[MS-OXWSDLGM]: Delegate Access Management Web Service Protocol Specification

Preliminary Documentation. This Open Specification provides documentation for past and current releases and/or for the pre-release (beta) version of this technology. This Open Specification is final documentation for past or current releases as specifically noted in the document, as applicable; it is preliminary documentation for the pre-release (beta) versions. Microsoft will release final documentation in connection with the commercial release of the updated or new version of this technology. As the documentation may change between this preliminary version and the final version of this technology, there are risks in relying on preliminary documentation. To the extent that you incur additional development obligations or any other costs as a result of relying on this preliminary documentation, you do so at your own risk.

Revision Summary

Date	Revision History	Revision Class	Comments
07/15/2009	1.0	Major	Initial Availability.
11/04/2009	1.1.0	Minor	Updated the technical content.
02/10/2010	1.2.0	Minor	Updated the technical content.
05/05/2010	1.2.1	Editorial	Revised and edited the technical content.
08/04/2010	2.0	Major	Significantly changed the technical content.
11/03/2010	3.0	Major	Significantly changed the technical content.
03/18/2011	4.0	Major	Significantly changed the technical content.
08/05/2011	4.1	Minor	Clarified the meaning of the technical content.
10/07/2011	4.1	No change	No changes to the meaning, language, or formatting of the technical content.
01/20/2012	5.0	Major	Significantly changed the technical content.
04/27/2012	5.0	No change	No changes to the meaning, language, or formatting of the technical content.

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

1.1 Glossary

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

Hypertext Transfer Protocol (HTTP)
Hypertext Transfer Protocol over Secure Sockets Layer (HTTPS)
XML

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

Calendar folder
delegate
Deleted Items folder
endpoint
Inbox folder
mailbox
meeting request
SOAP action
SOAP body
SOAP header
SOAP message
Uniform Resource Locator (URL)
Web Services Description Language (WSDL)
WSDL message
WSDL port type
XML namespace
XML schema

The following terms are specific to this document:

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

1.2 References

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

1.2.1 Normative References

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

http://msdn2.microsoft.com/en-us/library/E4BD6494-06AD-4aed-9823-445E921C9624, as an additional source.

[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

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

[RFC3066] Alvestrand, H., "Tags for the Identification of Language", 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", 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.S., Ed., Beech, D., Ed., Maloney, M., Ed., and Mendelsohn, N., Ed., "XML Schema Part 1: Structures", W3C Recommendation, May 2001, http://www.w3.org/TR/2001/REC-xmlschema-1-20010502/

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

1.2.2 Informative References

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

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

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

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

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

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 (4)** 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.
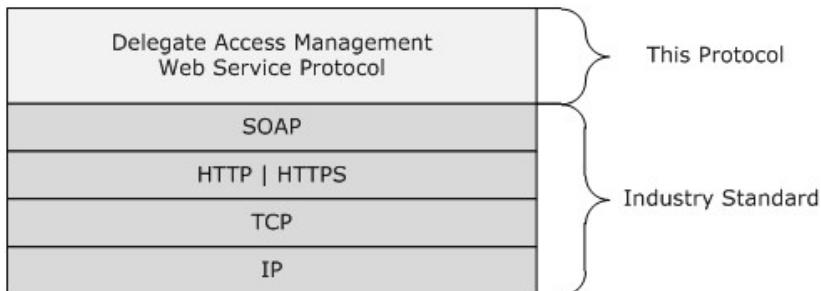
Figure 1: This protocol in relation to other protocols

1.5 Prerequisites/Preconditions

The endpoint(4) **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 (4) 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 2.2.4.9, and the version of the server responding to the request is identified by using the **t:ServerVersionInfo** element, as described in [MS-OXWSCDATA] section 2.2.4.10.

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

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 class for all Delegate Access Management Web Service Protocol response types.
BaseDelegateType	Specifies the base class for derived classes that specify a delegate management operation.
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:ArrayOfDelegateResponseMessageType Complex Type

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

```
<xs:complexType name="ArrayOfDelegateResponseMessageType">
  <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 one or more responses from a Delegate Access Management Web Service Protocol

Element name	Type	Description
		operation.

The **ArrayOfDelegateUserResponseMessageType** complex type is used in the
BaseDelegateResponseMessageType complex type, as specified in section 2.2.4.2, and is
returned by all operations used by this protocol.

2.2.4.2   m:BaseDelegateResponseMessageType Complex Type

The B**aseDelegateResponseMessageType** 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 2.2.3.57.

