[MS-OXWSMTGS]:

Calendaring 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	2.0.0	Major	Updated and revised the technical content.
2/10/2010	2.1.0	Minor	Updated the technical content.
5/5/2010	2.1.1	Editorial	Revised and edited the technical content.
8/4/2010	2.2	Minor	Clarified the meaning of the technical content.
11/3/2010	2.2	None	No changes to the meaning, language, or formatting of the technical content.
3/18/2011	2.2	None	No changes to the meaning, language, and formatting of the technical content.
8/5/2011	2.2	None	No changes to the meaning, language, or formatting of the technical content.
10/7/2011	3.0	Major	Significantly changed the technical content.
1/20/2012	4.0	Major	Significantly changed the technical content.
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7/16/2012	4.1	Minor	Clarified the meaning of the technical content.
10/8/2012	5.0	Major	Significantly changed the technical content.
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11/18/2013	7.0	None	No changes to the meaning, language, or formatting of the technical content.
2/10/2014	7.0	None	No changes to the meaning, language, or formatting of the technical content.
4/30/2014	7.0	None	No changes to the meaning, language, or formatting of the technical content.
7/31/2014	7.1	Minor	Clarified the meaning of the technical content.
10/30/2014	7.1	None	No changes to the meaning, language, or formatting of the technical content.
5/26/2015	8.0	Major	Significantly changed the technical content.
9/14/2015	9.0	Major	Significantly changed the technical content.
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9/14/2016	11.0	Major	Significantly changed the technical content.
6/20/2017	11.1	Minor	Clarified the meaning of the technical content.
7/24/2018	12.0	Major	Significantly changed the technical content.

Date	Revision History	Revision Class	Comments
10/1/2018	13.0	Major	Significantly changed the technical content.
2/19/2020	13.1	Minor	Clarified the meaning of the technical content.

Table of Contents

1   Introduction

The Calendaring Web Service Protocol enables clients to create, retrieve, update, move, copy, and delete calendar-related items (that is, appointments, meetings, meeting request messages, meeting response messages, and meeting cancellation messages) on the 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: A date range that shows availability, meetings, and appointments for one or more users or **resources**. See also **Calendar object**.

Calendar folder: A Folder object that contains **Calendar objects**.

Calendar object: A Message object that represents an event, which can be a one-time event or a recurring event. The Calendar object includes properties that specify event details such as description, organizer, date and time, and status.

Coordinated Universal Time (UTC): A high-precision atomic time standard that approximately tracks Universal Time (UT). It is the basis for legal, civil time all over the Earth. Time zones around the world are expressed as positive and negative offsets from UTC. In this role, it is also referred to as Zulu time (Z) and Greenwich Mean Time (GMT). In these specifications, all references to UTC refer to the time at UTC-0 (or GMT).

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

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.

instance: A unique publication of data for a category. It enables a publisher to publish data for the same category multiple times. An example is a publisher who uses two different endpoints to publish data. These endpoints can publish the same category. However, each endpoint requires a different instance number to be considered a distinct publication by the server. An instance number is provided by the publishing client.

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.

Meeting Workspace: A website that is created by using the Meetings Web Services protocol, as described in [MS-MEETS]. It can host documents, discussions, and other information about a meeting.

message store: A unit of containment for a single hierarchy of Folder objects, such as a mailbox or public folders.

optional attendee: An attendee of an event whom the organizer lists as an optional participant.

organizer: The owner or creator of a meeting or appointment.

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.

recipient: An entity that can receive email messages.

recurrence pattern: Information for a repeating event, such as the start and end time, the number of occurrences, and how occurrences are spaced, such as daily, weekly, or monthly.

resource: Any component that a computer can access that can read, write, and process data. This includes internal components (such as a disk drive), a service, or an application running on and managed by the cluster on a network that is used to access a file.

Sent Items folder: A special folder that is the default location for storing copies of Message objects after they are submitted or sent.

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.

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 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-OXWSBTRF] Microsoft Corporation, "Bulk Transfer Web Service Protocol".

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

[MS-OXWSCORE] Microsoft Corporation, "Core Items Web Service Protocol".

[MS-OXWSDLGM] Microsoft Corporation, "Delegate Access Management Web Service Protocol".

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

[MS-OXWSGTZ] Microsoft Corporation, "Get Server Time Zone Web Service Protocol".

[MS-OXWSMSG] Microsoft Corporation, "Email Message Types Web Service Protocol".

[MS-OXWSPERS] Microsoft Corporation, "Persona Web Service Protocol".

[MS-OXWSSRCH] Microsoft Corporation, "Mailbox Search Web Service Protocol".

[MS-OXWSXPROP] Microsoft Corporation, "Extended Properties Structure".

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

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

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

[SOAP1.1] Box, D., Ehnebuske, D., Kakivaya, G., et al., "Simple Object Access Protocol (SOAP) 1.1", W3C Note, May 2000, https://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, https://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, https://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, https://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, https://www.w3.org/TR/2001/REC-xmlschema-2-20010502/

1.2.2 Informative References

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

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

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

1.3 Overview

This protocol enables clients to create, retrieve, update, move, copy, and delete calendar-related items (that is, appointments, meetings, meeting request messages, meeting response messages, and meeting cancellation messages) on the server. Clients can use the data types and operations described by this protocol to manage appointments and meetings.

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 the 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 can use the item identifier(s) returned by the Mailbox Search Web Service Protocol, as described in [MS-OXWSSRCH], to access calendar-related item(s) on the server.

This protocol uses operations that are described in [MS-OXWSCORE] to retrieve, delete, update, move, copy, and create calendar-related items on the server. For more information about these operations, see section 3.1.4.

This protocol uses SOAP over **HTTP**, as described in [RFC2616], and SOAP over **HTTPS**, as described in [RFC2818], as shown in the following layering diagram.
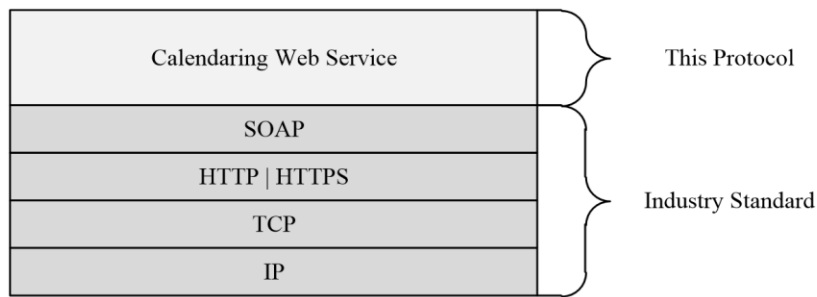
Figure 1: This protocol in relation to other protocols

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** 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. To retrieve the endpoint as described in either the Autodiscover Publishing Lookup SOAP-Based Web Service Protocol or the Autodiscover Publishing and Lookup Protocol, the client needs to have a valid mail-enabled account. 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 use Web services to create, retrieve, update, move, copy, and delete **calendar**-related items (that is, appointments, meetings, meeting request messages, meeting response messages, and meeting cancellation messages) in the server **message store**.

1.7 Versioning and Capability Negotiation

This document covers versioning issues in the following areas:

- **Supported Transports:** This protocol uses SOAP 1.1, as described in section 2.1 and in [SOAP1.1].

- **Protocol Versions:** This protocol specifies only one **WSDL port type** version. The **WSDL** version of the request is identified by using the **RequestServerVersion** element, as described in [MS-OXWSCDATA] section 2.2.3.9, and the version of the server responding to the request is identified by using the ServerVersionInfo element, as described in [MS-OXWSCDATA] section 2.2.3.10.

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

- **Localization:** This protocol includes text strings and dates and times in various messages.

- **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

Messages are transported by using **SOAP** version 1.1, as specified in [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], and SHOULD support SOAP over **HTTPS**, as specified 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	[XMLSCHEMA2]
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	[XMLSCHEMA2]

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 described with the operation.

Complex type name	Description
AcceptItemType (section 2.2.4.1)	Specifies a response object that is used to accept a meeting invitation or calendar item.
AddItemToMyCalendarType (section 2.2.4.2)	Specifies a response to a request to add items to the calendar.<1>
ArrayOfInboxReminderType (section 2.2.4.3)	Specifies an array of inbox reminders.
AttendeeType (section 2.2.4.4)	Specifies attendees and **resources** for a meeting.
CalendarFolderType (section 2.2.4.5)	Specifies a folder that contains calendar items.
CalendarItemType (section 2.2.4.6)	Specifies a server calendar item.
CalendarPermissionSetType (section 2.2.4.7)	Defines the access that a user has to a **Calendar folder**.
CalendarPermissionType (section 2.2.4.8)	Specifies the access that a user has to a Calendar folder.
CalendarViewType (section 2.2.4.9)	Specifies the settings that are used to return calendar items in the specified range as they appear in a calendar.
CancelCalendarItemType (section 2.2.4.10)	Specifies a response object that is used to cancel a meeting.
DeclineItemType (section 2.2.4.11)	Specifies a response object that is used to decline a meeting invitation or calendar item.
EnhancedLocationType (section 2.2.4.12)	Specifies additional location information for a calendar item.<2>
InboxReminderType (section 2.2.4.13)	Specifies an inbox reminder.
MeetingCancellationMessageType (section 2.2.4.14)	Specifies a meeting cancellation.
MeetingMessageType (section 2.2.4.15)	Specifies a meeting in the server **message store**.
MeetingRegistrationResponseObject (section 2.2.4.16)	Specifies a response to a meeting registration request.<3>
MeetingRequestMessageType (section 2.2.4.17)	Specifies a meeting request in the server message store.
MeetingResponseMessageType (section 2.2.4.18)	Specifies a meeting response in the server message store.
NonEmptyArrayOfAttendeesType (section 2.2.4.19)	Contains a list of attendees and resources for a meeting.
NonEmptyArrayOfDeletedOccurrencesType (section 2.2.4.20)	Contains a list of deleted occurrences of a recurring meeting request or calendar item.
NonEmptyArrayOfOccurrenceInfoType (section	Contains a list of modified occurrences of a recurring

Complex type name	Description
2.2.4.21)	meeting request or calendar item.
OccurrenceInfoType (section 2.2.4.22)	Specifies a single occurrence of a recurring meeting request or calendar item.
OnlineMeetingSettingsType (section 2.2.4.23)	Specifies the settings for an online meeting.<4>
ProposeNewTimeType (section 2.2.4.24)	Specifies a response to a new time proposal.<5>
RecurrenceType (section 2.2.4.25)	Specifies the recurrence pattern and recurrence range for calendar items and meeting requests.
RemoveItemType (section 2.2.4.26)	Specifies a response object that is used to remove a meeting item when a meeting cancellation message is received.
TentativelyAcceptItemType (section 2.2.4.27)	Specifies a response object that is used to tentatively accept a meeting invitation or calendar item.
TimeChangeType (section 2.2.4.28)	Specifies the date and time when the time changes to and from daylight saving time and standard time.
TimeZoneType (section 2.2.4.29)	MAY<6> specify the time zone of the location where a meeting is hosted.

2.2.4.1 t:AcceptItemType Complex Type

The **AcceptItemType** complex type specifies a response object that is used to accept a meeting invitation or calendar item. This complex type extends the **MeetingRegistrationResponseObjectType** complex type, as specified in section 2.2.4.16.

```
<xs:complexType name="AcceptItemType">
  <xs:complexContent>
    <xs:extension
      base="t:MeetingRegistrationResponseObjectType"
    />
  </xs:complexContent>
</xs:complexType>
```

2.2.4.2 t:AddItemToMyCalendarType Complex Type

The **AddItemToMyCalendarType** complex type specifies a response to a request to add items to the calendar.<7> This type extends the **ResponseObjectType** complex type ([MS-OXWSCDATA] section 2.2.4.67).

```
<xs:complexType name="AddItemToMyCalendarType">
  <xs:complexContent>
    <xs:extension base="t:ResponseObjectType"/>
  </xs:complexContent>
</xs:complexType>
```

2.2.4.3 t:ArrayOfInboxReminderType

The **ArrayOfInboxReminderType** complex type specifies an array of inbox reminders.<8>

```
<xs:complexType name="ArrayOfInboxReminderType">
    <xs:sequence>
      <xs:element name="InboxReminder"
            type="t:InboxReminderType" minOccurs="0" maxOccurs="unbounded"/>
    </xs:sequence>
</xs:complexType>
```

The following table describes the child element of the **ArrayOfInboxReminderType** complex type.

Element	Type	Description
InboxReminder	**t:InboxReminderType** (section 2.2.4.13)	An inbox reminder.

2.2.4.4 t:AttendeeType Complex Type

The **AttendeeType** complex type specifies attendees and resources for a meeting.

```
<xs:complexType name="AttendeeType">
  <xs:sequence>
    <xs:element name="Mailbox"
      type="t:EmailAddressType"
     />
    <xs:element name="ResponseType"
      type="t:ResponseTypeType"
      minOccurs="0"
     />
    <xs:element name="LastResponseTime"
      type="xs:dateTime"
      minOccurs="0"
     />
    <xs:element name="ProposedStart"
      type="xs:dateTime"
      minOccurs="0"
     />
    <xs:element name="ProposedEnd"
      type="xs:dateTime"
      minOccurs="0"
     />
  </xs:sequence>
</xs:complexType>
```

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

Element name	Type	Description
Mailbox	**t:EmailAddressType** ([MS-OXWSCDATA] section 2.2.4.31)	Specifies a fully resolved e-mail address.
ResponseType	**t:ResponseTypeType** (section 2.2.5.12)	Specifies the meeting invitation response received by the meeting organizer from a meeting attendee.
LastResponseTime	**xs:dateTime** ([XMLSCHEMA2])	Specifies the date and time that the latest meeting invitation response was received by the meeting organizer from the meeting attendee.
ProposedStart	**xs:dateTime**	The proposed start date and time of the meeting. <9>

Element name	Type	Description
ProposedEnd	**xs:dateTime**	The proposed end date and time of the meeting. <10>

2.2.4.5 t:CalendarFolderType Complex Type

The **CalendarFolderType** complex type specifies a folder that contains calendar items. This complex type extends the **BaseFolderType** complex type, as specified in [MS-OXWSFOLD] section 2.2.4.5.

```
<xs:complexType name="CalendarFolderType">
  <xs:complexContent>
    <xs:extension
      base="t:BaseFolderType"
    >
      <xs:sequence>
        <xs:element name="SharingEffectiveRights"
          type="t:CalendarPermissionReadAccessType"
          minOccurs="0"
         />
        <xs:element name="PermissionSet"
          type="t:CalendarPermissionSetType"
          minOccurs="0"
         />
      </xs:sequence>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>
```

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

Element name	Type	Description
SharingEffectiveRights	**t:CalendarPermissionReadAccessType** (section 2.2.5.5)	Specifies the permissions a user has to view items in a **Calendar folder** that is being shared. This element is read-only.<11>
PermissionSet	**t:CalendarPermissionSetType** (section 2.2.4.7)	Specifies all permissions that are configured for a Calendar folder.

2.2.4.6 t:CalendarItemType Complex Type

The **CalendarItemType** complex type represents a server calendar item. This complex type extends the **ItemType** complex type, as specified in [MS-OXWSCORE] section 2.2.4.24.

```
<xs:complexType name="CalendarItemType">
    <xs:complexContent>
      <xs:extension base="t:ItemType">

        <xs:sequence>
          <!-- iCalendar properties -->
          <xs:element name="UID" type="xs:string" minOccurs="0"/>
          <xs:element name="RecurrenceId" type="xs:dateTime" minOccurs="0"/>
          <xs:element name="DateTimeStamp" type="xs:dateTime" minOccurs="0"/>
          <!-- Single and Occurrence only -->
```

```xml
            <xs:element name="Start" type="xs:dateTime" minOccurs="0"/>
            <xs:element name="End" type="xs:dateTime" minOccurs="0"/>
            <!-- Occurrence only -->
            <xs:element name="OriginalStart" type="xs:dateTime" minOccurs="0"/>
            <xs:element name="IsAllDayEvent" type="xs:boolean" minOccurs="0"/>
            <xs:element name="LegacyFreeBusyStatus" type="t:LegacyFreeBusyType" minOccurs="0"/>
            <xs:element name="Location" type="xs:string" minOccurs="0"/>
            <xs:element name="When" type="xs:string" minOccurs="0"/>
            <xs:element name="IsMeeting" type="xs:boolean" minOccurs="0"/>
            <xs:element name="IsCancelled" type="xs:boolean" minOccurs="0"/>
            <xs:element name="IsRecurring" type="xs:boolean" minOccurs="0"/>
            <xs:element name="MeetingRequestWasSent" type="xs:boolean" minOccurs="0"/>
            <xs:element name="IsResponseRequested" type="xs:boolean" minOccurs="0"/>
            <xs:element name="CalendarItemType" type="t:CalendarItemTypeType" minOccurs="0"/>
            <xs:element name="MyResponseType" type="t:ResponseTypeType" minOccurs="0"/>
            <xs:element name="Organizer" type="t:SingleRecipientType" minOccurs="0"/>
            <xs:element name="RequiredAttendees" type="t:NonEmptyArrayOfAttendeesType"
minOccurs="0"/>
            <xs:element name="OptionalAttendees" type="t:NonEmptyArrayOfAttendeesType"
minOccurs="0"/>
            <xs:element name="Resources" type="t:NonEmptyArrayOfAttendeesType" minOccurs="0"/>
            <!-- Conflicting and adjacent meetings -->
            <xs:element name="ConflictingMeetingCount" type="xs:int" minOccurs="0"/>
            <xs:element name="AdjacentMeetingCount" type="xs:int" minOccurs="0"/>
            <xs:element name="ConflictingMeetings" type="t:NonEmptyArrayOfAllItemsType"
minOccurs="0"/>
            <xs:element name="AdjacentMeetings" type="t:NonEmptyArrayOfAllItemsType"
minOccurs="0"/>
            <xs:element name="Duration" type="xs:string" minOccurs="0"/>
            <xs:element name="TimeZone" type="xs:string" minOccurs="0"/>
            <xs:element name="AppointmentReplyTime" type="xs:dateTime" minOccurs="0"/>
            <xs:element name="AppointmentSequenceNumber" type="xs:int" minOccurs="0"/>
            <xs:element name="AppointmentState" type="xs:int" minOccurs="0"/>
            <!-- Recurrence specific data, only valid if CalendarItemType is RecurringMaster --
>
            <xs:element name="Recurrence" type="t:RecurrenceType" minOccurs="0"/>
            <xs:element name="FirstOccurrence" type="t:OccurrenceInfoType" minOccurs="0"/>
            <xs:element name="LastOccurrence" type="t:OccurrenceInfoType" minOccurs="0"/>
            <xs:element name="ModifiedOccurrences" type="t:NonEmptyArrayOfOccurrenceInfoType"
minOccurs="0"/>
            <xs:element name="DeletedOccurrences"
type="t:NonEmptyArrayOfDeletedOccurrencesType" minOccurs="0"/>
            <xs:element name="MeetingTimeZone" type="t:TimeZoneType" minOccurs="0"/>
            <xs:element name="StartTimeZone" type="t:TimeZoneDefinitionType" minOccurs="0"/>
            <xs:element name="EndTimeZone" type="t:TimeZoneDefinitionType" minOccurs="0"/>
            <xs:element name="ConferenceType" type="xs:int" minOccurs="0"/>
            <xs:element name="AllowNewTimeProposal" type="xs:boolean" minOccurs="0"/>
            <xs:element name="IsOnlineMeeting" type="xs:boolean" minOccurs="0"/>
            <xs:element name="MeetingWorkspaceUrl" type="xs:string" minOccurs="0"/>
            <xs:element name="NetShowUrl" type="xs:string" minOccurs="0"/>
            <xs:element name="EnhancedLocation" type="t:EnhancedLocationType" minOccurs="0"/>
            <xs:element name="StartWallClock" type="xs:dateTime" minOccurs="0" maxOccurs="1"/>
            <xs:element name="EndWallClock" type="xs:dateTime" minOccurs="0" maxOccurs="1"/>
            <xs:element name="StartTimeZoneId" type="xs:string" minOccurs="0" maxOccurs="1"/>
            <xs:element name="EndTimeZoneId" type="xs:string" minOccurs="0" maxOccurs="1"/>
            <xs:element name="IntendedFreeBusyStatus" type="t:LegacyFreeBusyType" minOccurs="0"
/>
            <xs:element name="JoinOnlineMeetingUrl" type="xs:string" minOccurs="0"
maxOccurs="1" />
            <xs:element name="OnlineMeetingSettings" type="t:OnlineMeetingSettingsType"
minOccurs="0" maxOccurs="1"/>
            <xs:element name="IsOrganizer" type="xs:boolean" minOccurs="0"/>
            <xs:element name="InboxReminders" type="t:ArrayOfInboxReminderType" minOccurs="0"/>

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

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

Element name	Type	Description
UID	**xs:string** ([XMLSCHEMA2])	Contains the unique identifier for the calendar item.
RecurrenceId	**xs:dateTime** ([XMLSCHEMA2])	Specifies a specific **instance** of a recurring calendar item. This element is not valid if **CalendarItemType** is contained in a **CreateItem** request, as specified in section 3.1.4.2.
DateTimeStamp	**xs:dateTime**	Specifies the date and time that the calendar item was created. This element is not valid if **CalendarItemType** is contained in a **CreateItem** request, as specified in section 3.1.4.2.
Start	**xs:dateTime**	Specifies the start date and time of a duration.
End	**xs:dateTime**	Specifies the end date and time of a duration.
OriginalStart	**xs:dateTime**	Represents the original start time of a calendar item (only for occurrences/exceptions). This element is not valid if **CalendarItemType** is contained in a **CreateItem** request, as specified in section 3.1.4.2.
IsAllDayEvent	**xs:boolean** ([XMLSCHEMA2])	Indicates whether a calendar item or meeting request represents an all-day event.
LegacyFreeBusyStatus	**t:LegacyFreeBusyType** ([MS-OXWSCDATA] section 2.2.5.17)	Specifies the free/busy status of the calendar item.
Location	**xs:string**	Specifies the location of a meeting or appointment.
When	**xs:string**	Provides information about when a calendar or meeting item occurs

Element name	Type	Description
		and is not populated to attendee's mailbox.
IsMeeting	**xs:boolean**	Indicates whether the calendar item is a meeting or an appointment. "true" if the calendar item is a meeting, otherwise the calendar item is an appointment. This element is not valid if **CalendarItemType** is contained in a **CreateItem** request, as specified in section 3.1.4.2.
IsCancelled	**xs:boolean**	Indicates whether a meeting has been canceled. This element is not valid if **CalendarItemType** is contained in a **CreateItem** request, as specified in section 3.1.4.2.
IsRecurring	**xs:boolean**	Indicates whether a calendar item is part of a recurring item. This element is not valid if **CalendarItemType** is contained in a **CreateItem** request, as specified in section 3.1.4.2.
MeetingRequestWasSent	**xs:boolean**	Indicates whether a meeting request has been sent to requested attendees, including required and **optional attendees**, and resources. This element is not valid if **CalendarItemType** is contained in a **CreateItem** request, as specified in section 3.1.4.2.
IsResponseRequested	**xs:boolean**	Indicates whether a response to an item is requested.
CalendarItemType	**t:CalendarItemTypeType** (section 2.2.5.2)	Specifies the occurrence type of a calendar item. This element is not valid if **CalendarItemType** is contained in a **CreateItem** request, as specified in section

Element name	Type	Description
		3.1.4.2.
MyResponseType	t:ResponseTypeType (section 2.2.5.12)	Specifies the status of the response to a calendar item. This element is not valid if **CalendarItemType** is contained in a **CreateItem** request, as specified in section 3.1.4.2.
Organizer	t:SingleRecipientType ([MS-OXWSCDATA] section 2.2.4.69)	Specifies the organizer of a meeting. This element is not valid if **CalendarItemType** is contained in a **CreateItem** request, as specified in section 3.1.4.2.
RequiredAttendees	t:NonEmptyArrayOfAttendeesType (section 2.2.4.19)	Specifies attendees that are required to attend a meeting.
OptionalAttendees	t:NonEmptyArrayOfAttendeesType	Specifies attendees who are not required to attend a meeting.
Resources	t:NonEmptyArrayOfAttendeesType	Specifies a scheduled resource for a meeting and is not populated to attendee's mailbox.
ConflictingMeetingCount	xs:int ([XMLSCHEMA2])	Specifies the number of meetings that conflict with the calendar item.
AdjacentMeetingCount	xs:int	Indicates the total number of calendar items that are adjacent to a meeting time.
ConflictingMeetings	t:NonEmptyArrayOfAllItemsType ([MS-OXWSCDATA] section 2.2.4.46)	Indicates all calendar items that conflict with a meeting time.
AdjacentMeetings	t:NonEmptyArrayOfAllItemsType ([MS-OXWSCDATA] section 2.2.4.46)	Indicates all calendar items that are adjacent to a meeting time.
Duration	xs:string	Specifies the duration of a calendar item. This element is not valid if **CalendarItemType** is contained in a **CreateItem** request, as specified in section 3.1.4.2.
TimeZone	xs:string	Specifies a text description of a time zone.<12> This element

Element name	Type	Description
		is not valid if **CalendarItemType** is contained in a **CreateItem** request, as specified in section 3.1.4.2.
AppointmentReplyTime	**xs:dateTime**	Specifies the date and time that an attendee replied to a meeting request. This element is not valid if **CalendarItemType** is contained in a **CreateItem** request, as specified in section 3.1.4.2.
AppointmentSequenceNumber	**xs:int**	Specifies the sequence number of a version of an appointment. This element is not valid if **CalendarItemType** is contained in a **CreateItem** request, as specified in section 3.1.4.2.
AppointmentState	**xs:int**	Specifies the status of the appointment. Valid values include: ▪ 0 (zero): the calendar item represents an appointment ▪ 1: the calendar item on the organizer's calendar represents a meeting ▪ 3: the meeting request corresponding to the calendar item has been received ▪ 5: the meeting corresponding to the organizer's calendar item has been cancelled. This value is found in the **Deleted Items folder** of the organizer. ▪ 7: the meeting corresponding to the attendee's calendar item has been cancelled This element is not valid if **CalendarItemType** is contained in a

Element name	Type	Description
		CreateItem request, as specified in section 3.1.4.2.
Recurrence	**t:RecurrenceType** (section 2.2.4.25)	Specifies the recurrence pattern and the recurrence range for calendar items and meeting requests.
FirstOccurrence	**t:OccurrenceInfoType** (section 2.2.4.22)	Specifies the first occurrence of a recurring calendar item. This element is not valid if **CalendarItemType** is contained in a **CreateItem** request, as specified in section 3.1.4.2.
LastOccurrence	**t:OccurrenceInfoType**	Specifies the last occurrence of a recurring calendar item. This element is not valid if **CalendarItemType** is contained in a **CreateItem** request, as specified in section 3.1.4.2.
ModifiedOccurrences	**t:NonEmptyArrayOfOccurrenceInfoType** (section 2.2.4.21)	Specifies recurring calendar item occurrences that have been modified so that they differ from original occurrences (or instances of the recurring master item). This element is not valid if **CalendarItemType** is contained in a **CreateItem** request, as specified in section 3.1.4.2.
DeletedOccurrences	**t:NonEmptyArrayOfDeletedOccurrencesType** (section 2.2.4.20)	Specifies deleted occurrences of a recurring calendar item. This element is not valid if **CalendarItemType** is contained in a **CreateItem** request, as specified in section 3.1.4.2.
MeetingTimeZone	**t:TimeZoneType** (section 2.2.4.29)	MAY<13> specify the time zone of the location where the meeting is hosted. This element is returned only if the value of the **CalendarItemType** element is

Element name	Type	Description
		RecurringMaster.
StartTimeZone	**t:TimeZoneDefinitionType** ([MS-OXWSGTZ] section 2.2.4.12)	SHOULD<14> specify the calendar item start time zone information.
EndTimeZone	**t:TimeZoneDefinitionType**	SHOULD<15> specify the calendar item end time zone information.
ConferenceType	**xs:int**	Specifies the type of conferencing that is performed with a calendar item.<16> Valid values include: ▪ 0 (zero): video conference ▪ 1: presentation ▪ 2: chat
AllowNewTimeProposal	**xs:boolean**	Indicates whether a new meeting time can be proposed for a meeting by an attendee.
IsOnlineMeeting	**xs:boolean**	Indicates whether the meeting is online. This element is read-only.<17>
MeetingWorkspaceUrl	**xs:string**	Contains the **URL** for the **Meeting Workspace** that is included in the calendar item.
NetShowUrl	**xs:string**	Specifies the URL for an online meeting.
EnhancedLocation	**t:EnhancedLocationType** (section 2.2.4.12)	Specifies additional location information for the calendar item.<18>
StartWallClock	**xs:dateTime**	Specifies the start time of the calendar item.<19>
EndWallClock	**xs:dateTime**	Specifies the ending time of the calendar item.<20>
StartTimeZoneId	**xs:string**	Specifies the calendar item start time zone identifier.<21>
EndTimeZoneId	**xs:string**	Specifies the calendar item end time zone identifier.<22>
IntendedFreeBusyStatus	**t:LegacyFreeBusyType** ([MS-OXWSCDATA] section 2.2.5.17)	Indicates how the organizer of the meeting wants it to show up in the attendee's calendar

Element name	Type	Description
		when the meeting is accepted. <23>
JoinOnlineMeetingUrl	**xs:string**	Specifies the URL for joining the online meeting.<24> This element is ignored by the server.
OnlineMeetingSettings	**t:OnlineMeetingSettingsType** (section 2.2.4.23)	Specifies settings for online meetings.<25> This element is ignored by the server.
IsOrganizer	**xs:boolean**	Specifies whether the current user is the organizer and/or owner of the calendar item.<26>
InboxReminders	**t:ArrayOfInboxReminderType** (section 2.2.4.3)	Specifies Inbox reminders.

2.2.4.7 t:CalendarPermissionSetType Complex Type

The **CalendarPermissionSetType** complex type defines the access that a user has to a **Calendar folder**.

