[MS-OXWSMTGS]:
Calendaring Web Service Protocol

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Revision Summary

Date	Revision History	Revision Class	Comments
07/15/2009	1.0	Major	Initial Availability.
11/04/2009	2.0.0	Major	Updated and revised the technical content.
02/10/2010	2.1.0	Minor	Updated the technical content.
05/05/2010	2.1.1	Editorial	Revised and edited the technical content.
08/04/2010	2.2	Minor	Clarified the meaning of the technical content.
11/03/2010	2.2	No change	No changes to the meaning, language, or formatting of the technical content.
03/18/2011	2.2	No change	No changes to the meaning, language, and formatting of the technical content.
08/05/2011	2.2	No change	No changes to the meaning, language, or formatting of the technical content.
10/07/2011	3.0	Major	Significantly changed the technical content.
01/20/2012	4.0	Major	Significantly changed the technical content.
04/27/2012	4.0	No change	No changes to the meaning, language, or formatting of the technical content.
07/16/2012	4.1	Minor	Clarified the meaning of the technical content.
10/08/2012	5.0	Major	Significantly changed the technical content.
02/11/2013	6.0	Major	Significantly changed the technical content.
07/26/2013	7.0	Major	Significantly changed the technical content.
11/18/2013	7.0	No change	No changes to the meaning, language, or formatting of the technical content.
02/10/2014	7.0	No change	No changes to the meaning, language, or formatting 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 1.8, 2, and 3 of this specification are normative and can contain the terms MAY, SHOULD, MUST, MUST NOT, and SHOULD NOT as defined in RFC 2119. Sections 1.5 and 1.9 are also normative but cannot contain those terms. All other sections and examples in this specification are informative.

1.1 Glossary

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

Coordinated Universal Time (UTC)
Hypertext Transfer Protocol (HTTP)
Hypertext Transfer Protocol over Secure Sockets Layer (HTTPS)
resource
SOAP
XML
XML namespace

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

calendar
Calendar folder
Calendar object
delegate
Deleted Items folder
endpoint
Inbox folder
instance
mailbox
meeting request
Meeting Workspace
message store
optional attendee
organizer
permission
recipient
recurrence pattern
Sent Items folder
Uniform Resource Locator (URL)
web server
Web Services Description Language (WSDL)
WSDL message
WSDL port type
XML schema

The following terms are specific to this document:

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

1.2 References

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

1.2.1 Normative References

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

[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".

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

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

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

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

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

[XMLNS] Bray, T., Hollander, D., Layman, A., et al., Eds., "Namespaces in XML 1.0 (Third Edition)", W3C Recommendation, December 2009, http://www.w3.org/TR/2009/REC-xml-names-20091208/

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

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

1.2.2 Informative References

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

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

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

[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 (4)** to use for each operation.

This protocol uses the **SOAP** protocol, as described in [SOAP1.1], to specify the structure information exchanged between the client and 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.
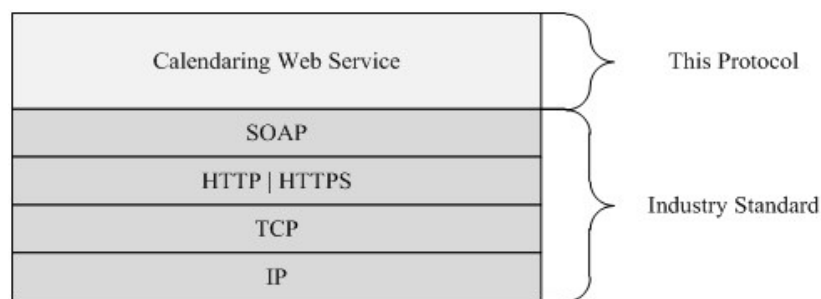
Figure 1: This protocol in relation to other protocols