```
<xs:complexType name="BaseDelegateResponseMessageType"
  abstract="true"
>
  <xs:complexContent>
    <xs:extension
      base="m:ResponseMessageType"
    >
      <xs:sequence>
        <xs:element name="ResponseMessages"
          type="m:ArrayOfDelegateUserResponseMessageType"
        />
      </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 Ba**seDelegateType** complex type specifies the base class for derived classes that specify a
delegate management operation. The **BaseDelegateType** complex type extends the
BaseRequestType complex type, as specified in [MS-OXWSCDATA] section 2.2.3.15.

```
<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 2.2.3.27)	Specifies an e-mail address that defines the target of the delegate management operation.

2.2.4.4   m:DelegateUserResponseMessageType Complex Type

The De**legateUserResponseMessageType** 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 2.2.3.57.

```
  <xs:complexType name="DelegateUserResponseMessageType">
    <xs:complexContent>
      <xs:extension
        base="m:ResponseMessageType"
      >
        <xs:sequence>
          <xs:element name="DelegateUser"
            type="t:DelegateUserType"
          />
        </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="UserName"
      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
UserName	**t:UserIdType** ([MS-OXWSCDATA] section 2.2.3.62)	Specifies one or more user identifiers.

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-OXWSCDATA] section 2.2.3.62)	Specifies the user identifier for the 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

Simple type name	Description
	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	Delegate has a custom permission set on the folder.

2.2.5.2 t:DeliverMeetingRequestsType Simple Type

The **DeliverMeetingRequestsType** simple type specifies whether a delegate receives meeting requests on behalf of 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. <1>
NoForward	Specifies that meeting requests are not to be forwarded to delegates. <2>

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 a delegate to a primary account's mailbox.
GetDelegate	Gets the delegates that are associated with a primary account's mailbox, if any.
RemoveDelegate	Removes the specified delegate from the primary account's mailbox.
UpdateDelegate	Modifies the specified delegate.

3.1.4.1 AddDelegate Operation

The **AddDelegate** operation adds a delegate to a mailbox.

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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 the delegate 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 a delegate 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 a delegate to a mailbox.
Impersonation	**t:ExchangeImpersonation** ([MS-OXWSCDATA] section 2.2.3.29)	Specifies a **SOAP header** that identifies the user whom the client application is impersonating.
MailboxCulture	**t:MailboxCulture** ([MS-OXWSCDATA] section 2.2.3.39)	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 2.2.4.9)	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 a delegate 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 2.2.4.10)	Specifies a SOAP header that identifies the server version for the response.

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 a delegate to a mailbox.
AddDelegateResponse	Specifies the response body content from a request to add a delegate to a mailbox.

3.1.4.1.2.1 tns:AddDelegate Element

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

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

3.1.4.1.2.2 tns: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.
AddDelegate	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:AddDelegate Complex Type

The **AddDelegateType** complex type specifies a request to add 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="AddDelegate">
```

```
                 <xs:complexContent>
                   <xs:extension
                     base="m:BaseDelegateType"
                   >
                     <xs:sequence>
                       <xs:element name="DelegateUsers"
                         type="t:ArrayOfDelegateUserType"
                        />
                       <xs:element name="DeliverMeetingRequests"
                         type="t:DeliverMeetingRequestsType"
                        />
                     </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:ArrayOfDelegatorUserType** (section 2.2.4.5)	Specifies the delegates to add to the mailbox.
DeliverMeetingRequests	**t:DeliverMeetingRequestsType** (section 2.2.5.2)	Specifies whether the delegates receive meeting-related messages that are sent to the primary account.

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 2.2.3.29)	Specifies a SOAP header that identifies the user whom the client application is impersonating.
MailboxCulture	**t:MailboxCulture** ([MS-OXWSCDATA] section 2.2.4.6)	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 2.2.4.9)	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 2.2.4.10)	Specifies a SOAP header that identifies the server version for the response.

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 tns:GetDelegate Element

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

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

3.1.4.2.2.2 tns: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.
GetDelegate	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="DeliverMeetingRequest"
          type="t:DeliverMeetingRequestsType"
        />
      </xs:sequence>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>
```

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

Element name	Type	Description
DeliverMeetingRequest	**t:DeliverMeetingRequestsType** (section 2.2.5.2)	Specifies whether the delegates in the response receive meeting-related messages that are sent to the primary account. This element can be present.<3>

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"
        />
      </xs:sequence>
    </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 for the primary accounts whose mailbox delegates are returned.

3.1.4.3   RemoveDelegate Operation

The **RemoveDelegate** operation removes a delegate 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 a delegate 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 a delegate from a mailbox.
Impersonation	**t:ExchangeImpersonation** ([MS-OXWSCDATA] section 2.2.4.3)	Specifies a SOAP header that identifies the user whom the client application is impersonating.
MailboxCulture	**t:MailboxCulture** ([MS-OXWSCDATA] section 2.2.4.6)	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 2.2.4.9)	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 a delegate 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.

Part name	Element/type	Description
ServerVersion	**t:ServerVersionInfo** ([MS-OXWSCDATA] section 2.2.4.10)	Specifies a SOAP header that identifies the server version for the response.

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 tns: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 tns: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
AddDelegateResponseMessageType	Specifies the response message for the **RemoveDelegate** operation.
AddDelegate	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>
```