```
<xs:complexType name="CalendarPermissionSetType">
  <xs:sequence>
    <xs:element name="CalendarPermissions"
      type="t:ArrayOfCalendarPermissionsType"
     />
    <xs:element name="UnknownEntries"
      type="t:ArrayOfUnknownEntriesType"
      minOccurs="0"
     />
  </xs:sequence>
</xs:complexType>
```

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

Element name	Type	Description
CalendarPermissions	**t:ArrayofCalendarPermissionsType** ([MS-OXWSCDATA] section 2.2.4.5)	Contains an array of calendar permissions for a folder.
UnknownEntries	**t:ArrayOfUnknownEntriesType** ([MS-OXWSFOLD] section 2.2.4.3)	Contains an array of unknown permission entries that cannot be resolved against the directory service.

2.2.4.8 t:CalendarPermissionType Complex Type

The **CalendarPermissionType** complex type specifies the access that a user has to a **Calendar folder**. This complex type extends the **BasePermissionType** complex type, as specified in [MS-OXWSFOLD] section 2.2.4.7.

```
<xs:complexType name="CalendarPermissionType">
  <xs:complexContent>
    <xs:extension
      base="t:BasePermissionType"
    >
      <xs:sequence>
        <xs:element name="ReadItems"
          type="t:CalendarPermissionReadAccessType"
          minOccurs="0"
          maxOccurs="1"
        />
        <xs:element name="CalendarPermissionLevel"
          type="t:CalendarPermissionLevelType"
          minOccurs="1"
          maxOccurs="1"
        />
      </xs:sequence>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>
```

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

Element name	Type	Description
ReadItems	**t:CalendarPermissionReadAccessType** (section 2.2.5.5)	Specifies the permissions a user has to view items in a Calendar folder.
CalendarPermissionLevel	**t:CalendarPermissionLevelType** (section 2.2.5.4)	Specifies the permission level that a user has on a Calendar folder. This element MUST exist if calendar permissions are set on a Calendar folder.

2.2.4.9 t:CalendarViewType Complex Type

The **CalendarViewType** complex type represents the settings that are used to return calendar items in the specified range as they appear in a calendar. This complex type extends the **BasePagingType** complex type, as specified in [MS-OXWSSRCH] section 2.2.4.5.

```
<xs:complexType name="CalendarViewType">
  <xs:complexContent>
    <xs:extension

      base="t:BasePagingType"
    >
      <xs:attribute name="StartDate"
        type="xs:dateTime"
        use="required"
      />
      <xs:attribute name="EndDate"
        type="xs:dateTime"
        use="required"
```

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

The following table lists the attributes of the **CalendarViewType** complex type.

Attribute name	Type	Description
StartDate	**xs:dateTime** ([XMLSCHEMA2])	Contains the start of the time span for a Calendar view.
EndDate	**xs:dateTime**	Contains the end of the time span for a Calendar view.

2.2.4.10 t:CancelCalendarItemType Complex Type

The **CancelCalendarItemType** complex type specifies a response object used to cancel a meeting. This complex type extends the **SmartResponseType** complex type, as specified in [MS-OXWSCORE] section 2.2.4.16.

```
<xs:complexType name="CancelCalendarItemType">
  <xs:complexContent>
    <xs:extension
      base="t:SmartResponseType"
     />
  </xs:complexContent>
</xs:complexType>
```

2.2.4.11 t:DeclineItemType Complex Type

The **DeclineItemType** complex type specifies a response object that is used to decline a meeting invitation or calendar item. This complex type extends the **MeetingRegistrationResponseObjectType** complex type, as specified in section 2.2.4.16.

```
<xs:complexType name="DeclineItemType">
  <xs:complexContent>
    <xs:extension
      base="t:MeetingRegistrationResponseObjectType"
     />
  </xs:complexContent>
</xs:complexType>
```

2.2.4.12 t:EnhancedLocationType Complex Type

The **EnhancedLocationType** complex type specifies additional location information for a calendar item.<27>

```
<xs:complexType name="EnhancedLocationType">
  <xs:sequence>
    <xs:element name="DisplayName" type="xs:string" minOccurs="0"/>
    <xs:element name="Annotation" type="xs:string" minOccurs="0"/>
    <xs:element name="PostalAddress" type="t:PersonaPostalAddressType" minOccurs="0"/>
  </xs:sequence>
```

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

DisplayName: An element of type **string**, as defined in [XMLSCHEMA2] section 3.2.1, that represents the display name of the calendar item.

Annotation: An element of type **string** that represents a note on the calendar item.

PostalAddress: An element of type **t:PersonaPostalAddressType**, as defined in [MS-OXWSPERS] section 2.2.4.18, that represents the postal address of the individual associated with a persona.

2.2.4.13   t:InboxReminderType

The **InboxReminderType** complex type specifies an inbox reminder.<28>

```
    <xs:complexType name="InboxReminderType">
      <xs:sequence>
        <xs:element name="Id" type="t:GuidType" minOccurs="0" maxOccurs="1"/>
        <xs:element name="ReminderOffset" type="xs:int" minOccurs="0" maxOccurs="1"/>
        <xs:element name="Message" type="xs:string" minOccurs="0" maxOccurs="1"/>
        <xs:element name="IsOrganizerReminder" type="xs:boolean" minOccurs="0" maxOccurs="1"/>
        <xs:element name="OccurrenceChange"
            type="t:EmailReminderChangeType" minOccurs="0" maxOccurs="1"/>
        <xs:element name="IsImportedFromOLC" type="xs:boolean" minOccurs="0" maxOccurs="1"/>
        <xs:element name="SendOption"
            type="t:EmailReminderSendOption" minOccurs="0" maxOccurs="1"/>
      </xs:sequence>
    </xs:complexType>
```

The following table describes the elements of the **InboxReminderType** complex type.

Element	Type	Description
Id	**t:GuidType** ([MS-OXWSXPROP] section 2.1.7)	The identifier for this reminder.
ReminderOffset	**xs:int** ([XMLSCHEMA2])	The offset from the start of the meeting in minutes.
Message	**xs:string** ([XMLSCHEMA2])	The custom message to send when the reminder is triggered.
IsOrganizerReminder	**xs:boolean** ([XMLSCHEMA2])	Specifies whether this is an organizer inbox reminder.
OccurrenceChange	**t:EmailReminderChangeType** (section 2.2.5.6)	Specifies how this reminder has been modified for an occurrence.
IsImportedFromOLC	**xs:boolean**	Specifies whether this reminder is imported from Microsoft Outlook.
SendOption	**t:EmailReminderSendOption** (section 2.2.5.7)	Specifies the send option.

2.2.4.14   t:MeetingCancellationMessageType Complex Type

The **MeetingCancellationMessageType** complex type represents a meeting cancellation. This type extends the **MeetingMessageType** complex type, as specified in section 2.2.4.15.

```
<xs:complexType name="MeetingCancellationMessageType">
  <xs:complexContent>
    <xs:extension base="t:MeetingMessageType">
      <xs:sequence>
        <xs:element name="Start" type="xs:dateTime" minOccurs="0"/>
        <xs:element name="End" type="xs:dateTime" minOccurs="0"/>
        <xs:element name="Location" type="xs:string" minOccurs="0"/>
        <xs:element name="Recurrence" type="t:RecurrenceType" minOccurs="0"/>
        <xs:element name="CalendarItemType" type="xs:string" minOccurs="0"/>
        <xs:element name="EnhancedLocation" type="t:EnhancedLocationType" minOccurs="0"/>
      </xs:sequence>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>
```

Start: An element of type **dateTime**, as defined in [XMLSCHEMA2] section 3.2.7, that represents the start time of the calendar item.<29>

End: An element of type **dateTime** that represents the ending time of the calendar item.<30>

Location: An element of type **string**, as defined in [XMLSCHEMA2] section 3.2.1, that represents the location of the calendar item.<31>

Recurrence: An element of type **RecurrenceType**, as defined in section 2.2.4.25, that represents the recurrence of the calendar item.<32>

CalendarItemType: An element of type **string** that represents the type of calendar item.<33>

EnhancedLocation: An element of type **EnhancedLocationType**, as defined in section 2.2.4.12, that specifies additional location information for a calendar item.

2.2.4.15   t:MeetingMessageType Complex Type

The **MeetingMessageType** complex type represents a meeting in the server **message store**. This type extends the **MessageType** complex type, as specified in [MS-OXWSMSG] section 2.2.4.3.

```
<xs:complexType name="MeetingMessageType">
  <xs:complexContent>
    <xs:extension
      base="t:MessageType"
    >
      <xs:sequence>
        <xs:element name="AssociatedCalendarItemId"
          type="t:ItemIdType"
          minOccurs="0"
        />
        <xs:element name="IsDelegated"
          type="xs:boolean"
          minOccurs="0"

        />
        <xs:element name="IsOutOfDate"
          type="xs:boolean"
          minOccurs="0"
        />
        <xs:element name="HasBeenProcessed"
          type="xs:boolean"
          minOccurs="0"
        />
        <xs:element name="ResponseType"
          type="t:ResponseTypeType"
          minOccurs="0"
        />
        <xs:element name="UID"
```

```
           type="xs:string"
           minOccurs="0"
          />
        <xs:element name="RecurrenceId"
           type="xs:dateTime"
           minOccurs="0"
          />
        <xs:element name="DateTimeStamp"
           type="xs:dateTime"
           minOccurs="0"
          />
        <xs:element name="IsOrganizer" type="xs:boolean" minOccurs="0"/>
      </xs:sequence>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>
```

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

Element name	Type	Description
AssociatedCalendarItemId	**t:ItemIdType** ([MS-OXWSCORE] section 2.2.4.25)	Represents an item identifier of the corresponding calendar item in a messaging server **mailbox**.
IsDelegated	**xs:boolean** ([XMLSCHEMA2])	Indicates whether a meeting message belongs to a mailbox of an account that has **delegate** access, as specified in [MS-OXWSDLGM].
IsOutOfDate	**xs:boolean**	Indicates that there has been an update to the meeting and the current item in the calendar is out of date.
HasBeenProcessed	**xs:boolean**	Indicates whether a meeting message item has been processed.
ResponseType	**t:ResponseTypeType** (section 2.2.5.12)	Represents the type of **recipient** response that is received for a meeting.<34>
UID	**xs:string** ([XMLSCHEMA2])	Identifies a meeting message.
RecurrenceId	**xs:dateTime** ([XMLSCHEMA2])	Identifies a specific instance of a recurring calendar item.
DateTimeStamp	**xs:dateTime**	Indicates the date and time that an instance of a **Calendar object** was created.
IsOrganizer	**xs:boolean** ([XMLSCHEMA2])	Specifies whether the current user is the organizer of the meeting.<35>

2.2.4.16   t:MeetingRegistrationResponseObjectType Complex Type

The **MeetingRegistrationResponseObjectType** complex type specifies a response to a meeting registration request.<36> This type extends the :**WellKnownResponseObjectType** complex type ([MS-OXWSCDATA] section 2.2.4.76).

```
<xs:complexType name="MeetingRegistrationResponseObjectType">
  <xs:complexContent>
    <xs:extension base="t:WellKnownResponseObjectType">
```

```
      <xs:sequence>
        <xs:element name="ProposedStart" type="xs:dateTime" minOccurs="0"/>
        <xs:element name="ProposedEnd" type=" xs:dateTime " minOccurs="0"/>
      </xs:sequence>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>
```

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

Element	Type	Description
ProposedStart	**xs:dateTime** [XMLSCHEMA2]	The proposed start time of the meeting.
ProposedEnd	**xs:dateTime**	The proposed end time of the meeting.

2.2.4.17   t:MeetingRequestMessageType Complex Type

The **MeetingRequestMessageType** complex type represents a meeting request in the server
message store. This type extends the **MeetingMessageType** complex type, as specified in section
2.2.4.15.

```
<xs:complexContent>
  <xs:extension base="t:MeetingMessageType">
    <xs:sequence>
      <!--- MeetingRequest properties -->
      <xs:element name="MeetingRequestType" type="t:MeetingRequestTypeType" minOccurs="0"/>
      <xs:element name="IntendedFreeBusyStatus" type="t:LegacyFreeBusyType" minOccurs="0"/>
      <!-- Calendar Properties of the associated meeting request -->
      <!-- Single and Occurrence only -->
      <xs:element name="Start" type="xs:dateTime" minOccurs="0"/>
      <xs:element name="End" type="xs:dateTime" minOccurs="0"/>
      <!-- Occurrence only -->
      <xs:element name="OriginalStart" type="xs:dateTime" minOccurs="0"/>
      <xs:element name="IsAllDayEvent" type="xs:boolean" minOccurs="0"/>
      <xs:element name="LegacyFreeBusyStatus" type="t:LegacyFreeBusyType" minOccurs="0"/>
      <xs:element name="Location" type="xs:string" minOccurs="0"/>
      <xs:element name="When" type="xs:string" minOccurs="0"/>
      <xs:element name="IsMeeting" type="xs:boolean" minOccurs="0"/>
      <xs:element name="IsCancelled" type="xs:boolean" minOccurs="0"/>
      <xs:element name="IsRecurring" type="xs:boolean" minOccurs="0"/>
      <xs:element name="MeetingRequestWasSent" type="xs:boolean" minOccurs="0"/>
      <xs:element name="CalendarItemType" type="t:CalendarItemTypeType" minOccurs="0"/>
      <xs:element name="MyResponseType" type="t:ResponseTypeType" minOccurs="0"/>
      <xs:element name="Organizer" type="t:SingleRecipientType" minOccurs="0"/>
      <xs:element name="RequiredAttendees" type="t:NonEmptyArrayOfAttendeesType"
 minOccurs="0"/>
      <xs:element name="OptionalAttendees" type="t:NonEmptyArrayOfAttendeesType"
minOccurs="0"/>

      <xs:element name="Resources" type="t:NonEmptyArrayOfAttendeesType" minOccurs="0"/>
      <!-- Conflicting and adjacent meetings -->
      <xs:element name="ConflictingMeetingCount" type="xs:int" minOccurs="0"/>
      <xs:element name="AdjacentMeetingCount" type="xs:int" minOccurs="0"/>
      <xs:element name="ConflictingMeetings" type="t:NonEmptyArrayOfAllItemsType"
 minOccurs="0"/>
      <xs:element name="AdjacentMeetings" type="t:NonEmptyArrayOfAllItemsType"
 minOccurs="0"/>
      <xs:element name="Duration" type="xs:string" minOccurs="0"/>
      <xs:element name="TimeZone" type="xs:string" minOccurs="0"/>
      <xs:element name="AppointmentReplyTime" type="xs:dateTime" minOccurs="0"/>
```