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 (4) 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 (4) 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 (4) 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.
AttendeeType (section 2.2.4.2)	Specifies attendees and **resources** for a meeting.
CalendarFolderType (section 2.2.4.3)	Specifies a folder that contains calendar items.
CalendarItemType (section 2.2.4.4)	Specifies a server calendar item.
CalendarPermissionSetType (section 2.2.4.5)	Defines the access that a user has to a **Calendar folder**.
CalendarPermissionType (section 2.2.4.6)	Specifies the access that a user has to a Calendar folder.
CalendarViewType (section 2.2.4.7)	Specifies the settings that are used to return calendar items in the specified range as they appear in a calendar.
CancelCalendarItemType (section 2.2.4.8)	Specifies a response object that is used to cancel a meeting.
DeclineItemType (section 2.2.4.9)	Specifies a response object that is used to decline a meeting invitation or calendar item.
MeetingCancellationMessageType (section 2.2.4.11)	Specifies a meeting cancellation.
MeetingMessageType (section 2.2.4.12)	Specifies a meeting in the server message store.
MeetingRequestMessageType (section 2.2.4.13)	Specifies a meeting request in the server message store.
MeetingResponseMessageType (section 2.2.4.14)	Specifies a meeting response in the server message store.
NonEmptyArrayOfAttendeesType (section 2.2.4.15)	Contains a list of attendees and resources for a meeting.
NonEmptyArrayOfDeletedOccurrencesType (section 2.2.4.16)	Contains a list of deleted occurrences of a recurring meeting request or calendar item.
NonEmptyArrayOfOccurrenceInfoType (section 2.2.4.17)	Contains a list of modified occurrences of a recurring meeting request or calendar item.
OccurrenceInfoType (section 2.2.4.18)	Specifies a single occurrence of a recurring meeting request or calendar item.
OnlineMeetingSettingsType (section 2.2.4.19)	Specifies the settings for an online meeting.<1>
RecurrenceType (section 2.2.4.20)	Specifies the recurrence pattern and recurrence range for calendar items and meeting requests.

Complex type name	Description
RemoveItemType (section 2.2.4.21)	Specifies a response object that is used to remove a meeting item when a meeting cancellation message is received.
TentativelyAcceptItemType (section 2.2.4.22)	Specifies a response object that is used to tentatively accept a meeting invitation or calendar item.
TimeChangeType (section 2.2.4.23)	Specifies the date and time when the time changes to and from daylight saving time and standard time.
TimeZoneType (section 2.2.4.24)	MAY<2> 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 **WellKnownResponseObjectType** complex type, as specified in [MS-OXWSCDATA] section 2.2.4.65.

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

2.2.4.2 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: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 2.2.4.27)	Specifies a fully resolved e-mail address.
ResponseType	t:ResponseTypeType (section 2.2.5.10)	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.

2.2.4.3   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 2.2.4.6.

```
<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. This element is read-only.<3>
PermissionSet	**t:CalendarPermissionSetType** (section 2.2.4.5)	Specifies all permissions that are configured for a Calendar folder.

2.2.4.4   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 2.2.4.22.

```xml
<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: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

Element name	Type	Description
		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 and is not populated to attendee's mailbox.
IsMeeting	**xs:boolean**	Indicates whether the calendar item is a meeting or 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

Element name	Type	Description
		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. This element is "false" only on the organizer's calendar item; it is always "true" on the attedee's calendar item.
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 3.1.4.2.
MyResponseType	t:ResponseTypeType (section 2.2.5.10)	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 2.2.4.60)	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 2.2.4.15)	Specifies attendees that are required to attend a meeting.
OptionalAttendees	t:NonEmptyArrayOfAttendeesType	Specifies attendees

Element name	Type	Description
		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 2.2.4.42)	Indicates all calendar items that conflict with a meeting time.
AdjacentMeetings	t:NonEmptyArrayOfAllItemsType	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. This element 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

Element name	Type	Description
		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 **CreateItem** request, as specified in section 3.1.4.2.
Recurrence	**t:RecurrenceType** (section 2.2.4.20)	Specifies the recurrence pattern and the recurrence range for calendar items and meeting requests.
FirstOccurrence	**t:OccurrenceInfoType** (section 2.2.4.18)	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