3.1.4.4   UpdateDelegate Operation

The **UpdateDelegate** operation updates a delegate 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 a delegate 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 a delegate 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**	Specifies the SOAP body of the request to modify a delegate to a mailbox.
Impersonation	**t:ExchangeImpersonation** ([MS-OXWSCDATA] section 2.2.4.3)	Specifies a SOAP header that identifies the user whom the client application is impersonating.
MailboxCulture	**t:MailboxCulture** ([MS-OXWSCDATA] section 2.2.4.6)	Specifies a SOAP header that identifies the culture to use for accessing the mailbox. The cultures are defined by [RFC3066].

Part name	Element/type	Description
RequestVersion	**t:RequestServerVersion** ([MS-OXWSCDATA] section 2.2.4.9)	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 a delegate 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 a delegate to a mailbox.
ServerVersion	**t:ServerVersionInfo** ([MS-OXWSCDATA] section 2.2.4.10)	Specifies a SOAP header that identifies the server version for the response.

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 tns: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 tns: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.
UpdateDelegate	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.

Element name	Type	Description
		This element can be present.
DeliverMeetingRequests	**t:DeliverMeetingRequestsType** (section 2.2.5.2)	Specifies a Boolean value that indicates 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>
```

3.1.5   Timer Events

None.

3.1.6   Other Local Events

None.

4 Protocol Examples

None.

5 Security

5.1 Security Considerations for Implementers

The Delegate Access Management Web Service Protocol does not use any additional security mechanisms.

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="Exchange2010"
xmlns:m="http://schemas.microsoft.com/exchange/services/2006/messages"
xmlns:tns="http://schemas.microsoft.com/exchange/services/2006/messages"
xmlns:t="http://schemas.microsoft.com/exchange/services/2006/types"
xmlns:xs="http://www.w3.org/2001/XMLSchema"
targetNamespace="http://schemas.microsoft.com/exchange/services/2006/messages"
xmlns="http://schemas.microsoft.com/exchange/services/2006/messages">
            <xs:include schemaLocation="MS-OXWSDLGM-messages.xsd"/>
        </xs:schema>
        <xs:schema id="types" elementFormDefault="qualified" version="Exchange2010"
xmlns:t="http://schemas.microsoft.com/exchange/services/2006/types"
targetNamespace="http://schemas.microsoft.com/exchange/services/2006/types"
xmlns="http://schemas.microsoft.com/exchange/services/2006/types"
xmlns:tns="http://schemas.microsoft.com/exchange/services/2006/types"
xmlns:xs="http://www.w3.org/2001/XMLSchema">
            <xs:import namespace="http://www.w3.org/XML/1998/namespace"/>
        </xs:schema>
    </wsdl:types>

    <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: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: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:tns="http://schemas.microsoft.com/exchange/services/2006/messages"
xmlns:t="http://schemas.microsoft.com/exchange/services/2006/types"
xmlns:xs="http://www.w3.org/2001/XMLSchema"
targetNamespace="http://schemas.microsoft.com/exchange/services/2006/messages"
elementFormDefault="qualified" version="Exchange2010" id="messages">
    <xs: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:tns="http://schemas.microsoft.com/exchange/services/2006/types"
xmlns:xs="http://www.w3.org/2001/XMLSchema"
targetNamespace="http://schemas.microsoft.com/exchange/services/2006/types"
elementFormDefault="qualified" version="Exchange2010" id="types">
  <xs:import namespace="http://www.w3.org/XML/1998/namespace"/>
  <xs:include schemaLocation="MS-OXWSCDATA-types.xsd" />
```

```xml
      <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 15 Technical Preview

- Microsoft® Office Outlook® 2007

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: Office Outlook 2007 uses this value to remove the Accept, Tentative, and Decline buttons from the principal user's reading pane.

<2> Section 2.2.5.2: Exchange 2007 SP1 and Exchange 2010 do not use the "NoForward" enumeration value.

<3> Section 3.1.4.2.3.1: When the **DeliverMeetingRequest** element is set to "NoForward" for a delegate, Exchange 2010 and Exchange 2010 SP1 do not include the **DeliverMeetingRequest** element in the response.

9 Change Tracking

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

10 Index