```
        <xs:element name="AppointmentSequenceNumber" type="xs:int" minOccurs="0"/>
        <xs:element name="AppointmentState" type="xs:int" minOccurs="0"/>
        <!-- Recurrence specific data, only valid if CalendarItemType is RecurringMaster -->
        <xs:element name="Recurrence" type="t:RecurrenceType" minOccurs="0"/>
        <xs:element name="FirstOccurrence" type="t:OccurrenceInfoType" minOccurs="0"/>
        <xs:element name="LastOccurrence" type="t:OccurrenceInfoType" minOccurs="0"/>
        <xs:element name="ModifiedOccurrences" type="t:NonEmptyArrayOfOccurrenceInfoType"
minOccurs="0"/>
        <xs:element name="DeletedOccurrences" type="t:NonEmptyArrayOfDeletedOccurrencesType"
minOccurs="0"/>
        <xs:element name="MeetingTimeZone" type="t:TimeZoneType" minOccurs="0"/>
        <xs:element name="StartTimeZone" type="t:TimeZoneDefinitionType" minOccurs="0"/>
        <xs:element name="EndTimeZone" type="t:TimeZoneDefinitionType" minOccurs="0"/>
        <xs:element name="ConferenceType" type="xs:int" minOccurs="0"/>
        <xs:element name="AllowNewTimeProposal" type="xs:boolean" minOccurs="0"/>
        <xs:element name="IsOnlineMeeting" type="xs:boolean" minOccurs="0"/>
        <xs:element name="MeetingWorkspaceUrl" type="xs:string" minOccurs="0"/>
        <xs:element name="NetShowUrl" type="xs:string" minOccurs="0"/>
        <xs:element name="EnhancedLocation" type="t:EnhancedLocationType" minOccurs="0"/>
        <xs:element name="ChangeHighlights" type="t:ChangeHighlightsType" minOccurs="0"/>
        <xs:element name="StartWallClock" type="xs:dateTime" minOccurs="0" maxOccurs="1"/>
        <xs:element name="EndWallClock" type="xs:dateTime" minOccurs="0" maxOccurs="1"/>
        <xs:element name="StartTimeZoneId" type="xs:string" minOccurs="0" maxOccurs="1"/>
        <xs:element name="EndTimeZoneId" type="xs:string" minOccurs="0" maxOccurs="1"/>
      </xs:sequence>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>
```

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

Element name	Type	Description
MeetingRequestType	**t:MeetingRequestTypeType** (section 2.2.5.9)	Specifies the type of meeting request.
IntendedFreeBusyStatus	**t:LegacyFreeBusyType** ([MS-OXWSCDATA] section 2.2.5.17)	Represents the intended status for the meeting item that is associated with the meeting request.
Start	**xs:dateTime** ([XMLSCHEMA2])	Represents the start time of the meeting.
End	**xs:dateTime**	Specifies the end of the duration for a single occurrence of a meeting.
OriginalStart	**xs:dateTime**	Specifies the original start time for the meeting item (only for occurrences/exceptions).
IsAllDayEvent	**xs:boolean** ([XMLSCHEMA2])	Specifies whether the meeting is an all-day event.
LegacyFreeBusyStatus	**t:LegacyFreeBusyType** ([MS-OXWSCDATA] section 2.2.5.17)	Represents the free/busy status of the meeting item. This element is not used.

Element name	Type	Description
Location	**xs:string** ([XMLSCHEMA2])	Represents the location of the meeting.
When	**xs:string**	Provides information about when the meeting occurs and is not populated to attendee's mailbox.
IsMeeting	**xs:boolean**	Indicates whether the calendar item is a meeting or an appointment. "true" if the calendar item is a meeting, otherwise the calendar item is an appointment. This element is "true".
IsCancelled	**xs:boolean**	Indicates whether the meeting has been cancelled.
IsRecurring	**xs:boolean**	Indicates whether the meeting is part of a recurring series of meetings.
MeetingRequestWasSent	**xs:boolean**	Indicates whether a meeting request has been sent to requested attendees. This element is "true".
CalendarItemType	**t:CalendarItemTypeType** (section 2.2.4.6)	Represents the occurrence type of a meeting item.
MyResponseType	**t:ResponseTypeType** (section 2.2.5.12)	Identifies the type of the response to the meeting request (sent for the organizer's meeting item).
Organizer	**t:SingleRecipientType** ([MS-OXWSCDATA] section 2.2.4.69)	Represents the organizer of the meeting.
RequiredAttendees	**t:NonEmptyArrayOfAttendeesType** (section 2.2.4.19)	Represents attendees that are required to attend the meeting.
OptionalAttendees	**t:NonEmptyArrayOfAttendeesType**	Represents attendees who are not required to attend the meeting.
Resources	**t:NonEmptyArrayOfAttendeesType**	Represents a scheduled resource for the meeting and is not populated to attendee's mailbox.
ConflictingMeetingCount	**xs:int** ([XMLSCHEMA2])	Represents the number of calendar items that conflict with the meeting

Element name	Type	Description
		item.
AdjacentMeetingCount	**xs:int**	Represents the total number of calendar items that are adjacent to the meeting time.
ConflictingMeetings	**t:NonEmptyArrayOfAllItemsType** ([MS-OXWSCDATA] section 2.2.4.46)	Identifies all calendar items that conflict with the meeting time.
AdjacentMeetings	**t:NonEmptyArrayOfAllItemsType**	Identifies all calendar items that are adjacent to the meeting time.
Duration	**xs:string**	Represents the duration of the meeting.
TimeZone	**xs:string**	Provides a text description of a time zone.<37>
AppointmentReplyTime	**xs:dateTime**	Represents the date and time that an attendee replied to a meeting request.
AppointmentSequenceNumber	**xs:int**	Specifies the sequence number of a version of an appointment.
AppointmentState	**xs:int**	Specifies the status of the appointment. Valid values include: ▪ 3: the organizer's meeting request has been sent; the attendee's meeting request has been received
Recurrence	**t:RecurrenceType** (section 2.2.4.25)	Contains the recurrence pattern for meeting items and meeting requests.
FirstOccurrence	**t:OccurrenceInfoType** (section 2.2.4.22)	Represents the first occurrence of a recurring meeting item.
LastOccurrence	**t:OccurrenceInfoType**	Represents the last occurrence of a recurring meeting item.
ModifiedOccurrences	**t:NonEmptyArrayOfOccurrenceInfoType** (section 2.2.4.21)	Contains an array of recurring meeting item occurrences that have been modified so that they are different from the original instances of the recurrence master item.

Element name	Type	Description
DeletedOccurrences	**t:NonEmptyArrayOfDeletedOccurrencesType** (section 2.2.4.20)	Contains an array of deleted occurrences of a recurring meeting item.
MeetingTimeZone	**t:TimeZoneType** (section 2.2.4.29)	MAY<38> specify the time zone of the location where the meeting is hosted. This element is returned only if the value of the **CalendarItemType** element is **RecurringMaster**.
StartTimeZone	**t:TimeZoneDefinitionType** ([MS-OXWSGTZ] section 2.2.4.12)	SHOULD<39> specify the time zone for the start of the meeting item.
EndTimeZone	**t:TimeZoneDefinitionType**	SHOULD<40> specify the time zone for the end of the meeting item.
ConferenceType	**xs:int**	Describes the type of conferencing that is performed with the meeting item.<41> Valid values include: ▪ 0 (zero): video conference ▪ 1: presentation ▪ 2: chat
AllowNewTimeProposal	**xs:boolean**	Indicates whether a new meeting time can be proposed for the meeting by an attendee.
IsOnlineMeeting	**xs:boolean**	Indicates whether the meeting is online.
MeetingWorkspaceUrl	**xs:string**	Contains the **URL** for the Meeting Workspace that is included in the meeting item.
NetShowUrl	**xs:string**	Specifies the URL for an online meeting.
EnhancedLocation	**t:EnhancedLocationType** (section 2.2.4.12)	Specifies additional location information.<42>
ChangeHighlights	**t:ChangeHighlightsType** ([MS-OXWSCDATA] section 2.2.4.21)	Specifies the changes made to a meeting when a meeting update occurs.
StartWallClock	**xs:dateTime**	Specifies the starting time of the calendar item.<43>

Element name	Type	Description
EndWallClock	**xs:dateTime**	Specifies the ending time of the calendar item.<44>
StartTimeZoneId	**xs:string**	Specifies the start time zone identifier.<45>
EndTimeZoneId	**xs:string**	Specifies the end time zone identifier.<46>

2.2.4.18   t:MeetingResponseMessageType Complex Type

The **MeetingResponseMessageType** complex type represents a meeting response in the server **message store**. The server creates this type in the organizer's **Inbox folder** when an attendee accepts, tentatively accepts, or declines a request created by the **CreateItem** operation, as specified in section 3.1.4.2. This type extends the **MeetingMessageType** complex type, as specified in section 2.2.4.15.

```
<xs:complexType name="MeetingResponseMessageType">
  <xs:complexContent>
    <xs:extension base="t:MeetingMessageType">
      <xs:sequence>
        <xs:element name="Start" type="xs:dateTime" minOccurs="0"/>
        <xs:element name="End" type="xs:dateTime" minOccurs="0"/>
        <xs:element name="Location" type="xs:string" minOccurs="0"/>
        <xs:element name="Recurrence" type="t:RecurrenceType" minOccurs="0"/>
        <xs:element name="CalendarItemType" type="xs:string" minOccurs="0"/>
        <xs:element name="ProposedStart" type="xs:dateTime" minOccurs="0"/>
        <xs:element name="ProposedEnd" type="xs:dateTime" minOccurs="0"/>
        <xs:element name="EnhancedLocation" type="t:EnhancedLocationType" minOccurs="0"/>
      </xs:sequence>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>
```

Start: An element of type **dateTime**, as defined in [XMLSCHEMA2] section 3.2.7, that represents the start time of the calendar item.<47>

End: An element of type **dateTime** that represents the ending time of the calendar item.<48>

Location: An element of type **string**, as defined in [XMLSCHEMA2] section 3.2.1, that represents the location for the calendar item.<49>

Recurrence: An element of type **RecurrenceType**, as defined in section 2.2.4.25, that represents the recurrence for the calendar item.<50>

CalendarItemType: An element of type **string** that represents the type of calendar item.<51>

ProposedStart: An element of type **dateTime** that represents the proposed start time of the calendar item.<52>

ProposedEnd: An element of type **dateTime** that represents the proposed end time of the calendar item.<53>

EnhancedLocation: An element of type **EnhancedLocationType**, as defined in section 2.2.4.12, that represents additional location information for the calendar item.<54>

2.2.4.19 t:NonEmptyArrayOfAttendeesType Complex Type

The **NonEmptyArrayOfAttendeesType** complex type contains a list representing attendees and resources for a meeting.

```
<xs:complexType name="NonEmptyArrayOfAttendeesType">
  <xs:sequence>
    <xs:element name="Attendee"
      type="t:AttendeeType"
      maxOccurs="unbounded"
    />
  </xs:sequence>
</xs:complexType>
```

The following table lists the child element of the **NonEmptyArrayOfAttendeesType** complex type.

Element name	Type	Description
Attendee	**t:AttendeeType** (section 2.2.4.4)	Represents an attendee or resource for a meeting.

2.2.4.20 t:NonEmptyArrayOfDeletedOccurrencesType Complex Type

The **NonEmptyArrayOfDeletedOccurrencesType** complex type contains a list of deleted occurrences of a recurring calendar item or meeting request.

```
<xs:complexType name="NonEmptyArrayOfDeletedOccurrencesType">
  <xs:sequence>
    <xs:element name="DeletedOccurrence"
      type="t:DeletedOccurrenceInfoType"
      maxOccurs="unbounded"
    />
  </xs:sequence>
</xs:complexType>
```

The following table lists the child element of the **NonEmptyArrayOfDeletedOccurrencesType** complex type.

Element name	Type	Description
DeletedOccurrence	**t:DeletedOccurrenceInfoType** ([MS-OXWSCDATA] section 2.2.4.25)	Represents a deleted occurrence of a recurring calendar item.

2.2.4.21 t:NonEmptyArrayOfOccurrenceInfoType Complex Type

The **NonEmptyArrayOfOccurrenceInfoType** complex type contains a list of modified occurrences of a recurring calendar item or meeting request.

```
<xs:complexType name="NonEmptyArrayOfOccurrenceInfoType">
  <xs:sequence>
    <xs:element name="Occurrence"
      type="t:OccurrenceInfoType"
      maxOccurs="unbounded"
```

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

The following table lists the child element of the **NonEmptyArrayOfOccurrenceInfoType** complex type.

Element name	Type	Description
Occurrence	**t:OccurrenceInfoType** (section 2.2.4.22)	Represents a modified occurrence of a recurring calendar item.

2.2.4.22 t:OccurrenceInfoType Complex Type

The **OccurrenceInfoType** complex type represents a single occurrence of a recurring calendar item or meeting request.

```
<xs:complexType name="OccurrenceInfoType">
  <xs:sequence>
    <xs:element name="ItemId"
      type="t:ItemIdType"
    />
    <xs:element name="Start"
      type="xs:dateTime"
    />
    <xs:element name="End"
      type="xs:dateTime"
    />
    <xs:element name="OriginalStart"
      type="xs:dateTime"
    />
  </xs:sequence>
</xs:complexType>
```

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

Element name	Type	Description
ItemId	**t:ItemIdType** ([MS-OXWSCORE] section 2.2.4.25)	Contains the identifier of a modified occurrence of a recurring calendar item.
Start	**xs:dateTime** ([XMLSCHEMA2])	Contains the start time of a modified occurrence of a recurring calendar item.
End	**xs:dateTime**	Contains the end time of a modified occurrence of a recurring calendar item.
OriginalStart	**xs:dateTime**	Contains the original start time of a modified occurrence of a recurring calendar item.

2.2.4.23 t:OnlineMeetingSettingsType Complex Type

The **OnlineMeetingSettingsType** complex type specifies the settings for an online meeting.<55>

```
<xs:complexType name="OnlineMeetingSettingsType">
  <xs:sequence>
    <xs:element name="LobbyBypass" type="t:LobbyBypassType"/>
    <xs:element name="AccessLevel" type="t:OnlineMeetingAccessLevelType"/>
    <xs:element name="Presenters" type="t:PresentersType"/>
  </xs:sequence>
</xs:complexType>
```

The following table describes the child elements of the **OnlineMeetingSettingsType** complex type.

Element	Type	Description
LobbyBypass	**t:LobbyBypassType** (section 2.2.5.8)	Specifies the settings to bypass the online waiting area.
AccessLevel	**t:OnlineMeetingAccessLevelType** (section 2.2.5.10)	Specifies who must wait in the online waiting area before online meetings.
Presenters	**t:PresentersType** (section 2.2.5.11	Controls which participants are given presenter privileges when the meeting is scheduled.

2.2.4.24 t:ProposeNewTimeType Complex Type

The **ProposeNewTimeType** complex type specifies a response to a new time proposal.<56> This type extends the **ResponseObjectType** complex type ([MS-OXWSCDATA] section 2.2.4.67).

```
<xs:complexType name="ProposeNewTimeType">
  <xs:complexContent>
    <xs:extension base="t:ResponseObjectType"/>
  </xs:complexContent>
</xs:complexType>
```

2.2.4.25 t:RecurrenceType Complex Type

The **RecurrenceType** complex type contains the recurrence pattern and recurrence range for calendar items and meeting requests.

```
<xs:complexType name="RecurrenceType">
  <xs:sequence>
    <xs:group
      ref="t:RecurrencePatternTypes"
      />
    <xs:group
      ref="t:RecurrenceRangeTypes"
      />
  </xs:sequence>
</xs:complexType>
```

The **RecurrencePatternTypes** group specifies the recurrence pattern for calendar items and meeting requests, as specified in [MS-OXWSCDATA] section 2.2.7.1.

The **RecurrenceRangeTypes** group specifies the recurrence patterns with numbered recurrences, non-ending recurrence patterns, and recurrence patterns with a set start and end date, as specified in [MS-OXWSCDATA] section 2.2.7.2.

2.2.4.26   t:RemoveItemType Complex Type

The **RemoveItemType** complex type specifies a response object that is used to remove a meeting item when a meeting cancellation message item is received. This complex type extends the **ResponseObjectType** complex type, as specified in [MS-OXWSCDATA] section 2.2.4.67.

```
<xs:complexType name="RemoveItemType">
  <xs:complexContent>
    <xs:extension
      base="t:ResponseObjectType"
      />
  </xs:complexContent>
</xs:complexType>
```

2.2.4.27   t:TentativelyAcceptItemType Complex Type

The **TentativelyAcceptItemType** complex type specifies a response object that is used to tentatively accept a meeting invitation or calendar item. This complex type extends the **MeetingRegistrationResponseObjectType** complex type, as specified section 2.2.4.16.

```
<xs:complexType name="TentativelyAcceptItemType">
  <xs:complexContent>
    <xs:extension
      base="t:MeetingRegistrationResponseObjectType"
      />
  </xs:complexContent>
</xs:complexType>
```

2.2.4.28   t:TimeChangeType Complex Type

The **TimeChangeType** complex type represents the date and time when the time changes to and from daylight saving time and standard time.

```
<xs:complexType name="TimeChangeType">
  <xs:sequence>
    <xs:element name="Offset"
      type="xs:duration"
      />
    <xs:group
      minOccurs="0"
      ref="t:TimeChangePatternTypes"
      />
    <xs:element name="Time"
      type="xs:time"
      />
  </xs:sequence>
  <xs:attribute name="TimeZoneName"
    type="xs:string"
    use="optional"
   />
</xs:complexType>
```

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

Element name	Type	Description
Offset	**xs:duration** ([XMLSCHEMA2])	Specifies the offset from the duration specified by the **BaseOffset** element (section 2.2.4.29).
Time	**xs:time** ([XMLSCHEMA2])	Specifies the time when the time changes between standard time and daylight saving time.

The following table lists the attribute of the **TimeChangeType** complex type.

Attribute name	Type	Description
TimeZoneName	**xs:string** ([XMLSCHEMA2])	Specifies the time zone name.

2.2.4.29   t:TimeZoneType Complex Type

The **TimeZoneType** complex type MAY<57> represent the time zone of the location where a meeting is hosted.

```
<xs:complexType name="TimeZoneType">
  <xs:sequence
    minOccurs="0"
  >
    <xs:element name="BaseOffset"
      type="xs:duration"
     />
    <xs:sequence
      minOccurs="0"
    >
      <xs:element name="Standard"
        type="t:TimeChangeType"
       />
      <xs:element name="Daylight"
        type="t:TimeChangeType"
       />
    </xs:sequence>
  </xs:sequence>
  <xs:attribute name="TimeZoneName"

    type="xs:string"
    use="optional"
  />
</xs:complexType>
```

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

Element name	Type	Description
BaseOffset	**xs:duration** ([XMLSCHEMA2])	Specifies the hourly offset from **Coordinated Universal Time (UTC)** for the current time zone.
Standard	**t:TimeChangeType** (section 2.2.4.28)	Specifies the date and time when the time changes from daylight saving time to standard time.

Element name	Type	Description
Daylight	**t:TimeChangeType**	Specifies the date and time when the time changes from standard time to daylight saving time.

The following table lists the attribute of the **TimeZoneType** complex type.

Attribute name	Type	Description
TimeZoneName	**xs:string** ([XMLSCHEMA2])	Specifies the time zone name.

2.2.5 Simple Types

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

Simple type	Description
CalendarItemCreateOrDeleteOperationType (section 2.2.5.1)	Specifies how **meeting requests** and cancellations are handled.
CalendarItemTypeType (section 2.2.5.2)	Identifies the type of a calendar item.
CalendarItemUpdateOperationType (section 2.2.5.3)	Specifies how meeting updates are communicated after a calendar item is updated.
CalendarPermissionLevelType (section 2.2.5.4)	Specifies the **permission** level that a user has on a **Calendar folder**.
CalendarPermissionReadAccessType (section 2.2.5.5)	Specifies the permissions a user has to view items in a Calendar folder.
EmailReminderChangeType (section 2.2.5.6)	Specifies the types of changes that can be made to an email reminder for an occurrence.
EmailReminderSendOption (section 2.2.5.7)	Specifies the send options for the reminder.
LobbyBypassType (section 2.2.5.8)	Specifies the settings to bypass the online waiting area.<58>
MeetingRequestTypeType (section 2.2.5.9)	Describes the types of meeting requests.
OnlineMeetingAccessLevelType (section 2.2.5.10)	Specifies who must wait in the online waiting area before online meetings.<59>
PresentersType (section 2.2.5.11)	Controls which participants are given presenter privileges when the meeting is scheduled.<60>
ResponseTypeType (section 2.2.5.12)	Represents the types of **recipient** responses that are received for a meeting.

2.2.5.1 t:CalendarItemCreateOrDeleteOperationType Simple Type

The **CalendarItemCreateOrDeleteOperationType** simple type specifies how meeting request creations and cancellations are communicated.

```
<xs:simpleType name="CalendarItemCreateOrDeleteOperationType">
  <xs:restriction
    base="xs:string"
  >
    <xs:enumeration
      value="SendToNone"
    />
    <xs:enumeration
      value="SendOnlyToAll"
    />
    <xs:enumeration
      value="SendToAllAndSaveCopy"
    />
  </xs:restriction>
</xs:simpleType>
```

The following table lists the **xs:string** ([XMLSCHEMA2]) enumeration values that are defined by the **CalendarItemCreateOrDeleteOperationType** simple type.

Value	Meaning
SendToNone	For the **CreateItem** operation ([MS-OXWSCORE] section 3.1.4.2), this value specifies that the meeting is created in the organizer's **Calendar folder** but no meeting request is sent to attendees. Because no meeting request is generated, the meeting is not created in each attendee's Calendar folder. For the **DeleteItem** operation ([MS-OXWSCORE] section 3.1.4.3), this value specifies that the meeting is deleted from the organizer's Calendar folder but no meeting cancellation message is sent to attendees.
SendOnlyToAll	For the **CreateItem** operation, this value specifies that the meeting is created in the organizer's Calendar folder, a meeting request is sent to all attendees, and the meeting is created in each attendee's Calendar folder. No copy of the meeting request is saved in the organizer's Sent Items folder. For the **DeleteItem** operation, this value specifies that the meeting is deleted from the organizer's Calendar folder and a meeting cancellation message is sent to all attendees, but no copy of the meeting cancellation message is saved.
SendToAllAndSaveCopy	For the **CreateItem** operation, this value specifies that the meeting is created in the organizer's Calendar folder, a meeting request is sent to all attendees, and the meeting is created in each attendee's Calendar folder. A copy of the meeting request is saved in the organizer's **Sent Items folder**. For the **DeleteItem** operation, this value specifies that the meeting is deleted from the organizer's Calendar folder, a meeting cancellation message is sent to all attendees, and a copy of the meeting cancellation message is saved in the organizer's Sent Items folder.

2.2.5.2 t:CalendarItemTypeType Simple Type

The **CalendarItemTypeType** simple type specifies the type of a calendar item.

```
<xs:simpleType name="CalendarItemTypeType">
  <xs:restriction
    base="xs:string"
  >
    <xs:enumeration
```

```
       value="Single"
      />
    <xs:enumeration
      value="Occurrence"
      />
    <xs:enumeration
      value="Exception"
      />
    <xs:enumeration
      value="RecurringMaster"
      />
  </xs:restriction>
</xs:simpleType>
```

The following table lists the **xs:string** ([XMLSCHEMA2]) enumeration values that are defined by the **CalendarItemTypeType** simple type.

Value	Meaning
Single	Specifies that the item is not associated with a recurring calendar item.
Occurrence	Specifies that the item is an occurrence of a recurring calendar item.
Exception	Specifies that the item is an exception to a recurring calendar item.
RecurringMaster	Specifies that the item is the master item that contains the **recurrence pattern** for a calendar item.

2.2.5.3 t:CalendarItemUpdateOperationType Simple Type

The **CalendarItemUpdateOperationType** simple type specifies how meeting updates are communicated after a calendar item is updated.

```
<xs:simpleType name="CalendarItemUpdateOperationType">
  <xs:restriction
    base="xs:string"
  >
    <xs:enumeration
      value="SendToNone"
     />
    <xs:enumeration
      value="SendOnlyToAll"
      />

    <xs:enumeration
      value="SendOnlyToChanged"
      />
    <xs:enumeration
      value="SendToAllAndSaveCopy"
      />
    <xs:enumeration
      value="SendToChangedAndSaveCopy"
      />
  </xs:restriction>
</xs:simpleType>
```

The following table lists the **xs:string** ([XMLSCHEMA2]) enumeration values that are defined by the **CalendarItemUpdateOperationType** simple type.

Value	Meaning
SendToNone	The calendar item is updated but updates are not sent to attendees.
SendOnlyToAll	The calendar item is updated and the meeting update is sent to all attendees but is not saved in the folder that is specified in the request.
SendOnlyToChanged	The calendar item is updated and the meeting update is sent only to attendees that were added and/or deleted because of the update.
SendToAllAndSaveCopy	The calendar item is updated, the meeting update is sent to all attendees, and a copy of the updated meeting request is saved in the **Sent Items folder**.
SendToChangedAndSaveCopy	The calendar item is updated, the meeting update is sent to all attendees that were added and/or deleted as a result of the update, and a copy of the updated meeting request is saved in the Sent Items folder.

2.2.5.4 t:CalendarPermissionLevelType Simple Type

The **CalendarPermissionLevelType** simple type specifies the permission level that a user has on a **Calendar folder**.

```
<xs:simpleType name="CalendarPermissionLevelType">
  <xs:restriction
    base="xs:string"
  >
    <xs:enumeration
      value="Author"
     />
    <xs:enumeration
      value="Contributor"
     />
    <xs:enumeration
      value="Custom"
     />
    <xs:enumeration
      value="Editor"
     />
    <xs:enumeration
      value="FreeBusyTimeAndSubjectAndLocation"
     />
    <xs:enumeration
      value="FreeBusyTimeOnly"
     />
    <xs:enumeration

      value="None"
     />
    <xs:enumeration
      value="NoneditingAuthor"
     />
    <xs:enumeration
      value="Owner"
     />
    <xs:enumeration
      value="PublishingAuthor"
     />
    <xs:enumeration
      value="PublishingEditor"
     />
    <xs:enumeration
      value="Reviewer"
     />
```

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

The following table lists the **xs:string** ([XMLSCHEMA2]) enumeration values that are defined by the **CalendarPermissionLevelType** simple type.

Value	Meaning
Author	The user can create and read all items in the folder, and edit and delete only items that the user creates.
Contributor	The user can create items in the folder. The contents of the folder do not appear.
Custom	The user has custom access permissions on the folder.
Editor	The user can create, read, edit and delete all items in the folder.
FreeBusyTimeAndSubjectAndLocation	The user can view free/busy time within the calendar and the subject and location of appointments.
FreeBusyTimeOnly	The user can view only free/busy time within the calendar.
None	The user has no permissions on the folder.
NoneditingAuthor	The user can create and read all items in the folder, and delete only items that the user creates.
Owner	The user can create, read, edit, and delete all items in the folder, and create subfolders. The user is both folder owner and folder contact.
PublishingAuthor	The user can create and read all items in the folder, edit and delete only items that the user creates, and create subfolders.
PublishingEditor	The user can create, read, edit, and delete all items in the folder, and create subfolders.
Reviewer	The user can read all items in the folder.

2.2.5.5 t:CalendarPermissionReadAccessType Simple Type

The **CalendarPermissionReadAccessType** simple type specifies the permissions a user has to view items in a **Calendar folder** that is being shared.