Element name	Type	Description
		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 2.2.4.17)	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 2.2.4.16)	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 2.2.4.24)	MAY<4> 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<5> specify the calendar item start time zone information.
EndTimeZone	**t:TimeZoneDefinitionType**	SHOULD<6> specify the calendar item end time zone information.
ConferenceType	**xs:int**	Specifies the type of conferencing that is performed with a calendar item. Valid

Element name	Type	Description
		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.
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 2.2.4.10)	Specifies additional location information for the calendar item.<7>
StartWallClock	**xs:dateTime**	Specifies the start time of the calendar item.<8>
EndWallClock	**xs:dateTime**	Specifies the ending time of the calendar item.<9>
StartTimeZoneId	**xs:string**	Specifies the calendar item start time zone identifier.<10>
EndTimeZoneId	**xs:string**	Specifies the calendar item end time zone identifier.<11>
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 when the meeting is accepted. <12>
JoinOnlineMeetingUrl	**xs:string**	Specifies the URL for joining the online meeting.<13>
OnlineMeetingSettings	**t:OnlineMeetingSettingsType** (section 2.2.4.19)	Specifies settings for online meetings.<14>

Element name	Type	Description
IsOrganizer	**xs:boolean**	Specifies whether the current user is the organizer and/or owner of the calendar item.<15>

2.2.4.5 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 2.2.4.4)	Contains an array of calendar permissions for a folder.
UnknownEntries	**t:ArrayOfUnknownEntriesType** ([MS-OXWSFOLD] section 2.2.4.4)	Contains an array of unknown permission entries that cannot be resolved against the directory service.

2.2.4.6 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 2.2.4.3.

```
<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.

2.2.4.7   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**	Contains the start of the time span for a Calendar

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

2.2.4.8   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>
```

2.2.4.9   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 **WellKnownResponseObjectType** complex type, as specified in [MS-OXWSCDATA] section 2.2.4.65.

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

2.2.4.10   t:EnhancedLocationType Complex Type

The **EnhancedLocationType** complex type specifies additional location information for a calendar item.<16>

```
<xs:complexType name="EnhancedLocationType">
  <xs:sequence>
    <xs:element name="DisplayName" type="xs:string"/>
    <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.

2.2.4.11   t:MeetingCancellationMessageType Complex Type

The **MeetingCancellationMessageType** complex type represents a meeting cancellation. This type extends the **MeetingMessageType** complex type, as specified in section 2.2.4.12.

```
<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.<17>

End: An element of type **dateTime** that represents the ending time of the calendar item.<18>

Location: An element of type **string**, as defined in [XMLSCHEMA2] section 3.2.1, that represents the location of the calendar item.<19>

Recurrence: An element of type **RecurrenceType**, as defined in section 2.2.4.20, that represents the recurrence of the calendar item.<20>

CalendarItemType: An element of type **string** that represents the type of calendar item.<21>

EnhancedLocation: An element of type **EnhancedLocationType**, as defined in section 2.2.4.10, that specifies additional location information for a calendar item.

2.2.4.12   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 2.2.4.1.

```
<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 2.2.4.23)	Represents an item identifier of the corresponding calendar item in a messaging server **mailbox**.
IsDelegated	**xs:boolean** ([XMLSCHEMA2])	Indicates whether a meeting was handled by 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 2.2.5.10)	Represents the type of **recipient (1)** response that is received for a meeting.

Element name	Type	Description
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.<22>

2.2.4.13   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 2.2.4.12.

```
<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 2.2.5.7)	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

Element name	Type	Description
		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.
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.
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 always "true".
CalendarItemType	**t:CalendarItemTypeType** (section 2.2.4.4)	Represents the occurrence type of a meeting item.
MyResponseType	**t:ResponseTypeType** (section 2.2.5.10)	Identifies the type of the response to the meeting request (sent for the organizer's meeting item).
Organizer	**t:SingleRecipientType** ([MS-OXWSCDATA] section 2.2.4.60)	Represents the organizer of the meeting.
RequiredAttendees	**t:NonEmptyArrayOfAttendeesType** (section 2.2.4.15)	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

