability or implementation. Examples of minor changes are updates to clarify ambiguity at the sentence, paragraph, or table level.

The revision class **Editorial** means that the formatting in the technical content was changed. Editorial changes apply to grammatical, formatting, and style issues.

The revision class **No change** means that no new technical changes were introduced. Minor editorial and formatting changes may have been made, but the technical content of the document is identical to the last released version.

Major and minor changes can be described further using the following change types:

- New content added.

- Content updated.

- Content removed.

- New product behavior note added.

- Product behavior note updated.

- Product behavior note removed.

- New protocol syntax added.

- Protocol syntax updated.

- Protocol syntax removed.

- New content added due to protocol revision.

- Content updated due to protocol revision.

- Content removed due to protocol revision.

- New protocol syntax added due to protocol revision.

- Protocol syntax updated due to protocol revision.

- Protocol syntax removed due to protocol revision.

- Obsolete document removed.

Editorial changes are always classified with the change type **Editorially updated**.

Some important terms used in the change type descriptions are defined as follows:

▪ **Protocol syntax** refers to data elements (such as packets, structures, enumerations, and methods) as well as interfaces.

▪ **Protocol revision** refers to changes made to a protocol that affect the bits that are sent over the wire.

The changes made to this document are listed in the following table. For more information, please contact dochelp@microsoft.com.

Section	Tracking number (if applicable) and description	Major change (Y or N)	Change type
7.1 Messages Schema	Updated the namespace prefix from "tns" to "m".	N	Content update.

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