```
    <xs:simpleType name="CalendarPermissionReadAccessType">
      <xs:restriction
        base="xs:string"
      >
        <xs:enumeration
          value="None"
         />
        <xs:enumeration
          value="TimeOnly"
         />
        <xs:enumeration
          value="TimeAndSubjectAndLocation"
         />
        <xs:enumeration
```

```
      value="FullDetails"
    />
  </xs:restriction>
</xs:simpleType>
```

The following table lists the **xs:string** ([XMLSCHEMA2]) enumeration values that are defined by the **CalendarPermissionReadAccessType** simple type.

Value	Meaning
None	The user does not have permission to view items in the calendar.
TimeOnly	The user has permission to view only free/busy time in the calendar.
TimeAndSubjectAndLocation	The user has permission to view free/busy time in the calendar and the subject and location of appointments.
FullDetails	The user has permission to view all items in the calendar, including free/busy time and subject, location, and details of appointments.

2.2.5.6 t:EmailReminderChangeType

The **EmailReminderChangeType** simple type specifies the type of the changes that can be made to an email reminder for an occurrence.<61>

```
<xs:simpleType name="EmailReminderChangeType">
  <xs:restriction base="xs:string">
    <xs:enumeration value="None"/>
    <xs:enumeration value="Added"/>
    <xs:enumeration value="Override"/>
    <xs:enumeration value="Deleted"/>
  </xs:restriction>
</xs:simpleType>
```

The following table describes the **xs:string** ([XMLSCHEMA2]) enumeration values that are defined by the **EmailReminderChangeType** simple type.

Value	Meaning
None	No change was made.
Added	An email reminder was added.
Override	The change was an override.
Deleted	The reminder was deleted.

2.2.5.7 t:EmailReminderSendOption

The **EmailReminderSendOption** simple type specifies the send options for the reminder.<62>

```
<xs:simpleType name="EmailReminderSendOption">
```

```
         <xs:restriction base="xs:string">
           <xs:enumeration value="NotSet"/>
           <xs:enumeration value="User"/>
           <xs:enumeration value="AllAttendees"/>
           <xs:enumeration value="Staff"/>
           <xs:enumeration value="Customer"/>
         </xs:restriction>
       </xs:simpleType>
```

The following table describes the **xs:string** ([XMLSCHEMA2]) enumeration values that are defined by the **EmailReminderSendOption** simple type.

Value	Meaning
NotSet	The send option has not been set on this email reminder. When the value is **NotSet**, it will be set to either **User** or **AllAttendees** according to the **IsOrganizerReminder** property (section 2.2.4.13). It will be set to **AllAttendees** if **IsOrganizerReminder** is true, otherwise **User**,
User	Send the email reminder only to the user.
AllAttendees	Send the email reminder to all attendees.
Staff	Send the reminder to staff only. This value is only applicable for a booking item and for internal use only.
Customer	Send the reminder to customer only. This value is only applicable for a booking item and for internal use only.

2.2.5.8 t:LobbyBypassType Simple Type

The **LobbyByPassType** simple type specifies the settings to bypass the online waiting area.<63>

```
    <xs:simpleType name="LobbyBypassType">
      <xs:restriction base="xs:string">
        <xs:enumeration value="Disabled"/>
        <xs:enumeration value="EnabledForGatewayParticipants"/>
      </xs:restriction>

    </xs:simpleType>
```

The following table lists the **xs:string** ([XMLSCHEMA2]) enumeration values that are defined by the **LobbyBypassType** simple type.

Value	Meaning
Disabled	Lobby bypass is disabled.
EnabledForGatewayParticipants	Lobby bypass is enabled for telephone participants.

2.2.5.9 t:MeetingRequestTypeType Simple Type

The **MeetingRequestTypeType** simple type specifies the type of a meeting request.

```
<xs:simpleType name="MeetingRequestTypeType">
  <xs:restriction
    base="xs:string"
  >
    <xs:enumeration
      value="None"
     />
    <xs:enumeration
      value="FullUpdate"
     />
    <xs:enumeration
      value="InformationalUpdate"
     />
    <xs:enumeration
      value="NewMeetingRequest"
     />
    <xs:enumeration
      value="Outdated"
     />
    <xs:enumeration
      value="SilentUpdate"
     />
    <xs:enumeration
      value="PrincipalWantsCopy"
     />
  </xs:restriction>
</xs:simpleType>
```

The following table lists the **xs:string** ([XMLSCHEMA2]) enumeration values that are defined by the **MeetingRequestTypeType** simple type.

Value	Meaning
None	Indicates that the meeting request type is not defined. This is the default type for **t:MeetingRequestType**.
FullUpdate	Identifies the meeting request as an updated meeting request. This value indicates that the attendee has not yet responded to the original meeting request.
InformationalUpdate	Identifies the meeting request as an updated meeting request. This value indicates that the attendee had previously accepted or tentatively accepted the original meeting request.
NewMeetingRequest	Identifies the meeting request as a new meeting request.
Outdated	Indicates that the meeting request has become outdated because an updated meeting request for the same calendar item has been received.
SilentUpdate	Identifies the meeting request as a silent update to an existing meeting.
PrincipalWantsCopy	Indicates that the meeting request belongs to a principal who has forwarded meeting messages to a delegate and this copy is informational.<64>

2.2.5.10   t:OnlineMeetingAccessLevelType Simple Type

The **OnlineMeetingAccessLevelType** simple type specifies who must wait in the online waiting area before online meetings.<65>

```
<xs:simpleType name="OnlineMeetingAccessLevelType">
  <xs:restriction base="xs:string">
    <xs:enumeration value="Locked"/>
    <xs:enumeration value="Invited"/>
    <xs:enumeration value="Internal"/>
    <xs:enumeration value="Everyone"/>
  </xs:restriction>
</xs:simpleType>
```

The following table describes the **xs:string** ([XMLSCHEMA2]) enumeration values that are defined by the **OnlineMeetingAccessLevelType** simple type.

Value	Meaning
Locked	Only the organizer has access. All others must wait in the online waiting area.
Invited	Only invited participants have access. All others must wait in the online waiting area.
Internal	Only internal participants have access. All others must wait in the online waiting area.
Everyone	All participants have access and do not have to wait to join the meeting.

2.2.5.11   t:PresentersType Simple Type

The **PresentersType** simple type controls which participants are given presenter privileges when the meeting is scheduled.<66>

```
<xs:simpleType name="PresentersType">
  <xs:restriction base="xs:string">
    <xs:enumeration value="Disabled"/>
    <xs:enumeration value="Internal"/>

    <xs:enumeration value="Everyone"/>
  </xs:restriction>
</xs:simpleType>.
```

The following table describes the **xs:string** ([XMLSCHEMA2]) enumeration values that are defined by the **PresentersType** simple type.

Value	Description
Disabled	The option is disabled. Only the organizer has presenter privileges.
Internal	Participants within the same company or organization have presenter privileges.<67>
Everyone	All participants have presenter privileges.

2.2.5.12 t:ResponseTypeType Simple Type

The **ResponseTypeType** simple type specifies the type of **recipient** response that is received for a meeting.

```
<xs:simpleType name="ResponseTypeType">
  <xs:restriction
    base="xs:string"
  >
    <xs:enumeration
      value="Unknown"
     />
    <xs:enumeration
      value="Organizer"
     />
    <xs:enumeration
      value="Tentative"
     />
    <xs:enumeration
      value="Accept"
     />
    <xs:enumeration
      value="Decline"
     />
    <xs:enumeration
      value="NoResponseReceived"
     />
  </xs:restriction>
</xs:simpleType>
```

The following table lists the **xs:string** ([XMLSCHEMA2]) enumeration values that are defined by the **ResponseTypeType** simple type.

Value	Meaning
Unknown	Indicates that the **organizer** has not received a response from the recipient.
Organizer	Indicates that the recipient is the meeting organizer.
Tentative	Indicates that the recipient has tentatively accepted the meeting.
Accept	Indicates that the recipient accepted the meeting.
Decline	Indicates that the recipient declined the meeting.
NoResponseReceived	Indicates that the recipient has not yet responded to the meeting request.

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 returned by the transport are passed directly back to the higher-layer protocol or application.

3.1   ExchangeServicePortType Server Details

This protocol defines a single port type and uses six operations that are specified in [MS-OXWSCORE]. These operations enable client implementations to retrieve, delete, update, move, copy, and create calendar-related items on the server.

3.1.1   Abstract Data Model

None.

3.1.2   Timers

None.

3.1.3   Initialization

None.

3.1.4   Message Processing Events and Sequencing Rules

The following table summarizes the list of operations as defined by this specification.

Operation name	Description
CopyItem ([MS-OXWSCORE] section 3.1.4.1)	Copies calendar-related items on the server.
CreateItem ([MS-OXWSCORE] section 3.1.4.2)	Creates calendar-related items on the server. Can also be used to cancel a meeting, and when a meeting is cancelled, it can be used to remove the meeting item and corresponding meeting cancellation message from the server.
DeleteItem ([MS-OXWSCORE] section 3.1.4.3)	Deletes calendar-related items on the server.
GetItem ([MS-OXWSCORE] section 3.1.4.4)	Retrieves calendar-related items from the server.
GetReminders	Retrieves reminders in the user's mailbox from the server.
MoveItem ([MS-OXWSCORE] section 3.1.4.7)	Moves calendar-related items on the server.
PerformReminderAction	Initiates an action on a reminder.
UpdateItem ([MS-OXWSCORE] section 3.1.4.9)	Updates calendar-related items on the server.

3.1.4.1 CopyItem Operation

The **CopyItem** operation creates copies of one or more calendar-related items on the server. This operation is specified in [MS-OXWSCORE] section 3.1.4.1.

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

```
<wsdl:operation name="CopyItem">
     <wsdl:input message="tns:CopyItemSoapIn" />
     <wsdl:output message="tns:CopyItemSoapOut" />
</wsdl:operation>
```

The following is the WSDL binding specification for the **CopyItem** operation.

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

3.1.4.1.1 Messages

The following table summarizes the set of **WSDL message** definitions that are specific to the **CopyItem** operation.

Message name	Description
CopyItemSoapIn	The **CopyItemSoapIn** message is specified in [MS-OXWSCORE] section 3.1.4.1.1.1. It specifies the **CopyItem** operation request to copy one or more calendar-related items on the server.
	The **CopyItem** ([MS-OXWSCORE] section 3.1.4.1.2.1) element that specifies the **XML** request MUST contain the following child elements:
	▪ **ToFolderId** ([MS-OXWSCORE] section 2.2.4.16)
	▪ **ItemIds** ([MS-OXWSCORE] section 2.2.4.16)
	For each item being copied that is not a recurring calendar item, the **ItemIds** element MUST contain an **ItemId** child element ([MS-OXWSCORE] section 2.2.4.31).
	For each item being copied that is a recurring calendar item, the **ItemIds** element SHOULD contain a **RecurringMasterItemId** child element ([MS-OXWSCORE] section 2.2.4.39).
CopyItemSoapOut	The **CopyItemSoapOut** message is specified in [MS-OXWSCORE] section 3.1.4.1.1.2. It specifies the server response to the **CopyItem** operation request.

A successful **CopyItem** operation returns a **CopyItemResponse** element, as specified in [MS-OXWSCORE] section 3.1.4.1.2.2, with the **ResponseClass** attribute of the **CopyItemResponseMessage** element, as specified in [MS-OXWSCDATA] section 2.2.4.12, set to "Success". The **ResponseCode** element, as specified in [MS-OXWSCDATA] section 2.2.4.41, of the **CopyItemResponseMessage** element is set to "NoError".

If the request is unsuccessful, the **CopyItem** operation returns an **CopyItemResponse** element with the **ResponseClass** attribute of the **CopyItemResponseMessage** element set to "Error". The **ResponseCode** element of the **CopyItemResponseMessage** element is set to a value of the **ResponseCodeType** simple type, as specified in [MS-OXWSCDATA] section 2.2.5.24. The following table describes some of the possible error code values.

Value	Description
ErrorCalendarCannotMoveOrCopyOccurrence	Specifies that an attempt was made to move or copy an occurrence of a recurring calendar item.
ErrorCalendarCannotUseIdForRecurringMasterId	Specifies that the RecurringMasterId ([MS-OXWSCORE] section 2.2.4.35) does not correspond to a valid recurring master item.
ErrorCalendarInvalidPropertyState	Specifies that the state of the calendar item recurrence binary large object (BLOB) in the **message store** is invalid.
ErrorCalendarInvalidRecurrence	Specifies that the internal structure of the objects that represent the recurrence is invalid.

3.1.4.2 CreateItem Operation

The **CreateItem** operation creates one or more calendar-related items on the server. This operation can be used to create appointments, meetings, meeting request messages, meeting response messages, and meeting cancellation messages. It can also be used to cancel a meeting, and when a meeting is cancelled, it can be used to remove the meeting item and corresponding meeting cancellation message from the server. This operation is specified in [MS-OXWSCORE] section 3.1.4.2.

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

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

The following is the WSDL binding specification for the **CreateItem** operation.

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

3.1.4.2.1 Messages

The following table summarizes the set of **WSDL message** definitions that are specific to the **CreateItem** operation.

Message name	Description
CreateItemSoapIn	The **CreateItemSoapIn** message is specified in [MS-OXWSCORE] section 3.1.4.2.1.1. It specifies the **CreateItem** operation request to create one or more calendar-related items on the server. The **Items** child element ([MS-OXWSCDATA] section 2.2.4.46) of the **CreateItem** element ([MS-OXWSCORE] section 3.1.4.2.2.1) that specifies the **XML** request MUST contain at least one of the following elements: ▪ **CalendarItemType** (section 2.2.4.6) ▪ **AcceptItemType** (section 2.2.4.1) ▪ **TentativelyAcceptItemType** (section 2.2.4.27) ▪ **DeclineItemType** (section 2.2.4.11) ▪ **CancelCalendarItemType** (section 2.2.4.10) ▪ **RemoveItemType** (section 2.2.4.26) The **Items** child element of the **CreateItem** element MUST NOT contain the following elements: ▪ **MeetingMessageType (**section 2.2.4.15**)** ▪ **MeetingRequestMessageType (**section 2.2.4.17**)** ▪ **MeetingCancellationMessageType (**section 2.2.4.14**)** All other child elements of the **CreateItem** element MUST be empty.
CreateItemSoapOut	The **CreateItemSoapOut** message is specified in [MS-OXWSCORE] section 3.1.4.2.1.2. It specifies the server response to the **CreateItem** operation request.

A successful **CreateItem** operation returns a **CreateItemResponse** element, as specified in [MS-OXWSCORE] section 3.1.4.2.2.2, with the **ResponseClass** attribute of the **CreateItemResponseMessage** element, as specified in [MS-OXWSCDATA] section 2.2.4.12, set to "Success". The **ResponseCode** element, as specified in [MS-OXWSCDATA] section 2.2.4.41, of the **CreateItemResponseMessage** element is set to "NoError".

If the request is unsuccessful, the **CreateItem** operation returns a **CreateItemResponse** element with the **ResponseClass** attribute of the **CreateItemResponseMessage** element set to "Error". The **ResponseCode** element of the **CreateItemResponseMessage** element is set to a value of the **ResponseCodeType** simple type, as specified in [MS-OXWSCDATA] section 2.2.5.24. The following table describes some of the possible error code values.

Value	Description
ErrorCalendarDurationIsTooLong	Specifies that the item duration of a calendar item exceeds five years.
ErrorCalendarEndDateIsEarlierThanStartDate	Specifies that the end date/time MUST be changed so that it is greater than the start date/time.
ErrorCalendarInvalidDayForWeeklyRecurrence	Specifies that invalid values were used to specify the weekly recurrence.<68>
ErrorCalendarInvalidRecurrence	Specifies that the internal structure of the objects that represent the recurrence is invalid.

3.1.4.3 DeleteItem Operation

The **DeleteItem** operation deletes one or more calendar-related items on the server. This operation is specified in [MS-OXWSCORE] section 3.1.4.3.

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

```
<wsdl:operation name="DeleteItem">
     <wsdl:input message="tns:DeleteItemSoapIn" />
     <wsdl:output message="tns:DeleteItemSoapOut" />
</wsdl:operation>
```

The following is the WSDL binding specification for the **DeleteItem** operation.

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

3.1.4.3.1 Messages

The following table summarizes the set of **WSDL message** definitions that are specific to the **DeleteItem** operation.

Message name	Description
DeleteItemSoapIn	The **DeleteItemSoapIn** message is specified in [MS-OXWSCORE] section 3.1.4.3.1.1. It specifies the **DeleteItem** operation request to delete one or more calendar-related items on the server.
	The **DeleteItem** element ([MS-OXWSCORE] section 3.1.4.3.2.1) that specifies the **XML** request MUST contain the **ItemIds** child element ([MS-OXWSCORE] section 3.1.4.3.3.2).
	For each item being deleted that is not a recurring calendar item, the **ItemIds** element MUST contain an **ItemId** child element ([MS-OXWSCORE] section 2.2.4.31).
	For each item being deleted that is a recurring calendar item, the **ItemIds** element can contain a **RecurringMasterItemId** child element ([MS-OXWSCORE] section 2.2.4.39) or an **OccurrenceItemId** child element ([MS-OXWSCORE] section 2.2.4.35).
DeleteItemSoapOut	The **DeleteItemSoapOut** message is specified in [MS-OXWSCORE] section 3.1.4.3.1.2. It specifies the server response to the **DeleteItem** operation request.

A successful **DeleteItem** operation returns a **DeleteItemResponse** element, as specified in [MS-OXWSCORE] section 3.1.4.3.2.2, with the **ResponseClass** attribute of the **DeleteItemResponseMessage** element, as specified in [MS-OXWSCDATA] section 2.2.4.12, set to "Success". The **ResponseCode** element, as specified in [MS-OXWSCDATA] section 2.2.4.41, of the **DeleteItemResponseMessage** element is set to "NoError".

If the request is unsuccessful, the **DeleteItem** operation returns a **DeleteItemResponse** element with the **ResponseClass** attribute of the **DeleteItemResponseMessage** element set to "Error". The **ResponseCode** element of the **DeleteItemResponseMessage** element is set to a value of the **ResponseCodeType** simple type, as specified in [MS-OXWSCDATA] section 2.2.5.24. The following table describes some of the possible error code values.

Value	Description
ErrorCalendarCannotUseIdForOccurrenceId	Specifies that the OccurrenceId ([MS-OXWSCORE] section 2.2.4.39) does not correspond to a valid occurrence of a recurring master item.
ErrorSendMeetingCancellationsRequired	Occurs during a **DeleteItem** call, when the **SendMeetingCancellations** property is missing from the request and the item to delete is a calendar item. If you are using the proxy objects, make sure that the **SendMeetingCancellationsSpecified** property is set to true.
ErrorCalendarInvalidPropertyState	Specifies that the state of the calendar item recurrence binary large object (BLOB) in the **message store** is invalid.
ErrorCalendarInvalidRecurrence	Specifies that the internal structure of the objects that represent the recurrence is invalid.

3.1.4.4 GetItem Operation

The **GetItem** operation retrieves one or more calendar-related items from the server. This operation is specified in [MS-OXWSCORE] section 3.1.4.4.

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

```
<wsdl:operation name="GetItem">
    <wsdl:input message="tns:GetItemSoapIn" />
    <wsdl:output message="tns:GetItemSoapOut" />
</wsdl:operation>
```

The following is the WSDL binding specification for the **GetItem** operation.<69>

```
<wsdl:operation name="GetItem">
    <soap:operation
soapAction="http://schemas.microsoft.com/exchange/services/2006/messages/GetItem"/>
    <wsdl:input>
        <soap:header message="tns:GetItemSoapIn" part="Impersonation" use="literal"/>
        <soap:header message="tns:GetItemSoapIn" part="MailboxCulture" use="literal"/>
        <soap:header message="tns:GetItemSoapIn" part="RequestVersion" use="literal"/>
        <soap:header message="tns:GetItemSoapIn" part="TimeZoneContext" use="literal"/>
        <soap:header message="tns:GetItemSoapIn" part="DateTimePrecision" use="literal" />
<soap:body parts="request" use="literal"/>
    </wsdl:input>
    <wsdl:output>
        <soap:body parts="GetItemResult" use="literal"/>
        <soap:header message="tns:GetItemSoapOut" part="ServerVersion" use="literal"/>
    </wsdl:output>
</wsdl:operation>
```

3.1.4.4.1 Messages

The following table summarizes the set of **WSDL message** definitions that are specific to the **GetItem** operation.

Message name	Description
GetItemSoapIn	The **GetItemSoapIn** message is specified in [MS-OXWSCORE] section 3.1.4.4.1.1. It specifies the **GetItem** operation request to retrieve one or more calendar-related items from the server.
	The **GetItem** element ([MS-OXWSCORE] section 3.1.4.4.2.1) that specifies the **XML** request MUST contain the following child elements:
	• **ItemShape** ([MS-OXWSCORE] section 3.1.4.4.3.2)
	• **ItemIds** ([MS-OXWSCORE] section 3.1.4.4.3.2)
	For each item being retrieved that is not a recurring calendar item, the **ItemIds** element MUST contain an **ItemId** child element ([MS-OXWSCORE] section 2.2.4.31).
	For each item being retrieved that is a recurring calendar item, the **ItemIds** element SHOULD contain a **RecurringMasterItemId** child element ([MS-OXWSCORE] section 2.2.4.39) or an **OccurrenceItemId** child element ([MS-OXWSCORE] section 2.2.4.35).
GetItemSoapOut	The **GetItemSoapOut** message is specified in [MS-OXWSCORE] section 3.1.4.4.1.2. It specifies the server response to the **GetItem** operation request.

A successful **GetItem** operation returns a **GetItemResponse** element, as specified in [MS-OXWSCORE] section 3.1.4.4.2.2, with the **ResponseClass** attribute of the **GetItemResponseMessage** element, as specified in [MS-OXWSCDATA] section 2.2.4.12, set to "Success". The **ResponseCode** element, as specified in [MS-OXWSCDATA] section 2.2.4.41, of the **GetItemResponseMessage** element is set to "NoError".

If the request is unsuccessful, the **GetItem** operation returns a **GetItemResponse** element with the **ResponseClass** attribute of the **GetItemResponseMessage** element set to "Error". The **ResponseCode** element of the **GetItemResponseMessage** element is set to a value of the **ResponseCodeType** simple type, as specified in [MS-OXWSCDATA] section 2.2.5.24. The following table describes some of the possible error code values.

Value	Description
ErrorCalendarCannotUseIdForOccurrenceId	Specifies that the OccurrenceId ([MS-OXWSCORE] section 2.2.4.39) does not correspond to a valid occurrence of a recurring master item.
ErrorCalendarCannotUseIdForRecurringMasterId	Specifies that the RecurringMasterId ([MS-OXWSCORE] section 2.2.4.35) does not correspond to a valid recurring master item.
ErrorCalendarInvalidPropertyState	Specifies that the state of the calendar item recurrence binary large object (BLOB) in the **message store** is invalid.
ErrorCalendarInvalidRecurrence	Specifies that the internal structure of the objects that represent the recurrence is invalid.

3.1.4.5 GetReminders Operation

The **GetReminders** operation retrieves reminders in the user's mailbox from the server.<70>

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

```
<wsdl:operation name="GetReminders">
     <wsdl:input message="tns:GetRemindersSoapIn" />
     <wsdl:output message="tns:GetRemindersSoapOut" />
</wsdl:operation>
```

The following is the **WSDL** binding specification for the **GetReminders** operation.

```
<wsdl:operation name="GetReminders">
   <soap:operation
soapAction="http://schemas.microsoft.com/exchange/services/2006/messages/GetReminders"/>
   <wsdl:input>
      <soap:header message="tns:GetRemindersSoapIn" part="RequestVersion" use="literal"/>
      <soap:body parts="request" use="literal"/>
   </wsdl:input>
   <wsdl:output>
      <soap:body parts="GetRemindersResult" use="literal"/>
      <soap:header message="tns:GetRemindersSoapOut" part="ServerVersion" use="literal"/>
   </wsdl:output>
</wsdl:operation>
```

3.1.4.5.1 Messages

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

Message name	Description
GetRemindersSoapIn	Specifies the **SOAP message** request to retrieve reminders.
GetRemindersSoapOut	Specifies the SOAP message that is returned by the server in response to a **GetRemindersSoapIn** operation request.

3.1.4.5.1.1   tns:GetRemindersSoapIn Message

The **GetRemindersSoapIn WSDL message** specifies the **GetReminders** operation request to retrieve reminders on the server.