Element name	Type	Description
		meeting and is not populated to attendee's mailbox.
ConflictingMeetingCount	**xs:int** ([XMLSCHEMA2])	Represents the number of calendar items that conflict with the meeting item.
AdjacentMeetingCount	**xs:int**	Represents the total number of calendar items that are adjacent to the meeting time.
ConflictingMeetings	**t:NonEmptyArrayOfAllItemsType** ([MS-OXWSCDATA] section 2.2.4.42)	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.
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 2.2.4.20)	Contains the recurrence pattern for meeting items and meeting requests.
FirstOccurrence	**t:OccurrenceInfoType** (section 2.2.4.18)	Represents the first occurrence of a recurring meeting item.
LastOccurrence	**t:OccurrenceInfoType**	Represents the last occurrence of a

Element name	Type	Description
		recurring meeting item.
ModifiedOccurrences	t:NonEmptyArrayOfOccurrenceInfoType (section 2.2.4.17)	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.
DeletedOccurrences	t:NonEmptyArrayOfDeletedOccurrencesType (section 2.2.4.16)	Contains an array of deleted occurrences of a recurring meeting item.
MeetingTimeZone	t:TimeZoneType (section 2.2.4.24)	MAY<23> 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<24> specify the time zone for the start of the meeting item.
EndTimeZone	t:TimeZoneDefinitionType	SHOULD<25> 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. 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

Element name	Type	Description
		meeting item.
NetShowUrl	xs:string	Specifies the URL for an online meeting.
EnhancedLocation	t:EnhancedLocationType (section 2.2.4.10)	Specifies additional location information.<26>
ChangeHighlights	t:ChangeHighlightsType ([MS-OXWSCDATA] section 2.2.4.18)	Specifies the changes made to a meeting when a meeting update occurs.
StartWallClock	xs:dateTime	Specifies the starting time of the calendar item.<27>
EndWallClock	xs:dateTime	Specifies the ending time of the calendar item.<28>
StartTimeZoneId	xs:string	Specifies the start time zone identifier.<29>
EndTimeZoneId	xs:string	Specifies the end time zone identifier.<30>

2.2.4.14   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 2.2.4.12.

```
<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.<31>

End: An element of type **dateTime** that represents the ending time of the calendar item.<32>

Location: An element of type **string**, as defined in [XMLSCHEMA2] section 3.2.1, that represents the location for the calendar item.<33>

Recurrence: An element of type **RecurrenceType**, as defined in section 2.2.4.20, that represents the recurrence for the calendar item.<34>

CalendarItemType: An element of type **string** that represents the type of calendar item.<35>

ProposedStart: An element of type **dateTime** that represents the proposed start time of the calendar item.<36>

ProposedEnd: An element of type **dateTime** that represents the proposed end time of the calendar item.<37>

EnhancedLocation: An element of type **EnhancedLocationType**, as defined in section 2.2.4.10, that represents additional location information for the calendar item.<38>

2.2.4.15   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 2.2.4.2)	Represents an attendee or resource for a meeting.

2.2.4.16   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 2.2.4.22)	Represents a deleted occurrence of a recurring calendar item.

2.2.4.17   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 2.2.4.18)	Represents a modified occurrence of a recurring calendar item.

2.2.4.18   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 2.2.4.23)	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.

2.2.4.19   t:OnlineMeetingSettingsType Complex Type

The **OnlineMeetingSettingsType** complex type specifies the settings for an online meeting.<39>

```
<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 2.2.5.6)	Specifies the settings to bypass the online waiting area.
AccessLevel	**t:OnlineMeetingAccessLevelType** (section 2.2.5.8)	Specifies who must wait in the online waiting area before online meetings.
Presenters	**t:PresentersType** (section 2.2.5.9	Controls which participants are given presenter privileges when the meeting is scheduled.

2.2.4.20   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.

2.2.4.21   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 2.2.4.59.

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

2.2.4.22   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 **WellKnownResponseObjectType** complex type, as specified in [MS-OXWSCDATA] section 2.2.4.65.

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

2.2.4.23   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 2.2.4.24).
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.