```
<wsdl:message name="GetRemindersSoapIn">
  <wsdl:part name="request" element="tns:GetReminders"/>
  <wsdl:part name="RequestVersion" element="t:RequestServerVersion"/>
</wsdl:message>
```

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

The parts of the **GetRemindersSoapIn** WSDL message are listed and described in the following table.

Part name	Element/type	Description
request	**tns:GetReminders** (section 3.1.4.5.2.1)	Specifies the **SOAP body** of the request to retrieve reminders on the server.
RequestVersion	**t:RequestServerVersion** ([MS-	Specifies a **SOAP header** that identifies the

Part name	Element/type	Description
	OXWSCDATA] section 2.2.3.9)	schema version for a **GetReminders** operation request.

3.1.4.5.1.2 tns:GetRemindersSoapOut Message

The **GetRemindersSoapOut WSDL message** specifies the server response to a **GetReminders** operation request to retrieve reminders on the server.

```
<wsdl:message name="GetRemindersSoapOut">
  <wsdl:part name="GetRemindersResult" element="tns:GetRemindersResponse"/>
  <wsdl:part name="ServerVersion" element="t:ServerVersionInfo"/>
</wsdl:message>
```

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

The parts of the **GetRemindersSoapOut** WSDL message are listed and described in the following table.

Part name	Element/type	Description
GetRemindersResult	**tns:GetRemindersResponse** (section 3.1.4.5.2.2)	Specifies the **SOAP body** of a response message.
ServerVersion	**t:ServerVersionInfo** ([MS-OXWSCDATA] section 2.2.3.10)	Specifies a **SOAP header** that identifies the server version for the response to a **GetReminders** operation request.

If the request is successful, the **GetReminders** operation returns a **GetRemindersResponse** element with the **ResponseClass** attribute of the **GetRemindersResponseMessage** element set to "Success". The **ResponseCode** element of the **GetRemindersResponse** element is set to "NoError".

If the request is unsuccessful, the **GetReminders** operation returns a **GetRemindersResponse** element with the **ResponseClass** attribute of the **GetRemindersResponse** element set to "Error". The **ResponseCode** element of the **GetRemindersResponse** element is set to a value of the **ResponseCodeType** simple type, as specified in [MS-OXWSCDATA] section 2.2.5.24.

3.1.4.5.2 Elements

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

Element name	Description
GetReminders	Specifies a request to retrieve reminders.
GetRemindersResponse	Specifies a response to a **GetReminders** operation request.

3.1.4.5.2.1 m:GetReminders Element

The **GetReminders** element specifies a request to return reminders.

```
<xs:element name="GetReminders" type="m:GetRemindersType"/>
```

3.1.4.5.2.2   m:GetRemindersResponse Element

The **GetRemindersResponse** element specifies a response to a **GetReminders** operation request.

```
<xs:element name="GetRemindersResponse" type="m:GetRemindersResponseMessageType" />
```

3.1.4.5.3 Complex Types

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

Complex type name	Description
GetRemindersResponseMessageType	Specifies a response to a **GetReminders** operation request.
ArrayOfRemindersType	Specifies an array of reminders.
GetRemindersType	Specifies a request to retrieve reminders.
ReminderType	Specifies a reminder object.

3.1.4.5.3.1   m:GetRemindersResponseMessageType Complex Type

The **GetRemindersResponseMessageType** complex type specifies a response to a request to return reminders. This type extends the **ResponseMessageType** ([MS-OXWSCDATA] section 2.2.4.65).

```
<xs:complexType name="GetRemindersResponseMessageType">
  <xs:complexContent>
    <xs:extension base="m:ResponseMessageType">
      <xs:sequence>
        <xs:element name="Reminders" type="t:ArrayOfRemindersType" minOccurs="1"
maxOccurs="1"/>
      </xs:sequence>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>
```

The following table describes the child element of the **GetRemindersResponseMessageType** complex type.

Element	Type	Description
Reminders	**t:ArrayOfRemindersType** (section 3.1.4.5.3.3)	The returned reminders.

3.1.4.5.3.2   m:GetRemindersType Complex Type

The **GetRemindersType** complex type represents a request to return reminders. This type extends the **BaseRequestType** complex type ([MS-OXWSCDATA] section 2.2.4.17).

```
<xs:complexType name="GetRemindersType" mixed="false">
  <xs:complexContent>
    <xs:extension base="m:BaseRequestType">
      <xs:sequence>
        <xs:element name="BeginTime" type="xs:dateTime" minOccurs="0" maxOccurs="1"/>
        <xs:element name="EndTime" type="xs:dateTime" minOccurs="0" maxOccurs="1"/>
        <xs:element name="MaxItems" minOccurs="0" maxOccurs="1">
          <xs:simpleType>
            <xs:restriction base="xs:int">
              <xs:minInclusive value="0"/>
              <xs:maxInclusive value="200"/>
            </xs:restriction>
          </xs:simpleType>
        </xs:element>
        <xs:element name="ReminderType" minOccurs="0" maxOccurs="1">
          <xs:simpleType>
            <xs:restriction base="xs:string">
              <xs:enumeration value="All"/>
              <xs:enumeration value="Current"/>
              <xs:enumeration value="Old"/>
            </xs:restriction>
          </xs:simpleType>
        </xs:element>
      </xs:sequence>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>
```

The following table describes the child elements of the **GetRemindersType** complex type.

Element	Type	Description
BeginTime	**xs:dateTime** ([XMLSCHEMA2])	The beginning time of reminders to return.
EndTime	**xs:dateTime**	The end time of the reminders to return
MaxItems	**xs:int** ([XMLSCHEMA2])	The maximum number of items to return. This number **MUST** be between 0 and 200 inclusive.
ReminderType	**xs:string** ([XMLSCHEMA2])	The type of reminders to return. This element has one of the following values: ▪ "All" ▪ "Current" ▪ "Old"

3.1.4.5.3.3   t:ArrayOfRemindersType Complex Type

The **ArrayOfRemindersType** complex type specifies an array of reminders.

```
<xs:complexType name="ArrayOfRemindersType">
  <xs:sequence>
    <xs:element name="Reminder" type="t:ReminderType" minOccurs="0" maxOccurs="unbounded"/>
  </xs:sequence>
```

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

The following table describes the child element of the **ArrayOfRemindersType** complex type.

Element	Type	Description
Reminder	**t:ReminderType** (section 3.1.4.5.3.4)	A reminder.

3.1.4.5.3.4   t:ReminderType Complex Type

The **ReminderType** complex type specifies a reminder object.

```
<xs:complexType name="ReminderType">
  <xs:sequence>
    <xs:element name="Subject" type="xs:string" minOccurs="1" maxOccurs="1"/>
    xs:element name="Location" type="xs:string" minOccurs="0" maxOccurs="1"/>
    <xs:element name="ReminderTime" type="xs:dateTime" minOccurs="1" maxOccurs="1"/>
    <xs:element name="StartDate" type="xs:dateTime" minOccurs="1" maxOccurs="1"/>
    <xs:element name="EndDate" type="xs:dateTime" minOccurs="1" maxOccurs="1"/>
    <xs:element name="ItemId" type="t:ItemIdType" minOccurs="1" maxOccurs="1"/>
    <xs:element name="RecurringMasterItemId" type="t:ItemIdType" minOccurs="0"
maxOccurs="1"/>
    <xs:element name="ReminderGroup" type="t:ReminderGroupType" minOccurs="0" maxOccurs="1"/>
    <xs:element name="UID" type="xs:string" minOccurs="1" maxOccurs="1"/>
  </xs:sequence>
</xs:complexType>
```

The following table describes the child elements of the **ReminderType** complex type.

Element	Type	Description
Subject	**xs:string** ([XMLSCHEMA2])	The subject of the item the reminder is for.
Location	**xs:string**	The location of the item the reminder is for.
ReminderTime	**xs:dateTime** ([XMLSCHEMA2])	The time of the reminder.
StartDate	**xs:dateTime**	The start date of the item.
EndDate	**xs:dateTime**	The end date of the item.
ItemId	**t:ItemIdType** ([MS-OXWSCORE] section 2.2.4.25)	The Id of the calendar or task item.
RecurringMasterItemId	**t:ItemIdType**	The Id of the recurring master for the calendar item.
ReminderGroup	**t:ReminderGroupType** (section 3.1.4.5.4.1)	Specifies whether the reminder is for a calendar item or a task item.
UID	**xs:string**	The Id of the item.

3.1.4.5.4 Simple Types

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

Simple type name	Description
ReminderGroupType	Specifies whether the reminder is for a calendar item or a task.

3.1.4.5.4.1 t:ReminderGroupType Simple Type

The **ReminderGroupType** simple type specifies whether the reminder is for a calendar item or a task.

```
<xs:simpleType name="ReminderGroupType">
  <xs:restriction base="xs:string">
    <xs:enumeration value="Calendar"/>
    <xs:enumeration value="Task"/>
  </xs:restriction>

</xs:simpleType>
```

The following table describes the values of the **RemindersGroupType** simple type.

Value	Meaning
Calendar	The reminder is for a calendar item.
Task	The reminder is for a task item.

3.1.4.5.5 Attributes

None.

3.1.4.5.6 Groups

None.

3.1.4.5.7 Attribute Groups

None.

3.1.4.6 MoveItem Operation

The **MoveItem** operation moves one or more calendar-related items on the server. This operation is specified in [MS-OXWSCORE] section 3.1.4.7.

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

```
<wsdl:operation name="MoveItem">
    <wsdl:input message="tns:MoveItemSoapIn" />
    <wsdl:output message="tns:MoveItemSoapOut" />
</wsdl:operation>
```

The following is the WSDL binding specification for the **MoveItem** operation.

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

3.1.4.6.1 Messages

The following table summarizes the set of **WSDL message** definitions that are specific to the **MoveItem** operation.

Message name	Description
MoveItemSoapIn	The **MoveItemSoapIn** message is specified in [MS-OXWSCORE] section 3.1.4.7.1.1. It specifies the **MoveItem** operation request to move one or more calendar-related items on the server.
	The **MoveItem** element ([MS-OXWSCORE] section 3.1.4.7.2.1) that specifies the **XML** request MUST contain the following child elements:
	▪ ToFolderId ([MS-OXWSCORE] section 2.2.4.16)
	▪ ItemIds ([MS-OXWSCORE] section 2.2.4.16)
	For each item being moved that is not a recurring calendar item, the **ItemIds** element MUST contain an **ItemId** child element ([MS-OXWSCORE] section 2.2.4.31).
	For each item being moved that is a recurring calendar item, the **ItemIds** element SHOULD contain a **RecurringMasterItemId** child element ([MS-OXWSCORE] section 2.2.4.39).
MoveItemSoapOut	The **MoveItemSoapOut** message is specified in [MS-OXWSCORE] section 3.1.4.7.1.2. It specifies the server response to the **MoveItem** operation request.

A successful **MoveItem** operation returns a **MoveItemResponse** element, as specified in [MS-OXWSCORE] section 3.1.4.7.2.2, with the **ResponseClass** attribute of the **MoveItemResponseMessage** element, as specified in [MS-OXWSCDATA] section 2.2.4.12, set to "Success". The **ResponseCode** element, as specified in [MS-OXWSCDATA] section 2.2.4.41, of the **MoveItemResponseMessage** element is set to "NoError".

If the request is unsuccessful, the **MoveItem** operation returns a **MoveItemResponse** element with the **ResponseClass** attribute of the **MoveItemResponseMessage** element set to "Error". The **ResponseCode** element of the **MoveItemResponseMessage** element is set to a value of the **ResponseCodeType** simple type, as specified in [MS-OXWSCDATA] section 2.2.5.24. The following table describes some of the possible error code values.

Value	Description
ErrorCalendarCannotMoveOrCopyOccurrence	Specifies that an attempt was made to move or copy an occurrence of a recurring calendar item.
ErrorCalendarCannotUseIdForOccurrenceId	Specifies that the OccurrenceId ([MS-OXWSCORE] section 2.2.4.39) does not

Value	Description
	correspond to a valid occurrence of a recurring master item.
ErrorCalendarInvalidRecurrence	Specifies that the internal structure of the objects that represent the recurrence is invalid.

3.1.4.7 PerformReminderAction Operation

PerformReminderAction operation performs an action on a reminder.<71>

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

```
<wsdl:operation name="PerformReminderAction">
   <wsdl:input message="tns:PerformReminderActionSoapIn"/>
   <wsdl:output message="tns:PerformReminderActionSoapOut"/>
</wsdl:operation>
```

The following is the **WSDL** binding specification for the **PerformReminderAction** operation.

```
<wsdl:operation name="PerformReminderAction">
   <soap:operation
soapAction="http://schemas.microsoft.com/exchange/services/2006/messages/PerformReminderActio
n"/>
   <wsdl:input>
      <soap:header message="tns:PerformReminderActionSoapIn" part="RequestVersion"
use="literal"/>
      <soap:body parts="request" use="literal"/>
   </wsdl:input>
   <wsdl:output>
      <soap:body parts="PerformReminderActionResult" use="literal"/>
      <soap:header message="tns:PerformReminderActionSoapOut" part="ServerVersion"
use="literal"/>
   </wsdl:output>
</wsdl:operation>
```

3.1.4.7.1 Messages

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

Message name	Description
PerformReminderActionSoapIn	Specifies the **SOAP message** that performs an action on a reminder.
PerformReminderActionSoapOut	Specifies the SOAP message that is returned in response to an **PerformReminderAction** operation request.

3.1.4.7.1.1   tns:PerformReminderActionSoapIn Message

The **PerformReminderActionSoapIn WSDL message** specifies the **PerformReminderAction** operation request to perform an action on a reminder.

```
<wsdl:message name="PerformReminderActionSoapIn">
  <wsdl:part name="request" element="tns:PerformReminderAction"/>
  <wsdl:part name="RequestVersion" element="t:RequestServerVersion"/>
</wsdl:message>
```

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

The parts of the **PerformReminderActionSoapIn** WSDL message are listed and described in the
following table.

Part name	Element/type	Description
request	**tns:PerformReminderAction** (section 3.1.4.7.2.1)	Specifies the **SOAP body** of the request to perform an action on a reminder.
RequestVersion	**t:RequestServerVersion** ([MS-OXWSCDATA] section 2.2.3.9)	Specifies a **SOAP header** that identifies the schema version for an **PerformReminderAction** operation request.

3.1.4.7.1.2   tns:PerformReminderActionSoapOut Message

The **PerformReminderActionSoapOut WSDL message** specifies the server response to an
PerformReminderAction operation request to perform an action on a reminder.

```
<wsdl:message name="PerformReminderActionSoapOut">
  <wsdl:part name="PerformReminderActionResult" element="tns:
PerformReminderActionResponse"/>
  <wsdl:part name="ServerVersion" element="t:ServerVersionInfo"/>
</wsdl:message>
```

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

The parts of the **PerformReminderActionSoapOut** WSDL message are listed and described in the
following table.

Part name	Element/type	Description
PerformReminderActionResult	**tns:PerformReminderActionResponse** (section 3.1.4.7.2.2)	Specifies the **SOAP body** of a response message.
ServerVersion	**t:ServerVersionInfo** ([MS-OXWSCDATA] section 2.2.3.10)	Specifies a **SOAP header** that identifies the server version for a response to an **PerformReminderAction** operation request.

If the request is successful, the **PerformReminderAction** operation returns a
PerformReminderActionResponse element with the **ResponseClass** attribute of the
PerformReminderActionResponse element set to "Success". The **ResponseCode** element of the
PerformReminderActionResponse element is set to "NoError".

If the request is unsuccessful, the **PerformReminderAction** operation returns a
PerformReminderActionResponse element with the **ResponseClass** attribute of the
PerformReminderActionResponse element set to "Error". The **ResponseCode** element of the

PerformReminderActionResponse element is set to a value of the **ResponseCodeType** simple type, as specified in [MS-OXWSCDATA] section 2.2.5.24.

3.1.4.7.2 Elements

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

Element name	Description
PerformReminderAction	Specifies a request to perform an action on a reminder.
PerformReminderActionResponse	Specifies a response to a **PerformReminderAction** operation request.

3.1.4.7.2.1   m:PerformReminderAction Element

The **PerformReminderAction** element specifies a request to perform an action on a reminder.

```
<xs:element name="PerformReminderAction" type="m:PerformReminderActionType"/>
```

3.1.4.7.2.2   m:PerformReminderActionResponse Element

The **PerformReminderActionResponse** element specifies a response to an **PerformReminderAction** operation request.

```
<xs:element name="PerformReminderActionResponse"
 type="m:PerformReminderActionResponseMessageType" />
```

3.1.4.7.3 Complex Types

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

Complex type name	Description
PerformReminderActionResponseMessageType	Specifies the response to a call to the **PerformReminderAction** operation.
PerformReminderActionType	Specifies a request to perform an action on a reminder.
NonEmptyArrayOfReminderItemActionType	Specifies an array of reminder actions and new reminder times for items.
ReminderItemActionType	Specifies the action and new reminder time for an item.

3.1.4.7.3.1   m:PerformReminderActionResponseMessageType ComplexType

The **PerformReminderActionResponseMessageType** complex type represents a response to a request to perform a reminder action. This type extends the **ResponseMessageType**, as specified in [MS-OXWSCDATA] section 2.2.4.65.

```
<xs:complexType name="PerformReminderActionResponseMessageType">
```

```
    <xs:complexContent>
      <xs:extension base="m:ResponseMessageType">
        <xs:sequence>
          <xs:element name="UpdatedItemIds" type="t:NonEmptyArrayOfItemIdsType" minOccurs="1"
maxOccurs="1"/>
        </xs:sequence>
      </xs:extension>
    </xs:complexContent>
  </xs:complexType>
```

The following table describes the child elements of the
PerformReminderActionResponseMessageType complex type.

Element	Type	Description
UpdatedItemIds	**t:NonEmptyArrayOfItemIdsType** ([MS-OXWSBTRF] section 3.1.4.1.3.4)	The reminder items that the actions were performed on.

3.1.4.7.3.2   m:PerformReminderActionType Complex Type

The **PerformReminderActionType** complex type specifies a request to perform an action on a
reminder. This type extends the **BaseRequestType** complex type ([MS-OXWSCDATA] section
2.2.4.17).

```
  <xs:complexType name="PerformReminderActionType">
    <xs:complexContent>
      <xs:extension base="m:BaseRequestType">
        <xs:sequence>
          <xs:element name="ReminderItemActions" type="t:NonEmptyArrayOfReminderItemActionType"
minOccurs="1" maxOccurs="1"/>
        </xs:sequence>
      </xs:extension>
    </xs:complexContent>
  </xs:complexType>
```

The following table describes the child elements of the **PerformReminderActionType** complex type.

Element	Type	Description
ReminderItemActions	**t:NonEmptyArrayOfReminderItemActionType** (section 3.1.4.7.3.3)	The actions to perform.

3.1.4.7.3.3   t:NonEmptyArrayOfReminderItemActionType Complex Type

The **NonEmptyArrayOfReminderItemActionType** complex type specifies an array of reminder
actions and new reminder times for items.

```
  <xs:complexType name="NonEmptyArrayOfReminderItemActionType">
    <xs:sequence>
      <xs:element name="ReminderItemAction" type="t:ReminderItemActionType" minOccurs="1"
maxOccurs="unbounded"/>
    </xs:sequence>
  </xs:complexType
```

The following table describes the child element of the **NonEmptyArrayOfReminderItemActionType** complex type.

Element	Type	Description
ReminderItemAction	**t:ReminderItemActionType** (section 3.1.4.7.3.4)	An action and new start time for a reminder.

3.1.4.7.3.4   t:ReminderItemActionType Complex Type

The **ReminderItemActionType** specifies the action and new reminder time for an item.

```
<xs:complexType name="ReminderItemActionType">
  <xs:sequence>
    <xs:element name="ActionType" type="t:ReminderActionType" minOccurs="1" maxOccurs="1"/>
    <xs:element name="ItemId" type="t:ItemIdType" minOccurs="1" maxOccurs="1"/>
    <xs:element name="NewReminderTime" type="xs:string" minOccurs="0" maxOccurs="1"/>
  </xs:sequence>
</xs:complexType>
```

The following table describes the child elements of the **ReminderItemActionType**.

Element	Type	Description
ActionType	**t:ReminderActionType** (section 3.1.4.7.4.1)	The action to take.
ItemId	**t:ItemIdType** ([MS-OXWSCORE] section 2.2.4.25)	The Id of the item.
NewReminderTime	**xs:string** ([XMLSCHEMA2])	The new time for the reminder

3.1.4.7.4 Simple Types

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

Simple type name	Description
ReminderActionType	Specifies the reminder action.

3.1.4.7.4.1   t:ReminderActionType Simple Type

The **ReminderActionType** simple type specifies the reminder action.

```
<xs:simpleType name="ReminderActionType">
  <xs:restriction base="xs:string">
    <xs:enumeration value="Dismiss"/>
    <xs:enumeration value="Snooze"/>
  </xs:restriction>
</xs:simpleType>
```

The following table describes the values of the **ReminderActionType** simple type.

Value	Meaning
Dismiss	Dismiss the reminder.
Snooze	Dismiss the reminder temporarily and activate it later.

3.1.4.7.5 Attributes

None.

3.1.4.7.6 Groups

None.

3.1.4.7.7 Attribute Groups

None.

3.1.4.8 UpdateItem Operation

The **UpdateItem** operation updates one or more calendar-related items on the server. This operation is specified in [MS-OXWSCORE] section 3.1.4.9.

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

```
<wsdl:operation name="UpdateItem">
     <wsdl:input message="tns:UpdateItemSoapIn" />
     <wsdl:output message="tns:UpdateItemSoapOut" />
</wsdl:operation>
```

The following is the WSDL binding specification for the **UpdateItem** operation.

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

3.1.4.8.1 Messages

The following table summarizes the set of **WSDL message** definitions that are specific to the **UpdateItem** operation.

Message name	Description
UpdateItemSoapIn	The **UpdateItemSoapIn** message is specified in [MS-OXWSCORE] section 3.1.4.9.1.1. It specifies the **UpdateItem** operation request to update one or more calendar-related items on the server.
	The **UpdateItem** element ([MS-OXWSCORE] section 3.1.4.9) that specifies the **XML** request MUST contain an **ItemChanges** element ([MS-OXWSCORE] section 3.1.4.9.3.2) that contains one or more **ItemChange** elements ([MS-OXWSCORE] section 3.1.4.9.3.9).
	For each item being updated that is not a recurring calendar item, the **ItemChange** element MUST contain an **ItemId** child element ([MS-OXWSCORE] section 3.1.4.9.3.7).
	For each item being updated that is a recurring calendar item, the **ItemChange** element can contain a **RecurringMasterItemId** child element ([MS-OXWSCORE] section 3.1.4.9.3.7) or an **OccurrenceItemId** child element ([MS-OXWSCORE] section 3.1.4.9.3.7).
UpdateItemSoapOut	The **UpdateItemSoapOut** message is specified in [MS-OXWSCORE] section 3.1.4.9.1.2. It specifies the server response to the **UpdateItem** operation request.

A successful **UpdateItem** operation returns an **UpdateItemResponse** element, as specified in [MS-OXWSCORE] section 3.1.4.9.2.2, with the **ResponseClass** attribute of the **UpdateItemResponseMessage** element, as specified in [MS-OXWSCDATA] section 2.2.4.12, set to "Success". The **ResponseCode** element, as specified in [MS-OXWSCDATA] section 2.2.4.41, of the **UpdateItemResponseMessage** element is set to "NoError".

If the request is unsuccessful, the **UpdateItem** operation returns an **UpdateItemResponse** element with the **ResponseClass** attribute of the **UpdateItemResponseMessage** element set to "Error". The **ResponseCode** element of the **UpdateItemResponseMessage** element is set to a value of the **ResponseCodeType** simple type, as specified in [MS-OXWSCDATA] section 2.2.5.24. The following table describes some of the possible error codes.

Value	Description
ErrorMessageDispositionRequired	Occurs if the MessageDisposition property is not set. This error code MUST be returned under the following conditions: ▪ When the item that is being created or updated is a MessageType object. ▪ For the CancelCalendarItemType, AcceptItemType, DeclineItemType, or TentativelyAcceptItemType response objects.
ErrorInvalidRecipients	Specifies that the recipient collection on your message or the attendee collection on your calendar item is invalid.
ErrorCalendarInvalidDayForTimeChangePattern	Specifies that invalid values of Day, Weekday, and WeekendDay were used to define the time change pattern.
ErrorCalendarDurationIsTooLong	Specifies that the item duration of a calendar item exceeds five years.
ErrorCalendarEndDateIsEarlierThanStartDate	Specifies that the end date/time MUST be changed so that it is greater than the start date/time.

3.1.5 Timer Events

None.

3.1.6 Other Local Events

None.

4   Protocol Examples

4.1   Copying a Calendar Item

The following example demonstrates a client request to copy an item to the **Inbox folder**, and the server response. The identifier of the new item is returned in the response message.

Request:

```
<?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="Exchange2010" />
  </soap:Header>
  <soap:Body>
    <CopyItem xmlns="http://schemas.microsoft.com/exchange/services/2006/messages">
      <ToFolderId>
        <t:DistinguishedFolderId Id="inbox"/>
      </ToFolderId>
      <ItemIds>
        <t:ItemId Id="AS4AUnV"/>
      </ItemIds>
    </CopyItem>
  </soap:Body>
</soap:Envelope>
```

Response:

```
<?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="344"
MinorBuildNumber="0" Version="Exchange2010"
xmlns:t="http://schemas.microsoft.com/exchange/services/2006/types" />
  </soap:Header>
  <soap:Body>
    <CopyItemResponse xmlns:m="http://schemas.microsoft.com/exchange/services/2006/messages"
                      xmlns:t="http://schemas.microsoft.com/exchange/services/2006/types"
                      xmlns="http://schemas.microsoft.com/exchange/services/2006/messages">
      <m:ResponseMessages>
        <m:CopyItemResponseMessage ResponseClass="Success">
          <m:ResponseCode>NoError</m:ResponseCode>
          <m:Items>
            <t:Message>
              <t:ItemID Id="AAMkAd" ChangeKey="FwAAABY" />
            </t:Message>
          </m:Items>
        </m:CopyItemResponseMessage>
      </m:ResponseMessages>
    </CopyItemResponse>
  </soap:Body>
</soap:Envelope>
```

4.2   Creating a Calendar Item

The following example demonstrates a client request to create a meeting and send meeting request messages to invitees, and the server response. In this example, the meeting includes two required attendees and one optional attendee.

Request:

```xml
<?xml version="1.0" encoding="utf-8"?>
<soap:Envelope xmlns:xsi=http://www.w3.org/2001/XMLSchema-instance
     xmlns:m=http://schemas.microsoft.com/exchange/services/2006/messages
     xmlns:t=http://schemas.microsoft.com/exchange/services/2006/types
     xmlns:soap="http://schemas.xmlsoap.org/soap/envelope/">
    <soap:Header>
       <t:RequestServerVersion Version="Exchange2010" />
    </soap:Header>
    <soap:Body>
       <m:CreateItem SendMeetingInvitations="SendToAllAndSaveCopy">
          <m:Items>
             <t:CalendarItem>
                <t:Subject>Status Meeting</t:Subject>
                <t:Body BodyType="Text">
                   The purpose of this meeting is to discuss project status.
                </t:Body>
                <t:Start>2009-03-01T17:00:00Z</t:Start>
                <t:End>2009-03-01T19:00:00Z</t:End>
                <t:Location>Conf Room</t:Location>
                <t:RequiredAttendees>
                   <t:Attendee>
                      <t:Mailbox>
                         <t:EmailAddress>user1@contoso.com</t:EmailAddress>
                      </t:Mailbox>
                   </t:Attendee>
                   <t:Attendee>
                      <t:Mailbox>
                         <t:EmailAddress>user2@contoso.com</t:EmailAddress>
                      </t:Mailbox>
                   </t:Attendee>
                </t:RequiredAttendees>
                <t:OptionalAttendees>
                   <t:Attendee>
                      <t:Mailbox>
                         <t:EmailAddress>user3@contoso.com</t:EmailAddress>
                      </t:Mailbox>
                   </t:Attendee>
                </t:OptionalAttendees>
             </t:CalendarItem>
          </m:Items>
       </m:CreateItem>
    </soap:Body>
</soap:Envelope>
```

Response:

```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="344"
MinorBuildNumber="0" Version="Exchange2010"
xmlns:t="http://schemas.microsoft.com/exchange/services/2006/types" />
    </soap:Header>
    <soap:Body>
       <m:CreateItemResponse
xmlns:t="http://schemas.microsoft.com/exchange/services/2006/types"
xmlns:m="http://schemas.microsoft.com/exchange/services/2006/messages">
          <m:ResponseMessages>
             <m:CreateItemResponseMessage ResponseClass="Success">
                <m:ResponseCode>NoError</m:ResponseCode>
                <m:Items>
                   <t:CalendarItem>
                      <t:ItemId Id="AAMkA=" ChangeKey="DwAAA" />
```

```
                </t:CalendarItem>
              </m:Items>
            </m:CreateItemResponseMessage>
          </m:ResponseMessages>
        </m:CreateItemResponse>
      </soap:Body>
    </soap:Envelope>
```

4.3   Deleting a Calendar Item

The following example demonstrates a client request to delete an appointment and move the deleted appointment to the **Deleted Items folder**, and the server response.

Request:

```
<soap:Envelope xmlns:xsi=http://www.w3.org/2001/XMLSchema-instance
     xmlns:m="http://schemas.microsoft.com/exchange/services/2006/messages"
     xmlns:t=http://schemas.microsoft.com/exchange/services/2006/types
     xmlns:soap="http://schemas.xmlsoap.org/soap/envelope/">
  <soap:Header>
    <t:RequestServerVersion Version="Exchange2010" />
  </soap:Header>
  <soap:Body>
    <m:DeleteItem DeleteType="MoveToDeletedItems"
SendMeetingCancellations="SendToAllAndSaveCopy">
       <m:ItemIds>
         <t:ItemId Id="AAMkA=" ChangeKey="DwAAA" />
       </m:ItemIds>
    </m:DeleteItem>
  </soap:Body>
</soap:Envelope>
```

Response:

```
<?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="344"
MinorBuildNumber="0" Version="Exchange2010"
xmlns:t="http://schemas.microsoft.com/exchange/services/2006/types" />
  </soap:Header>
  <soap:Body>
    <m:DeleteItemResponse
xmlns:t="http://schemas.microsoft.com/exchange/services/2006/types"
xmlns:m="http://schemas.microsoft.com/exchange/services/2006/messages">
       <m:ResponseMessages>
         <m:DeleteItemResponseMessage ResponseClass="Success">
           <m:ResponseCode>NoError</m:ResponseCode>
         </m:DeleteItemResponseMessage>
       </m:ResponseMessages>
    </m:DeleteItemResponse>
  </soap:Body>
</soap:Envelope>
```

4.4   Moving a Calendar Item

The following example demonstrates a client request to move an item to the **Inbox folder**, and the server response.

Request:

```xml
<?xml version="1.0" encoding="utf-8"?>
<soap:Envelope xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
      xmlns:xsd=http://www.w3.org/2001/XMLSchema
      xmlns:soap="http://schemas.xmlsoap.org/soap/envelope/"
      xmlns:t="http://schemas.microsoft.com/exchange/services/2006/types">
  <soap:Header>
     <t:RequestServerVersion Version="Exchange2010" />
  </soap:Header>
  <soap:Body>
    <MoveItem xmlns="http://schemas.microsoft.com/exchange/services/2006/messages"
    xmlns:t="http://schemas.microsoft.com/exchange/services/2006/types">
      <ToFolderId>
        <t:DistinguishedFolderId Id="inbox"/>
      </ToFolderId>
      <ItemIds>
        <t:ItemId Id="AAAtAEF=" ChangeKey="EwAAABYA"/>
      </ItemIds>
    </MoveItem>
  </soap:Body>
</soap:Envelope>
```

Response:

```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="344"
MinorBuildNumber="0" Version="Exchange2010"
xmlns:t="http://schemas.microsoft.com/exchange/services/2006/types" />
  </soap:Header>
  <soap:Body>
    <MoveItemResponse xmlns:m="http://schemas.microsoft.com/exchange/services/2006/messages"
                      xmlns:t="http://schemas.microsoft.com/exchange/services/2006/types"
                      xmlns="http://schemas.microsoft.com/exchange/services/2006/messages">
      <m:ResponseMessages>
        <m:MoveItemResponseMessage ResponseClass="Success">
          <m:ResponseCode>NoError</m:ResponseCode>
          <m:Items>
            <t:Message>
              <t:ItemID Id="AAMkAd" ChangeKey="FwAAABY" />
            </t:Message>
          </m:Items>
        </m:MoveItemResponseMessage>
      </m:ResponseMessages>
    </MoveItemResponse>
  </soap:Body>
</soap:Envelope>
```

4.5   Retrieving a Calendar Item

The following example demonstrates a client request to retrieve the identifier and subject of a calendar item, and the server response.

Request:

```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="Exchange2010" />
    </soap:Header>
    <soap:Body>
      <GetItem xmlns="http://schemas.microsoft.com/exchange/services/2006/messages">
        <ItemShape>
          <t:BaseShape>IdOnly</t:BaseShape>
          <t:AdditionalProperties>
            <t:FieldURI FieldURI="item:Subject"/>
          </t:AdditionalProperties>
        </ItemShape>
        <ItemIds>
          <t:ItemId Id="AsdD89=" ChangeKey="Jajs3=="/>
        </ItemIds>
      </GetItem>
    </soap:Body>
</soap:Envelope>
```

Response:

```
<?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="344"
MinorBuildNumber="0" Version="Exchange2010"
xmlns:t="http://schemas.microsoft.com/exchange/services/2006/types" />
    </soap:Header>
    <soap:Body>
     <GetItemResponse xmlns:m="http://schemas.microsoft.com/exchange/services/2006/messages"
                    xmlns:t="http://schemas.microsoft.com/exchange/services/2006/types"
                    xmlns="http://schemas.microsoft.com/exchange/services/2006/messages">
      <m:ResponseMessages>
        <m:GetItemResponseMessage ResponseClass="Success">
          <m:ResponseCode>NoError</m:ResponseCode>
          <m:Items>
            <t:CalendarItem>
              <t:ItemId Id="ASUAd" ChangeKey="otlIqB=="/>
            </t:CalendarItem>
          </m:Items>
        </m:GetItemResponseMessage>
      </m:ResponseMessages>
    </GetItemResponse>
    </soap:Body>
</soap:Envelope>
```


4.6   Updating a Calendar Item

The following example demonstrates a client request to update the subject, the location, and the end time of a meeting, and the server response. In this example, an updated meeting request is sent to all attendees and a copy is saved in the organizer's **Sent Items folder**.

Request:

```
<?xml version="1.0" encoding="utf-8"?>
<soap:Envelope xmlns:xsi=http://www.w3.org/2001/XMLSchema-instance
     xmlns:m=http://schemas.microsoft.com/exchange/services/2006/messages
     xmlns:t=http://schemas.microsoft.com/exchange/services/2006/types
     xmlns:soap="http://schemas.xmlsoap.org/soap/envelope/">
   <soap:Header>
     <t:RequestServerVersion Version="Exchange2010" />
   </soap:Header>
   <soap:Body>
```

```
        <m:UpdateItem ConflictResolution="AlwaysOverwrite"
SendMeetingInvitationsOrCancellations="SendToAllAndSaveCopy">
          <m:ItemChanges>
            <t:ItemChange>
              <t:ItemId Id="AAMkA=" ChangeKey="DwAAA" />
              <t:Updates>
                <t:SetItemField>
                  <t:FieldURI FieldURI="item:Subject" />
                  <t:CalendarItem>
                     <t:Subject>Status Meeting - Rescheduled/Moved</t:Subject>
                  </t:CalendarItem>
                </t:SetItemField>
                <t:SetItemField>
                  <t:FieldURI FieldURI="calendar:Location" />
                  <t:CalendarItem>
                     <t:Location>Conf Room 34</t:Location>
                  </t:CalendarItem>
                </t:SetItemField>
                <t:SetItemField>
                  <t:FieldURI FieldURI="calendar:Start" />
                  <t:CalendarItem>
                    <t:Start>2009-03-05T17:00:00Z</t:Start>
                  </t:CalendarItem>
                </t:SetItemField>
                <t:SetItemField>
                  <t:FieldURI FieldURI="calendar:End" />
                  <t:CalendarItem>
                    <t:End>2009-03-05T18:00:00Z</t:End>
                  </t:CalendarItem>
                </t:SetItemField>
              </t:Updates>
            </t:ItemChange>
          </m:ItemChanges>
        </m:UpdateItem>
    </soap:Body>
</soap:Envelope>
```

Response:

```
<?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="344"
MinorBuildNumber="0" Version="Exchange2010"
xmlns:t="http://schemas.microsoft.com/exchange/services/2006/types" />
   </soap:Header>
   <soap:Body>
      <m:UpdateItemResponse
xmlns:t="http://schemas.microsoft.com/exchange/services/2006/types"
xmlns:m="http://schemas.microsoft.com/exchange/services/2006/messages">
        <m:ResponseMessages>
           <m:UpdateItemResponseMessage ResponseClass="Success">
              <m:ResponseCode>NoError</m:ResponseCode>
              <m:Items>
                 <t:CalendarItem>
                    <t:ItemId Id="AAMkA=" ChangeKey="DwAAA" />
                 </t:CalendarItem>
              </m:Items>
              <m:ConflictResults>
                 <t:Count>0</t:Count>
              </m:ConflictResults>
           </m:UpdateItemResponseMessage>
        </m:ResponseMessages>
      </m:UpdateItemResponse>
   </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.

File name	Description	Section
MS-OXWSMTGS.wsdl	Contains the **WSDL** for the implementation of this protocol.	6
MS-OXWSCORE-messages.xsd	Contains the XML schema message definitions that are used in this protocol.	[MS-OXWSCORE] section 7.1
MS-OXWSMTGS-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 for the WSDL to validate and operate. Also, any schema files that are included in or imported into the MS-OXWSMTGS-types.xsd or MS-OXWSCORE-messages.xsd schemas have to be placed in the common folder with these files.

This section contains the contents of the MS-OXWSMTGS.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:import namespace="http://schemas.microsoft.com/exchange/services/2006/types"
schemaLocation="MS-OXWSCORE-types.xsd"/>
      <xs:include schemaLocation="MS-OXWSCORE-messages.xsd" />
      <!-- Add global elements and types from 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"/>
      <!-- Add global elements and types from types.xsd -->
    </xs:schema>
  </wsdl:types>
  <wsdl:message name="GetItemSoapIn">
    <wsdl:part name="request" element="tns:GetItem"/>
    <wsdl:part name="Impersonation" element="t:ExchangeImpersonation"/>
    <wsdl:part name="MailboxCulture" element="t:MailboxCulture"/>
    <wsdl:part name="RequestVersion" element="t:RequestServerVersion"/>
    <wsdl:part name="TimeZoneContext" element="t:TimeZoneContext"/>
    <wsdl:part name="DateTimePrecision" element="t:DateTimePrecision"/>
  </wsdl:message>
  <wsdl:message name="GetItemSoapOut">
    <wsdl:part name="GetItemResult" element="tns:GetItemResponse"/>
    <wsdl:part name="ServerVersion" element="t:ServerVersionInfo"/>
  </wsdl:message>
  <wsdl:message name="CreateItemSoapIn">
    <wsdl:part name="request" element="tns:CreateItem"/>
```

```
      <wsdl:part name="Impersonation" element="t:ExchangeImpersonation"/>
      <wsdl:part name="MailboxCulture" element="t:MailboxCulture"/>
      <wsdl:part name="RequestVersion" element="t:RequestServerVersion"/>
      <wsdl:part name="TimeZoneContext" element="t:TimeZoneContext"/>
    </wsdl:message>
    <wsdl:message name="CreateItemSoapOut">
      <wsdl:part name="CreateItemResult" element="tns:CreateItemResponse"/>
      <wsdl:part name="ServerVersion" element="t:ServerVersionInfo"/>
    </wsdl:message>
    <wsdl:message name="DeleteItemSoapIn">
      <wsdl:part name="request" element="tns:DeleteItem"/>
      <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="DeleteItemSoapOut">
      <wsdl:part name="DeleteItemResult" element="tns:DeleteItemResponse"/>
      <wsdl:part name="ServerVersion" element="t:ServerVersionInfo"/>
    </wsdl:message>
    <wsdl:message name="UpdateItemSoapIn">
      <wsdl:part name="request" element="tns:UpdateItem"/>
      <wsdl:part name="Impersonation" element="t:ExchangeImpersonation"/>
      <wsdl:part name="MailboxCulture" element="t:MailboxCulture"/>
      <wsdl:part name="RequestVersion" element="t:RequestServerVersion"/>
      <wsdl:part name="TimeZoneContext" element="t:TimeZoneContext"/>
    </wsdl:message>
    <wsdl:message name="UpdateItemSoapOut">
      <wsdl:part name="UpdateItemResult" element="tns:UpdateItemResponse"/>
      <wsdl:part name="ServerVersion" element="t:ServerVersionInfo"/>
    </wsdl:message>
    <wsdl:message name="MoveItemSoapIn">
      <wsdl:part name="request" element="tns:MoveItem"/>
      <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="MoveItemSoapOut">
      <wsdl:part name="MoveItemResult" element="tns:MoveItemResponse"/>
      <wsdl:part name="ServerVersion" element="t:ServerVersionInfo"/>
    </wsdl:message>
    <wsdl:message name="CopyItemSoapIn">
      <wsdl:part name="request" element="tns:CopyItem"/>
      <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="CopyItemSoapOut">
      <wsdl:part name="CopyItemResult" element="tns:CopyItemResponse"/>
      <wsdl:part name="ServerVersion" element="t:ServerVersionInfo"/>
    </wsdl:message>
    <wsdl:message name="GetRemindersSoapIn">
      <wsdl:part name="request" element="tns:GetReminders"/>
      <wsdl:part name="RequestVersion" element="t:RequestServerVersion"/>
    </wsdl:message>
    <wsdl:message name="GetRemindersSoapOut">
      <wsdl:part name="GetRemindersResult" element="tns:GetRemindersResponse"/>
      <wsdl:part name="ServerVersion" element="t:ServerVersionInfo"/>
    </wsdl:message>
    <wsdl:message name="PerformReminderActionSoapIn">
      <wsdl:part name="request" element="tns:PerformReminderAction"/>
      <wsdl:part name="RequestVersion" element="t:RequestServerVersion"/>
    </wsdl:message>
    <wsdl:message name="PerformReminderActionSoapOut">
      <wsdl:part name="PerformReminderActionResult" element="tns:
  PerformReminderActionResponse"/>
      <wsdl:part name="ServerVersion" element="t:ServerVersionInfo"/>
    </wsdl:message>
    <wsdl:portType name="ExchangeServicePortType">
      <wsdl:operation name="GetItem">
```

```
        <wsdl:input message="tns:GetItemSoapIn"/>
        <wsdl:output message="tns:GetItemSoapOut"/>
      </wsdl:operation>
      <wsdl:operation name="CreateItem">
        <wsdl:input message="tns:CreateItemSoapIn"/>
        <wsdl:output message="tns:CreateItemSoapOut"/>
      </wsdl:operation>
      <wsdl:operation name="DeleteItem">
        <wsdl:input message="tns:DeleteItemSoapIn"/>
        <wsdl:output message="tns:DeleteItemSoapOut"/>
      </wsdl:operation>
      <wsdl:operation name="UpdateItem">
        <wsdl:input message="tns:UpdateItemSoapIn"/>
        <wsdl:output message="tns:UpdateItemSoapOut"/>
      </wsdl:operation>
      <wsdl:operation name="MoveItem">
        <wsdl:input message="tns:MoveItemSoapIn"/>
        <wsdl:output message="tns:MoveItemSoapOut"/>
      </wsdl:operation>
      <wsdl:operation name="CopyItem">
        <wsdl:input message="tns:CopyItemSoapIn"/>
        <wsdl:output message="tns:CopyItemSoapOut"/>
      </wsdl:operation>
      <wsdl:operation name="GetReminders">
        <wsdl:input message="tns:GetRemindersSoapIn"/>
        <wsdl:output message="tns:GetRemindersSoapOut"/>
      </wsdl:operation>
      <wsdl:operation name="PerformReminderAction">
        <wsdl:input message="tns:PerformReminderActionSoapIn"/>
        <wsdl:output message="tns:PerformReminderActionSoapOut"/>
      </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="GetItem">
      <soap:operation
soapAction="http://schemas.microsoft.com/exchange/services/2006/messages/GetItem"/>
      <wsdl:input>
        <soap:header message="tns:GetItemSoapIn" part="Impersonation" use="literal"/>
        <soap:header message="tns:GetItemSoapIn" part="MailboxCulture" use="literal"/>
        <soap:header message="tns:GetItemSoapIn" part="RequestVersion" use="literal"/>
        <soap:header message="tns:GetItemSoapIn" part="TimeZoneContext" use="literal"/>
        <soap:header message="tns:GetItemSoapIn" part="DateTimePrecision" use="literal"/>
        <soap:body parts="request" use="literal"/>
      </wsdl:input>
      <wsdl:output>
        <soap:body parts="GetItemResult" use="literal"/>
        <soap:header message="tns:GetItemSoapOut" part="ServerVersion" use="literal"/>
      </wsdl:output>
    </wsdl:operation>
    <wsdl:operation name="CreateItem">
      <soap:operation
soapAction="http://schemas.microsoft.com/exchange/services/2006/messages/CreateItem"/>
      <wsdl:input>
        <soap:header message="tns:CreateItemSoapIn" part="Impersonation" use="literal"/>
        <soap:header message="tns:CreateItemSoapIn" part="MailboxCulture" use="literal"/>
        <soap:header message="tns:CreateItemSoapIn" part="RequestVersion" use="literal"/>
        <soap:header message="tns:CreateItemSoapIn" part="TimeZoneContext" use="literal"/>
        <soap:body parts="request" use="literal"/>
      </wsdl:input>
      <wsdl:output>
        <soap:body parts="CreateItemResult" use="literal"/>
        <soap:header message="tns:CreateItemSoapOut" part="ServerVersion" use="literal"/>
      </wsdl:output>
    </wsdl:operation>
```

```
    <wsdl:operation name="DeleteItem">
      <soap:operation
soapAction="http://schemas.microsoft.com/exchange/services/2006/messages/DeleteItem"/>
      <wsdl:input>
        <soap:header message="tns:DeleteItemSoapIn" part="Impersonation" use="literal"/>
        <soap:header message="tns:DeleteItemSoapIn" part="MailboxCulture" use="literal"/>
        <soap:header message="tns:DeleteItemSoapIn" part="RequestVersion" use="literal"/>
        <soap:body parts="request" use="literal"/>
      </wsdl:input>
      <wsdl:output>
        <soap:body parts="DeleteItemResult" use="literal"/>
        <soap:header message="tns:DeleteItemSoapOut" part="ServerVersion" use="literal"/>
      </wsdl:output>
    </wsdl:operation>
    <wsdl:operation name="UpdateItem">
      <soap:operation
soapAction="http://schemas.microsoft.com/exchange/services/2006/messages/UpdateItem"/>
      <wsdl:input>
        <soap:header message="tns:UpdateItemSoapIn" part="Impersonation" use="literal"/>
        <soap:header message="tns:UpdateItemSoapIn" part="MailboxCulture" use="literal"/>
        <soap:header message="tns:UpdateItemSoapIn" part="RequestVersion" use="literal"/>
        <soap:header message="tns:UpdateItemSoapIn" part="TimeZoneContext" use="literal"/>
        <soap:body parts="request" use="literal"/>
      </wsdl:input>
      <wsdl:output>
        <soap:body parts="UpdateItemResult" use="literal"/>
        <soap:header message="tns:UpdateItemSoapOut" part="ServerVersion" use="literal"/>
      </wsdl:output>
    </wsdl:operation>
    <wsdl:operation name="MoveItem">
      <soap:operation
soapAction="http://schemas.microsoft.com/exchange/services/2006/messages/MoveItem"/>
      <wsdl:input>
        <soap:header message="tns:MoveItemSoapIn" part="Impersonation" use="literal"/>
        <soap:header message="tns:MoveItemSoapIn" part="MailboxCulture" use="literal"/>
        <soap:header message="tns:MoveItemSoapIn" part="RequestVersion" use="literal"/>
        <soap:body parts="request" use="literal"/>
      </wsdl:input>
      <wsdl:output>
        <soap:body parts="MoveItemResult" use="literal"/>
        <soap:header message="tns:MoveItemSoapOut" part="ServerVersion" use="literal"/>
      </wsdl:output>
    </wsdl:operation>
    <wsdl:operation name="CopyItem">
      <soap:operation
soapAction="http://schemas.microsoft.com/exchange/services/2006/messages/CopyItem"/>
      <wsdl:input>
        <soap:header message="tns:CopyItemSoapIn" part="Impersonation" use="literal"/>
        <soap:header message="tns:CopyItemSoapIn" part="MailboxCulture" use="literal"/>
        <soap:header message="tns:CopyItemSoapIn" part="RequestVersion" use="literal"/>
        <soap:body parts="request" use="literal"/>
      </wsdl:input>
      <wsdl:output>
        <soap:body parts="CopyItemResult" use="literal"/>
        <soap:header message="tns:CopyItemSoapOut" part="ServerVersion" use="literal"/>
      </wsdl:output>
    </wsdl:operation>
    <wsdl:operation name="GetReminders">
      <soap:operation
soapAction="http://schemas.microsoft.com/exchange/services/2006/messages/GetReminders"/>
      <wsdl:input>
        <soap:header message="tns:GetRemindersSoapIn" part="RequestVersion" use="literal"/>
        <soap:body parts="request" use="literal"/>
      </wsdl:input>
      <wsdl:output>
        <soap:body parts="GetRemindersResult" use="literal"/>
        <soap:header message="tns:GetRemindersSoapOut" part="ServerVersion" use="literal"/>
      </wsdl:output>
    </wsdl:operation>
```

```
      <wsdl:operation name="PerformReminderAction">
        <soap:operation
soapAction="http://schemas.microsoft.com/exchange/services/2006/messages/PerformReminderActio
n"/>
        <wsdl:input>
          <soap:header message="tns:PerformReminderActionSoapIn" part="RequestVersion"
use="literal"/>
          <soap:body parts="request" use="literal"/>
        </wsdl:input>
        <wsdl:output>
          <soap:body parts="PerformReminderActionResult" use="literal"/>
          <soap:header message="tns:PerformReminderActionSoapOut" 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-OXWSMTGS-types.xsd or MS-OXWSMTGS-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-OXWSMTGS-messages.xsd file and information about additional files that this schema file requires to operate correctly.

MS-OXWSMTGS-messages.xsd includes the file listed in the following table. 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-messages.xsd	[MS-OXWSCDATA] section 7.1
MS-OXWSBTRF-types.xsd	[MS-OXWSBTRF] section 7.2
MS-OXWSCORE-types.xsd	[MS-OXWSCORE] section 7.2
MS-OXWSMTGS-types.xsd	section 7.2

```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:import namespace="http://schemas.microsoft.com/exchange/services/2006/types"
schemaLocation="MS-OXWSBTRF-types.xsd"/>
  <xs:import namespace="http://schemas.microsoft.com/exchange/services/2006/types"
schemaLocation="MS-OXWSCORE-types.xsd"/>
  <xs:import namespace="http://schemas.microsoft.com/exchange/services/2006/types"
schemaLocation="MS-OXWSMTGS-types.xsd"/>
  <xs:include schemaLocation="MS-OXWSCDATA-messages.xsd"/>

 <xs:complexType name="GetRemindersType" mixed="false">
   <xs:complexContent>
     <xs:extension base="m:BaseRequestType">
       <xs:sequence>
         <xs:element name="BeginTime" type="xs:dateTime" minOccurs="0" maxOccurs="1"/>
         <xs:element name="EndTime" type="xs:dateTime" minOccurs="0" maxOccurs="1"/>
         <xs:element name="MaxItems" minOccurs="0" maxOccurs="1">
           <xs:simpleType>
             <xs:restriction base="xs:int">
               <xs:minInclusive value="0"/>
                 <xs:maxInclusive value="200"/>
               </xs:restriction>
           </xs:simpleType>
         </xs:element>
```

```
              <xs:element name="ReminderType" minOccurs="0" maxOccurs="1">
                <xs:simpleType>
                  <xs:restriction base="xs:string">
                    <xs:enumeration value="All"/>
                    <xs:enumeration value="Current"/>
                    <xs:enumeration value="Old"/>
                  </xs:restriction>
                </xs:simpleType>
              </xs:element>
            </xs:sequence>
          </xs:extension>
        </xs:complexContent>
    </xs:complexType>


  <xs:element name="GetReminders" type="m:GetRemindersType"/>
  <xs:complexType name="GetRemindersResponseMessageType">
    <xs:complexContent>
      <xs:extension base="m:ResponseMessageType">
        <xs:sequence>
          <xs:element name="Reminders" type="t:ArrayOfRemindersType" minOccurs="1"
maxOccurs="1"/>
        </xs:sequence>
      </xs:extension>
    </xs:complexContent>
  </xs:complexType>
  <xs:element name="GetRemindersResponse" type="m:GetRemindersResponseMessageType" />
  <xs:complexType name="PerformReminderActionType">
    <xs:complexContent>
      <xs:extension base="m:BaseRequestType">
        <xs:sequence>
          <xs:element name="ReminderItemActions"
type="t:NonEmptyArrayOfReminderItemActionType" minOccurs="1" maxOccurs="1"/>
        </xs:sequence>
      </xs:extension>
    </xs:complexContent>
  </xs:complexType>
  <xs:element name="PerformReminderAction" type="m:PerformReminderActionType"/>
  <xs:complexType name="PerformReminderActionResponseMessageType">
    <xs:complexContent>
      <xs:extension base="m:ResponseMessageType">
        <xs:sequence>
          <xs:element name="UpdatedItemIds" type="t:NonEmptyArrayOfItemIdsType" minOccurs="1"
maxOccurs="1"/>
        </xs:sequence>
      </xs:extension>
    </xs:complexContent>
  </xs:complexType>
  <xs:element name="PerformReminderActionResponse"
type="m:PerformReminderActionResponseMessageType" />
</xs:schema>
```

7.2   Types Schema

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

MS-OXWSMTGS-types.xsd includes the files listed in the following table. To operate correctly, these files have to be present in the folder that contains the **WSDL**, types schema, and messages schema files for this protocol.

File name	Defining specification
MS-OXWSMSG-types.xsd	[MS-OXWSMSG] section 7

File name	Defining specification
MS-OXWSGTZ-types.xsd	[MS-OXWSGTZ] section 7.2
MS-OXWSSRCH-types.xsd	[MS-OXWSSRCH] section 7.2
MS-OXWSCDATA-types.xsd	[MS-OXWSCDATA] section 7.2
MS-OXWSXPROP-types.xsd	[MS-OXWSXPROP] section 5

```xml
<?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-OXWSMSG-types.xsd"/>
  <xs:include schemaLocation="MS-OXWSGTZ-types.xsd"/>
  <xs:include schemaLocation="MS-OXWSSRCH-types.xsd"/>
  <xs:include schemaLocation="MS-OXWSCDATA-types.xsd"/>
  <xs:include schemaLocation="MS-OXWSPERS-types.xsd"/>
  <xs:include schemaLocation="MS-OXWSXPROP-types.xsd"/>
  <xs:complexType name="AcceptItemType">
    <xs:complexContent>
      <xs:extension base="t:MeetingRegistrationResponseObjectType"/>
    </xs:complexContent>
  </xs:complexType>
  <xs:complexType name="AddItemToMyCalendarType">
    <xs:complexContent>
      <xs:extension base="t:ResponseObjectType"/>
    </xs:complexContent>
  </xs:complexType>
  <xs:complexType name="ArrayOfInboxReminderType">
    <xs:sequence>
      <xs:element name="InboxReminder"
          type="t:InboxReminderType" minOccurs="0" maxOccurs="unbounded"/>
    </xs:sequence>
  </xs:complexType>
  <xs:complexType name="ArrayOfRemindersType">
    <xs:sequence>
      <xs:element name="Reminder" type="t:ReminderType" minOccurs="0" maxOccurs="unbounded"/>
    </xs:sequence>
  </xs:complexType>
  <xs:complexType name="CalendarPermissionType">
    <xs:complexContent>
      <xs:extension base="t:BasePermissionType">
        <xs:sequence>
          <xs:element name="ReadItems" type="t:CalendarPermissionReadAccessType"
minOccurs="0"/>
          <xs:element name="CalendarPermissionLevel" type="t:CalendarPermissionLevelType"/>
        </xs:sequence>
      </xs:extension>
    </xs:complexContent>
  </xs:complexType>
  <xs:complexType name="AttendeeType">
    <xs:sequence>
      <xs:element name="Mailbox" type="t:EmailAddressType"/>
      <xs:element name="ResponseType" type="t:ResponseTypeType" minOccurs="0"/>
      <xs:element name="LastResponseTime" type="xs:dateTime" minOccurs="0"/>
      <xs:element name="ProposedStart" type="xs:dateTime" minOccurs="0"/>
      <xs:element name="ProposedEnd" type="xs:dateTime" minOccurs="0"/>
    </xs:sequence>
  </xs:complexType>
  <xs:complexType name="CalendarFolderType">
    <xs:complexContent>
      <xs:extension base="t:BaseFolderType">
        <xs:sequence>
```

```xml
            <xs:element name="SharingEffectiveRights" type="t:CalendarPermissionReadAccessType"
minOccurs="0"/>
            <xs:element name="PermissionSet" type="t:CalendarPermissionSetType" minOccurs="0"/>
         </xs:sequence>
      </xs:extension>
   </xs:complexContent>
</xs:complexType>
<xs:complexType name="CalendarFolderExType">
   <xs:complexContent>
      <xs:extension base="t:CalendarFolderType">
         <xs:sequence>
            <xs:element name="CalendarColor" type="xs:int" minOccurs="1" maxOccurs="1"/>
            <xs:element name="ParentGroupId" type="xs:string" minOccurs="1" maxOccurs="1"/>
            <xs:element name="IsDefaultCalendar" type="xs:boolean" minOccurs="1"
maxOccurs="1"/>
         </xs:sequence>
      </xs:extension>
   </xs:complexContent>
</xs:complexType>
<xs:simpleType name="CalendarItemCreateOrDeleteOperationType">
   <xs:restriction base="xs:string">
      <xs:enumeration value="SendToNone"/>
      <xs:enumeration value="SendOnlyToAll"/>
      <xs:enumeration value="SendToAllAndSaveCopy"/>
   </xs:restriction>
</xs:simpleType>
<xs:complexType name="CalendarItemType">
   <xs:complexContent>
      <xs:extension base="t:ItemType">
         <xs:sequence>
            <!-- iCalendar properties -->
            <xs:element name="UID" type="xs:string" minOccurs="0"/>
            <xs:element name="RecurrenceId" type="xs:dateTime" minOccurs="0"/>
            <xs:element name="DateTimeStamp" type="xs:dateTime" minOccurs="0"/>
            <!-- Single and Occurrence only -->
            <xs:element name="Start" type="xs:dateTime" minOccurs="0"/>
            <xs:element name="End" type="xs:dateTime" minOccurs="0"/>
            <!-- Occurrence only -->
            <xs:element name="OriginalStart" type="xs:dateTime" minOccurs="0"/>
            <xs:element name="IsAllDayEvent" type="xs:boolean" minOccurs="0"/>
            <xs:element name="LegacyFreeBusyStatus" type="t:LegacyFreeBusyType" minOccurs="0"/>
            <xs:element name="Location" type="xs:string" minOccurs="0"/>
            <xs:element name="When" type="xs:string" minOccurs="0"/>
            <xs:element name="IsMeeting" type="xs:boolean" minOccurs="0"/>
            <xs:element name="IsCancelled" type="xs:boolean" minOccurs="0"/>
            <xs:element name="IsRecurring" type="xs:boolean" minOccurs="0"/>
            <xs:element name="MeetingRequestWasSent" type="xs:boolean" minOccurs="0"/>
            <xs:element name="IsResponseRequested" type="xs:boolean" minOccurs="0"/>
            <xs:element name="CalendarItemType" type="t:CalendarItemTypeType" minOccurs="0"/>
            <xs:element name="MyResponseType" type="t:ResponseTypeType" minOccurs="0"/>
            <xs:element name="Organizer" type="t:SingleRecipientType" minOccurs="0"/>
            <xs:element name="RequiredAttendees" type="t:NonEmptyArrayOfAttendeesType"
minOccurs="0"/>
            <xs:element name="OptionalAttendees" type="t:NonEmptyArrayOfAttendeesType"
minOccurs="0"/>
            <xs:element name="Resources" type="t:NonEmptyArrayOfAttendeesType" minOccurs="0"/>
            <!-- Conflicting and adjacent meetings -->
            <xs:element name="ConflictingMeetingCount" type="xs:int" minOccurs="0"/>
            <xs:element name="AdjacentMeetingCount" type="xs:int" minOccurs="0"/>
            <xs:element name="ConflictingMeetings" type="t:NonEmptyArrayOfAllItemsType"
minOccurs="0"/>
            <xs:element name="AdjacentMeetings" type="t:NonEmptyArrayOfAllItemsType"
minOccurs="0"/>
            <xs:element name="Duration" type="xs:string" minOccurs="0"/>
            <xs:element name="TimeZone" type="xs:string" minOccurs="0"/>
            <xs:element name="AppointmentReplyTime" type="xs:dateTime" minOccurs="0"/>
            <xs:element name="AppointmentSequenceNumber" type="xs:int" minOccurs="0"/>
            <xs:element name="AppointmentState" type="xs:int" minOccurs="0"/>
```

```
            <!-- Recurrence specific data, only valid if CalendarItemType is RecurringMaster --
>
            <xs:element name="Recurrence" type="t:RecurrenceType" minOccurs="0"/>
            <xs:element name="FirstOccurrence" type="t:OccurrenceInfoType" minOccurs="0"/>
            <xs:element name="LastOccurrence" type="t:OccurrenceInfoType" minOccurs="0"/>
            <xs:element name="ModifiedOccurrences" type="t:NonEmptyArrayOfOccurrenceInfoType"
minOccurs="0"/>
            <xs:element name="DeletedOccurrences"
type="t:NonEmptyArrayOfDeletedOccurrencesType" minOccurs="0"/>
            <xs:element name="MeetingTimeZone" type="t:TimeZoneType" minOccurs="0"/>
            <xs:element name="StartTimeZone" type="t:TimeZoneDefinitionType" minOccurs="0"/>
            <xs:element name="EndTimeZone" type="t:TimeZoneDefinitionType" minOccurs="0"/>
            <xs:element name="ConferenceType" type="xs:int" minOccurs="0"/>
            <xs:element name="AllowNewTimeProposal" type="xs:boolean" minOccurs="0"/>
            <xs:element name="IsOnlineMeeting" type="xs:boolean" minOccurs="0"/>
            <xs:element name="MeetingWorkspaceUrl" type="xs:string" minOccurs="0"/>
            <xs:element name="NetShowUrl" type="xs:string" minOccurs="0"/>
            <xs:element name="EnhancedLocation" type="t:EnhancedLocationType" minOccurs="0"/>
            <xs:element name="StartWallClock" type="xs:dateTime" minOccurs="0" maxOccurs="1"/>
            <xs:element name="EndWallClock" type="xs:dateTime" minOccurs="0" maxOccurs="1"/>
            <xs:element name="StartTimeZoneId" type="xs:string" minOccurs="0" maxOccurs="1"/>
            <xs:element name="EndTimeZoneId" type="xs:string" minOccurs="0" maxOccurs="1"/>
            <xs:element name="IntendedFreeBusyStatus" type="t:LegacyFreeBusyType" minOccurs="0"
/>
            <xs:element name="JoinOnlineMeetingUrl" type="xs:string" minOccurs="0"
maxOccurs="1"/>
            <xs:element name="OnlineMeetingSettings" type="t:OnlineMeetingSettingsType"
minOccurs="0" maxOccurs="1"/>
            <xs:element name="IsOrganizer" type="xs:boolean" minOccurs="0"/>
            <xs:element name="InboxReminders" type="t:ArrayOfInboxReminderType" minOccurs="0"/>
          </xs:sequence>
        </xs:extension>
      </xs:complexContent>
    </xs:complexType>
    <xs:simpleType name="CalendarItemTypeType">
      <xs:restriction base="xs:string">
        <xs:enumeration value="Single"/>
        <xs:enumeration value="Occurrence"/>
        <xs:enumeration value="Exception"/>
        <xs:enumeration value="RecurringMaster"/>
      </xs:restriction>
    </xs:simpleType>
    <xs:simpleType name="CalendarItemUpdateOperationType">
      <xs:restriction base="xs:string">
        <xs:enumeration value="SendToNone"/>
        <xs:enumeration value="SendOnlyToAll"/>
        <xs:enumeration value="SendOnlyToChanged"/>
        <xs:enumeration value="SendToAllAndSaveCopy"/>
        <xs:enumeration value="SendToChangedAndSaveCopy"/>
      </xs:restriction>
    </xs:simpleType>
    <xs:simpleType name="CalendarPermissionLevelType">
      <xs:restriction base="xs:string">
        <xs:enumeration value="None"/>
        <xs:enumeration value="Owner"/>
        <xs:enumeration value="PublishingEditor"/>
        <xs:enumeration value="Editor"/>
        <xs:enumeration value="PublishingAuthor"/>
        <xs:enumeration value="Author"/>
        <xs:enumeration value="NoneditingAuthor"/>
        <xs:enumeration value="Reviewer"/>
        <xs:enumeration value="Contributor"/>
        <xs:enumeration value="FreeBusyTimeOnly"/>
        <xs:enumeration value="FreeBusyTimeAndSubjectAndLocation"/>
        <xs:enumeration value="Custom"/>
      </xs:restriction>
    </xs:simpleType>
    <xs:simpleType name="CalendarPermissionReadAccessType">
      <xs:restriction base="xs:string">
```

```xml
          <xs:enumeration value="None"/>
          <xs:enumeration value="TimeOnly"/>
          <xs:enumeration value="TimeAndSubjectAndLocation"/>
          <xs:enumeration value="FullDetails"/>
      </xs:restriction>
  </xs:simpleType>
  <xs:complexType name="CalendarPermissionSetType">
    <xs:sequence>
      <xs:element name="CalendarPermissions" type="t:ArrayOfCalendarPermissionsType"/>
      <xs:element name="UnknownEntries" type="t:ArrayOfUnknownEntriesType" minOccurs="0"/>
    </xs:sequence>
  </xs:complexType>
  <xs:complexType name="CalendarViewType">
    <xs:complexContent>
      <xs:extension base="t:BasePagingType">
        <xs:attribute name="StartDate" type="xs:dateTime" use="required"/>
        <xs:attribute name="EndDate" type="xs:dateTime" use="required"/>
      </xs:extension>
    </xs:complexContent>
  </xs:complexType>
  <xs:complexType name="CancelCalendarItemType">
    <xs:complexContent>
      <xs:extension base="t:SmartResponseType"/>
    </xs:complexContent>
  </xs:complexType>
  <xs:complexType name="DeclineItemType">
    <xs:complexContent>
      <xs:extension base="t:MeetingRegistrationResponseObjectType"/>
    </xs:complexContent>
  </xs:complexType>
  <xs:complexType name="EnhancedLocationType">
    <xs:sequence>
      <xs:element name="DisplayName" type="xs:string" minOccurs="0"/>
      <xs:element name="Annotation" type="xs:string" minOccurs="0"/>
      <xs:element name="PostalAddress" type="t:PersonaPostalAddressType" minOccurs="0"/>
    </xs:sequence>
  </xs:complexType>
  <xs:complexType name="InboxReminderType">
    <xs:sequence>
      <xs:element name="Id" type="t:GuidType" minOccurs="0" maxOccurs="1"/>
      <xs:element name="ReminderOffset" type="xs:int" minOccurs="0" maxOccurs="1"/>
      <xs:element name="Message" type="xs:string" minOccurs="0" maxOccurs="1"/>
      <xs:element name="IsOrganizerReminder" type="xs:boolean" minOccurs="0" maxOccurs="1"/>
      <xs:element name="OccurrenceChange"
        type="t:EmailReminderChangeType" minOccurs="0" maxOccurs="1"/>
      <xs:element name="IsImportedFromOLC" type="xs:boolean" minOccurs="0" maxOccurs="1"/>
      <xs:element name="SendOption"
        type="t:EmailReminderSendOption" minOccurs="0" maxOccurs="1"/>
    </xs:sequence>
  </xs:complexType>
  <xs:simpleType name="EmailReminderChangeType">
    <xs:restriction base="xs:string">
      <xs:enumeration value="None"/>
      <xs:enumeration value="Added"/>
      <xs:enumeration value="Override"/>
      <xs:enumeration value="Deleted"/>
    </xs:restriction>
  </xs:simpleType>
  <xs:simpleType name="EmailReminderSendOption">
    <xs:restriction base="xs:string">
      <xs:enumeration value="NotSet"/>
      <xs:enumeration value="User"/>
      <xs:enumeration value="AllAttendees"/>
      <xs:enumeration value="Staff"/>
      <xs:enumeration value="Customer"/>
    </xs:restriction>
  </xs:simpleType>  <xs:complexType name="MeetingCancellationMessageType">
    <xs:complexContent>
      <xs:extension base="t:MeetingMessageType">
```

```
            <xs:sequence>
              <xs:element name="Start" type="xs:dateTime" minOccurs="0"/>
              <xs:element name="End" type="xs:dateTime" minOccurs="0"/>
              <xs:element name="Location" type="xs:string" minOccurs="0"/>
              <xs:element name="Recurrence" type="t:RecurrenceType" minOccurs="0"/>
              <xs:element name="CalendarItemType" type="xs:string" minOccurs="0"/>
              <xs:element name="EnhancedLocation" type="t:EnhancedLocationType" minOccurs="0"/>
            </xs:sequence>
          </xs:extension>
        </xs:complexContent>
      </xs:complexType>
      <xs:complexType name="MeetingMessageType">
        <xs:complexContent>
          <xs:extension base="t:MessageType">
            <xs:sequence>
              <xs:element name="AssociatedCalendarItemId" type="t:ItemIdType" minOccurs="0"/>
              <xs:element name="IsDelegated" type="xs:boolean" minOccurs="0"/>
              <xs:element name="IsOutOfDate" type="xs:boolean" minOccurs="0"/>
              <xs:element name="HasBeenProcessed" type="xs:boolean" minOccurs="0"/>
              <xs:element name="ResponseType" type="t:ResponseTypeType" minOccurs="0"/>
              <xs:element name="UID" type="xs:string" minOccurs="0"/>
              <xs:element name="RecurrenceId" type="xs:dateTime" minOccurs="0"/>
              <xs:element name="DateTimeStamp" type="xs:dateTime" minOccurs="0"/>
              <xs:element name="IsOrganizer" type="xs:boolean" minOccurs="0"/>
            </xs:sequence>
          </xs:extension>
        </xs:complexContent>
      </xs:complexType>
      <xs:complexType name="MeetingRegistrationResponseObjectType">
        <xs:complexContent>
          <xs:extension base="t:WellKnownResponseObjectType">
            <xs:sequence>
              <xs:element name="ProposedStart" type="xs:dateTime" minOccurs="0"/>
              <xs:element name="ProposedEnd" type="xs:dateTime" minOccurs="0"/>
            </xs:sequence>
          </xs:extension>
        </xs:complexContent>
      </xs:complexType>
      <xs:complexType name="MeetingRequestMessageType">
        <xs:complexContent>
          <xs:extension base="t:MeetingMessageType">
            <xs:sequence>
              <!--- MeetingRequest properties -->
              <xs:element name="MeetingRequestType" type="t:MeetingRequestTypeType"
  minOccurs="0"/>
              <xs:element name="IntendedFreeBusyStatus" type="t:LegacyFreeBusyType"
  minOccurs="0"/>
              <!-- Calendar Properties of the associated meeting request -->
              <!-- Single and Occurrence only -->
              <xs:element name="Start" type="xs:dateTime" minOccurs="0"/>
              <xs:element name="End" type="xs:dateTime" minOccurs="0"/>
              <!-- Occurrence only -->
              <xs:element name="OriginalStart" type="xs:dateTime" minOccurs="0"/>
              <xs:element name="IsAllDayEvent" type="xs:boolean" minOccurs="0"/>
              <xs:element name="LegacyFreeBusyStatus" type="t:LegacyFreeBusyType" minOccurs="0"/>
              <xs:element name="Location" type="xs:string" minOccurs="0"/>
              <xs:element name="When" type="xs:string" minOccurs="0"/>
              <xs:element name="IsMeeting" type="xs:boolean" minOccurs="0"/>
              <xs:element name="IsCancelled" type="xs:boolean" minOccurs="0"/>
              <xs:element name="IsRecurring" type="xs:boolean" minOccurs="0"/>
              <xs:element name="MeetingRequestWasSent" type="xs:boolean" minOccurs="0"/>
              <xs:element name="CalendarItemType" type="t:CalendarItemTypeType" minOccurs="0"/>
              <xs:element name="MyResponseType" type="t:ResponseTypeType" minOccurs="0"/>
              <xs:element name="Organizer" type="t:SingleRecipientType" minOccurs="0"/>
              <xs:element name="RequiredAttendees" type="t:NonEmptyArrayOfAttendeesType"
  minOccurs="0"/>
              <xs:element name="OptionalAttendees" type="t:NonEmptyArrayOfAttendeesType"
  minOccurs="0"/>
              <xs:element name="Resources" type="t:NonEmptyArrayOfAttendeesType" minOccurs="0"/>
```

94 / 106

```
            <!-- Conflicting and adjacent meetings -->
            <xs:element name="ConflictingMeetingCount" type="xs:int" minOccurs="0"/>
            <xs:element name="AdjacentMeetingCount" type="xs:int" minOccurs="0"/>
            <xs:element name="ConflictingMeetings" type="t:NonEmptyArrayOfAllItemsType"
 minOccurs="0"/>
            <xs:element name="AdjacentMeetings" type="t:NonEmptyArrayOfAllItemsType"
 minOccurs="0"/>
            <xs:element name="Duration" type="xs:string" minOccurs="0"/>
            <xs:element name="TimeZone" type="xs:string" minOccurs="0"/>
            <xs:element name="AppointmentReplyTime" type="xs:dateTime" minOccurs="0"/>
            <xs:element name="AppointmentSequenceNumber" type="xs:int" minOccurs="0"/>
            <xs:element name="AppointmentState" type="xs:int" minOccurs="0"/>
            <!-- Recurrence specific data, only valid if CalendarItemType is RecurringMaster --
>
            <xs:element name="Recurrence" type="t:RecurrenceType" minOccurs="0"/>
            <xs:element name="FirstOccurrence" type="t:OccurrenceInfoType" minOccurs="0"/>
            <xs:element name="LastOccurrence" type="t:OccurrenceInfoType" minOccurs="0"/>
            <xs:element name="ModifiedOccurrences" type="t:NonEmptyArrayOfOccurrenceInfoType"
 minOccurs="0"/>
            <xs:element name="DeletedOccurrences"
 type="t:NonEmptyArrayOfDeletedOccurrencesType" minOccurs="0"/>
            <xs:element name="MeetingTimeZone" type="t:TimeZoneType" minOccurs="0"/>
            <xs:element name="StartTimeZone" type="t:TimeZoneDefinitionType" minOccurs="0"/>
            <xs:element name="EndTimeZone" type="t:TimeZoneDefinitionType" minOccurs="0"/>
            <xs:element name="ConferenceType" type="xs:int" minOccurs="0"/>
            <xs:element name="AllowNewTimeProposal" type="xs:boolean" minOccurs="0"/>
            <xs:element name="IsOnlineMeeting" type="xs:boolean" minOccurs="0"/>
            <xs:element name="MeetingWorkspaceUrl" type="xs:string" minOccurs="0"/>
            <xs:element name="NetShowUrl" type="xs:string" minOccurs="0"/>
            <xs:element name="EnhancedLocation" type="t:EnhancedLocationType" minOccurs="0"/>
            <xs:element name="ChangeHighlights" type="t:ChangeHighlightsType" minOccurs="0"/>
            <xs:element name="StartWallClock" type="xs:dateTime" minOccurs="0" maxOccurs="1"/>
            <xs:element name="EndWallClock" type="xs:dateTime" minOccurs="0" maxOccurs="1"/>
            <xs:element name="StartTimeZoneId" type="xs:string" minOccurs="0" maxOccurs="1"/>
            <xs:element name="EndTimeZoneId" type="xs:string" minOccurs="0" maxOccurs="1"/>
          </xs:sequence>
        </xs:extension>
      </xs:complexContent>
  </xs:complexType>
  <xs:complexType name="MeetingResponseMessageType">
    <xs:complexContent>
      <xs:extension base="t:MeetingMessageType">
        <xs:sequence>
          <xs:element name="Start" type="xs:dateTime" minOccurs="0"/>
          <xs:element name="End" type="xs:dateTime" minOccurs="0"/>
          <xs:element name="Location" type="xs:string" minOccurs="0"/>
          <xs:element name="Recurrence" type="t:RecurrenceType" minOccurs="0"/>
          <xs:element name="CalendarItemType" type="xs:string" minOccurs="0"/>
          <xs:element name="ProposedStart" type="xs:dateTime" minOccurs="0"/>
          <xs:element name="ProposedEnd" type="xs:dateTime" minOccurs="0"/>
          <xs:element name="EnhancedLocation" type="t:EnhancedLocationType" minOccurs="0"/>
        </xs:sequence>
      </xs:extension>
    </xs:complexContent>
  </xs:complexType>
  <xs:simpleType name="MeetingRequestTypeType">
    <xs:restriction base="xs:string">
      <xs:enumeration value="None"/>
      <xs:enumeration value="FullUpdate"/>
      <xs:enumeration value="InformationalUpdate"/>
      <xs:enumeration value="NewMeetingRequest"/>
      <xs:enumeration value="Outdated"/>
      <xs:enumeration value="SilentUpdate"/>
      <xs:enumeration value="PrincipalWantsCopy"/>
    </xs:restriction>
  </xs:simpleType>
  <xs:complexType name="NonEmptyArrayOfAttendeesType">
    <xs:sequence>
      <xs:element name="Attendee" type="t:AttendeeType" maxOccurs="unbounded"/>
```

```xml
        </xs:sequence>
      </xs:complexType>
      <xs:complexType name="NonEmptyArrayOfDeletedOccurrencesType">
        <xs:sequence>
          <xs:element name="DeletedOccurrence" type="t:DeletedOccurrenceInfoType"
maxOccurs="unbounded"/>
        </xs:sequence>
      </xs:complexType>
      <xs:complexType name="OccurrenceInfoType">
        <xs:sequence>
          <xs:element name="ItemId" type="t:ItemIdType"/>
          <xs:element name="Start" type="xs:dateTime"/>
          <xs:element name="End" type="xs:dateTime"/>
          <xs:element name="OriginalStart" type="xs:dateTime"/>
        </xs:sequence>
      </xs:complexType>
      <xs:complexType name="NonEmptyArrayOfOccurrenceInfoType">
        <xs:sequence>
          <xs:element name="Occurrence" type="t:OccurrenceInfoType" maxOccurs="unbounded"/>
        </xs:sequence>
      </xs:complexType>
      <xs:complexType name="NonEmptyArrayOfReminderItemActionType">
        <xs:sequence>
          <xs:element name="ReminderItemAction" type="t:ReminderItemActionType" minOccurs="1"
maxOccurs="unbounded"/>
        </xs:sequence>
      </xs:complexType>
      <xs:complexType name="ProposeNewTimeType">
        <xs:complexContent>
          <xs:extension base="t:ResponseObjectType"/>
        </xs:complexContent>
      </xs:complexType>
      <xs:complexType name="RecurrenceType">
        <xs:sequence>
          <xs:group ref="t:RecurrencePatternTypes"/>
          <xs:group ref="t:RecurrenceRangeTypes"/>
        </xs:sequence>
      </xs:complexType>
      <xs:complexType name="ReminderItemActionType">
        <xs:sequence>
          <xs:element name="ActionType" type="t:ReminderActionType" minOccurs="1" maxOccurs="1"/>
          <xs:element name="ItemId" type="t:ItemIdType" minOccurs="1" maxOccurs="1"/>
          <xs:element name="NewReminderTime" type="xs:string" minOccurs="0" maxOccurs="1"/>
        </xs:sequence>
      </xs:complexType>
      <xs:simpleType name="ReminderActionType">
        <xs:restriction base="xs:string">
          <xs:enumeration value="Dismiss"/>
          <xs:enumeration value="Snooze"/>
        </xs:restriction>
      </xs:simpleType>
      <xs:complexType name="ReminderType">
        <xs:sequence>
          <xs:element name="Subject" type="xs:string" minOccurs="1" maxOccurs="1"/>
          <xs:element name="Location" type="xs:string" minOccurs="0" maxOccurs="1"/>
          <xs:element name="ReminderTime" type="xs:dateTime" minOccurs="1" maxOccurs="1"/>
          <xs:element name="StartDate" type="xs:dateTime" minOccurs="1" maxOccurs="1"/>
          <xs:element name="EndDate" type="xs:dateTime" minOccurs="1" maxOccurs="1"/>
          <xs:element name="ItemId" type="t:ItemIdType" minOccurs="1" maxOccurs="1"/>
          <xs:element name="RecurringMasterItemId" type="t:ItemIdType" minOccurs="0"
maxOccurs="1"/>
          <xs:element name="ReminderGroup" type="t:ReminderGroupType" minOccurs="0"
maxOccurs="1"/>
          <xs:element name="UID" type="xs:string" minOccurs="1" maxOccurs="1"/>
        </xs:sequence>
      </xs:complexType>
      <xs:simpleType name="ReminderGroupType">
        <xs:restriction base="xs:string">
          <xs:enumeration value="Calendar"/>
```

```
        <xs:enumeration value="Task"/>
      </xs:restriction>
    </xs:simpleType>
    <xs:complexType name="RemoveItemType">
      <xs:complexContent>
        <xs:extension base="t:ResponseObjectType"/>
      </xs:complexContent>
    </xs:complexType>
    <xs:simpleType name="ResponseTypeType">
      <xs:restriction base="xs:string">
        <xs:enumeration value="Unknown"/>
        <xs:enumeration value="Organizer"/>
        <xs:enumeration value="Tentative"/>
        <xs:enumeration value="Accept"/>
        <xs:enumeration value="Decline"/>
        <xs:enumeration value="NoResponseReceived"/>
      </xs:restriction>
    </xs:simpleType>
    <xs:complexType name="OnlineMeetingSettingsType">
      <xs:sequence>
        <xs:element name="LobbyBypass" type="t:LobbyBypassType"/>
        <xs:element name="AccessLevel" type="t:OnlineMeetingAccessLevelType"/>
        <xs:element name="Presenters" type="t:PresentersType"/>
      </xs:sequence>
    </xs:complexType>
    <xs:simpleType name="LobbyBypassType">
      <xs:restriction base="xs:string">
        <xs:enumeration value="Disabled"/>
        <xs:enumeration value="EnabledForGatewayParticipants"/>
      </xs:restriction>
    </xs:simpleType>
    <xs:simpleType name="OnlineMeetingAccessLevelType">
      <xs:restriction base="xs:string">
        <xs:enumeration value="Locked"/>
        <xs:enumeration value="Invited"/>
        <xs:enumeration value="Internal"/>
        <xs:enumeration value="Everyone"/>
      </xs:restriction>
    </xs:simpleType>
    <xs:simpleType name="PresentersType">
      <xs:restriction base="xs:string">
        <xs:enumeration value="Disabled"/>
        <xs:enumeration value="Internal"/>
        <xs:enumeration value="Everyone"/>
      </xs:restriction>
    </xs:simpleType>
    <xs:complexType name="TentativelyAcceptItemType">
      <xs:complexContent>
        <xs:extension base="t:MeetingRegistrationResponseObjectType"/>
      </xs:complexContent>
    </xs:complexType>
    <xs:complexType name="TimeChangeType">
      <xs:sequence>
        <xs:element name="Offset" type="xs:duration"/>
        <xs:group ref="t:TimeChangePatternTypes" minOccurs="0"/>
        <xs:element name="Time" type="xs:time"/>
      </xs:sequence>
      <xs:attribute name="TimeZoneName" type="xs:string" use="optional"/>
    </xs:complexType>
    <xs:complexType name="TimeZoneType">
      <xs:sequence minOccurs="0">
        <xs:element name="BaseOffset" type="xs:duration"/>
        <xs:sequence minOccurs="0">
          <xs:element name="Standard" type="t:TimeChangeType"/>
          <xs:element name="Daylight" type="t:TimeChangeType"/>
        </xs:sequence>
      </xs:sequence>
      <xs:attribute name="TimeZoneName" type="xs:string" use="optional"/>
    </xs:complexType>
```

```
</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 updates to those products.

- Microsoft Exchange Server 2007

- Microsoft Exchange Server 2010

- Microsoft Exchange Server 2013

- Microsoft Exchange Server 2016

- Microsoft Exchange Server 2019

Exceptions, if any, are noted in this section. If an update version, service pack or Knowledge Base (KB) number appears with a product name, the behavior changed in that update. The new behavior also applies to subsequent updates unless otherwise specified. If a product edition appears with the product version, behavior is different in that product edition.

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

<1> Section 2.2.4: Exchange 2007, Exchange 2010, and the initial release of Exchange 2013 do not support the **AddItemToMyCalendarType** complex type. This type was introduced in Microsoft Exchange Server 2013 Service Pack 1 (SP1).

<2> Section 2.2.4: Exchange 2007 and Exchange 2010 do not support the **EnhancedLocationType** complex type.

<3> Section 2.2.4: Exchange 2007, Exchange 2010, and the initial release of Exchange 2013 do not support the **MeetingRegistrationResponseObjectType** complex type. This type was introduced in Exchange 2013 SP1.

<4> Section 2.2.4: Exchange 2007 and Exchange 2010 do not support the **OnlineMeetingSettingsType** complex type.

<5> Section 2.2.4: Exchange 2007, Exchange 2010, and the initial release of Exchange 2013 do not support the **ProposeNewTimeType** complex type. This type was introduced in Exchange 2013 SP1.

<6> Section 2.2.4: Only Exchange 2007 supports the **TimeZoneType** complex type.

<7> Section 2.2.4.2: Exchange 2007, Exchange 2010, and the initial release of Exchange 2013 do not support the **AddItemToMyCalendarType** complex type. This type was introduced in Exchange 2013 SP1.

<8> Section 2.2.4.3: Exchange 2007, Exchange 2010, and Exchange 2013 do not support the **ArrayOfInboxReminderType** complex type

<9> Section 2.2.4.4: Exchange 2007, Exchange 2010, and Exchange 2013 do not use the **ProposedStart** element.

<10> Section 2.2.4.4: Exchange 2007, Exchange 2010, and Exchange 2013 do not use the **ProposedEnd** element.

<11> Section 2.2.4.5: Exchange 2007 does not support the **SharingEffectiveRights** element.

<12> Section 2.2.4.6: Exchange 2016 and Exchange 2019 do not return the **TimeZone** element if the meeting is not associated with a recurring calendar item.

<13> Section 2.2.4.6: Only Exchange 2007 supports the **MeetingTimeZone** element.

<14> Section 2.2.4.6: Exchange 2007 does not support the **StartTimeZone** element.

<15> Section 2.2.4.6: Exchange 2007 does not support the **EndTimeZone** element.

<16> Section 2.2.4.6: Exchange 2007, Exchange 2010, and Exchange 2013 support the **ConferenceType** element. The **ConferenceType** element is obsolete in Exchange 2016 and Exchange 2019.

<17> Section 2.2.4.6: In Exchange 2007, Exchange 2010, and Exchange 2013, this element is not read-only.

<18> Section 2.2.4.6: Exchange 2007 and Exchange 2010 do not support the **EnhancedLocation** element.

<19> Section 2.2.4.6: Exchange 2007 and Exchange 2010 do not support the **StartWallClock** element.

<20> Section 2.2.4.6: Exchange 2007 and Exchange 2010 do not support the **EndWallClock** element.

<21> Section 2.2.4.6: Exchange 2007 and Exchange 2010 do not support the **StartTimeZoneId** element.

<22> Section 2.2.4.6: Exchange 2007 and Exchange 2010 do not support the **EndTimeZoneId** element.

<23> Section 2.2.4.6: Exchange 2007 and Exchange 2010 do not support the **IntendedFreeBusyStatus** element.

<24> Section 2.2.4.6: Exchange 2007 and Exchange 2010 do not support the **JoinOnlineMeetingUrl** element.

<25> Section 2.2.4.6: Exchange 2007 and Exchange 2010 do not support the **OnlineMeetingSettings** element.

<26> Section 2.2.4.6: Exchange 2007 and Exchange 2010 do not support the **IsOrganizer** element.

<27> Section 2.2.4.12: Exchange 2007 and Exchange 2010 do not support the **EnhancedLocationType** complex type.

<28> Section 2.2.4.13: Exchange 2007, Exchange 2010, and Exchange 2013 do not support the **InboxReminderType** complex type.

<29> Section 2.2.4.14: Exchange 2007 and Exchange 2010 do not support the **Start** element.

<30> Section 2.2.4.14: Exchange 2007 and Exchange 2010 do not support the **End** element.

<31> Section 2.2.4.14: Exchange 2007 and Exchange 2010 do not support the **Location** element.

<32> Section 2.2.4.14: Exchange 2007 and Exchange 2010 do not support the **Recurrence** element.

<33> Section 2.2.4.14: Exchange 2007 and Exchange 2010 do not support the **CalendarItemType** element.

<34> Section 2.2.4.15: Exchange 2010 does not return the **ResponseType** element if the **recipient** has not yet responded to the meeting request.

<35> Section 2.2.4.15: Exchange 2007 and Exchange 2010 do not use the **IsOrganizer** element.

<36> Section 2.2.4.16: Exchange 2007, Exchange 2010, and the initial release of Exchange 2013 do not support the **MeetingRegistrationResponseObjectType** complex type. This type was introduced in Exchange 2013 SP1.

<37> Section 2.2.4.17: Exchange 2016 and Exchange 2019 do not return the **TimeZone** element if the meeting is not associated with a recurring calendar item.

<38> Section 2.2.4.17: Only Exchange 2007 supports the **MeetingTimeZone** element

<39> Section 2.2.4.17: Exchange 2007 does not support the **StartTimeZone** element.

<40> Section 2.2.4.17: Exchange 2007 does not support the **EndTimeZone** element.

<41> Section 2.2.4.17: Exchange 2007, Exchange 2010, and Exchange 2013 support the **ConferenceType** element. The **ConferenceType** element is obsolete in Exchange 2016 and Exchange 2019.

<42> Section 2.2.4.17: Exchange 2007 and Exchange 2010 do not support the **EnhancedLocation** element.

<43> Section 2.2.4.17: Exchange 2007 and Exchange 2010 do not support the **StartWallClock** element.

<44> Section 2.2.4.17: Exchange 2007 and Exchange 2010 do not support the **EndWallClock** element.

<45> Section 2.2.4.17: Exchange 2007 and Exchange 2010 do not support the **StartTimeZoneId** element.

<46> Section 2.2.4.17: Exchange 2007 and Exchange 2010 do not support the **EndTimeZoneId** element.

<47> Section 2.2.4.18: Exchange 2007 and Exchange 2010 do not support the **Start** element.

<48> Section 2.2.4.18: Exchange 2007 and Exchange 2010 do not support the **End** element.

<49> Section 2.2.4.18: Exchange 2007 and Exchange 2010 do not support the **Location** element.

<50> Section 2.2.4.18: Exchange 2007 and Exchange 2010 do not support the **Recurrence** element.

<51> Section 2.2.4.18: Exchange 2007 and Exchange 2010 do not support the **CalendarItemType** element.

<52> Section 2.2.4.18: Exchange 2007 and Exchange 2010 do not support the **ProposedStart** element.

<53> Section 2.2.4.18: Exchange 2007 and Exchange 2010 do not support the **ProposedEnd** element.

<54> Section 2.2.4.18: Exchange 2007 and Exchange 2010 do not support the **EnhancedLocation** element.

<55> Section 2.2.4.23: Exchange 2007 and Exchange 2010 do not support the **OnlineMeetingSettingsType** complex type.

<56> Section 2.2.4.24: Exchange 2007, Exchange 2010, and the initial release of Exchange 2013 do not support the **ProposeNewTimeType** complex type. This type was introduced in Exchange 2013 SP1.

<57> Section 2.2.4.29: Only Exchange 2007 supports the **TimeZoneType** complex type.

<58> Section 2.2.5: Exchange 2007 and Exchange 2010 do not support the **LobbyBypassType** simple type.

<59> Section 2.2.5: Exchange 2007 and Exchange 2010 do not support the **OnlineMeetingAccessLevelType** simple type.

<60> Section 2.2.5: Exchange 2007 and Exchange 2010 do not support the **PresentersType** simple type.

<61> Section 2.2.5.6: Exchange 2007, Exchange 2010, and Exchange 2013 do not support the **EmailReminderChangeType** simple type.

<62> Section 2.2.5.7: Exchange 2007, Exchange 2010, and Exchange 2013 do not support the EmailReminderSendOption simple type.

<63> Section 2.2.5.8: Exchange 2007 and Exchange 2010 do not support the **LobbyBypassType** simple type.

<64> Section 2.2.5.9: Exchange 2007 does not use the **PrincipalWantsCopy** enumeration value.

<65> Section 2.2.5.10: Exchange 2007 and Exchange 2010 do not use the **OnlineMeetingAccessLevelType** simple type.

<66> Section 2.2.5.11: Exchange 2007 and Exchange 2010 do not use the **PresentersType** simple type.

<67> Section 2.2.5.11: Exchange 2007 and Exchange 2010 do not use the **Internal** enumeration value.

<68> Section 3.1.4.2.1: Exchange 2007, Exchange 2010 and the initial release of Exchange 2013 do not use the **ErrorCalendarInvalidDayForWeeklyRecurrence** error code. This error code was introduced in Exchange 2013 SP1.

<69> Section 3.1.4.4: Exchange 2007, the initial release version of Exchange 2010, and Microsoft Exchange Server 2010 Service Pack 1 (SP1) do not include the **DateTimePrecision** part.

<70> Section 3.1.4.5: Exchange 2007 and Exchange 2010 do not support the **GetReminders** operation.

<71> Section 3.1.4.7: Exchange 2007 and Exchange 2010 do not support the **PerformReminderAction** operation.

9 Change Tracking

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

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

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

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

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

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

Section	Description	Revision class
2.2.4.12 t:EnhancedLocationType Complex Type	Added minOccurs indicator for DisplayName element.	Minor
2.2.5.7 t:EmailReminderSendOption	Updated description for Staff and Customer of EmailReminderSendOption.	Minor
2.2.5.7 t:EmailReminderSendOption	Updated description for value NotSet of EmailReminderSendOption.	Minor
7.2 Types Schema	Added minOccurs indicator for DisplayName element of EnhancedLocationType.	Minor

10 Index