2.2.4.24   t:TimeZoneType Complex Type

The **TimeZoneType** complex type MAY<40> 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 2.2.4.23)	Specifies the date and time when the time changes from daylight saving time to standard time.
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.
LobbyBypassType (section 2.2.5.6)	Specifies the settings to bypass the online waiting area.<41>
MeetingRequestTypeType (section 2.2.5.7)	Describes the types of meeting requests.
OnlineMeetingAccessLevelType (section 2.2.5.8)	Specifies who must wait in the online waiting area before online meetings.<42>

Simple type	Description
PresentersType (section 2.2.5.8)	Controls which participants are given presenter privileges when the meeting is scheduled.<43>
ResponseTypeType (section 2.2.5.10)	Represents the types of recipient (1) 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

Value	Meaning
	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

Value	Meaning
	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.

```
<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:LobbyBypassType Simple Type

The **LobbyByPassType** simple type specifies the settings to bypass the online waiting area.<44>

```
<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.

2.2.5.7   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

Value	Meaning
	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.

2.2.5.8   t:OnlineMeetingAccessLevelType Simple Type

The **OnlineMeetingAccessLevelType** simple type specifies who must wait in the online waiting area before online meetings.<45>

```
<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.

2.2.5.9   t:PresentersType Simple Type

The **PresentersType** simple type controls which participants are given presenter privileges when the meeting is scheduled.<46>

```
<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.<47>
Everyone	All participants have presenter privileges.

2.2.5.10   t:ResponseTypeType Simple Type

The **ResponseTypeType** simple type specifies the type of recipient (1) 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 (1).

Value	Meaning
Organizer	Indicates that the recipient (1) is the meeting organizer.
Tentative	Indicates that the recipient (1) has tentatively accepted the meeting.
Accept	Indicates that the recipient (1) accepted the meeting.
Decline	Indicates that the recipient (1) declined the meeting.
NoResponseReceived	Indicates that the recipient (1) 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.
MoveItem ([MS-OXWSCORE] section 3.1.4.7)	Moves calendar-related items on the server.
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 2.2.4.15)
	ItemIds ([MS-OXWSCORE] section 2.2.4.15)
	For each item being copied that is not a recurring calendar item, the **ItemIds** element MUST contain an **ItemId** child element ([MS-OXWSCORE] section 2.2.4.27).
	For each item being copied that is a recurring calendar item, the **ItemIds** element SHOULD contain a **RecurringMasterItemId** child element ([MS-OXWSCORE] section 2.2.4.27).
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 2.2.4.10, set to "Success". The **ResponseCode** element, as specified in [MS-OXWSCDATA] section 2.2.4.37, 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 2.2.5.23. 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 does not correspond to a valid occurrence of the OccurrenceId.
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 2.2.4.42) 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 2.2.4.4)
	AcceptItemType (section 2.2.4.1)
	TentativelyAcceptItemType (section 2.2.4.22)
	DeclineItemType (section 2.2.4.9)
	CancelCalendarItemType (section 2.2.4.8)
	RemoveItemType (section 2.2.4.21)
	The **Items** child element of the **CreateItem** element MUST NOT contain the following elements:
	MeetingMessageType (section 2.2.4.12**)**
	MeetingRequestMessageType (section 2.2.4.13**)**
	MeetingCancellationMessageType (section 2.2.4.11**)**
	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 2.2.4.10, set to "Success". The **ResponseCode** element, as specified in [MS-OXWSCDATA] section 2.2.4.37, 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 2.2.5.23. 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

Value	Description
	it is greater than the start date/time.
ErrorCalendarInvalidDayForWeeklyRecurrence	Specifies that invalid values of Day, WeekDay, and WeekendDay were used to specify the weekly recurrence.
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 2.2.4.27).

Message name	Description
	For each item being deleted that is a recurring calendar item, the **ItemIds** element can contain a **RecurringMasterItemId** child element ([MS-OXWSCORE] section 2.2.4.27) or an **OccurrenceItemId** child element ([MS-OXWSCORE] section 2.2.4.27).
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 2.2.4.10, set to "Success". The **ResponseCode** element, as specified in [MS-OXWSCDATA] section 2.2.4.37, 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 2.2.5.23. The following table describes some of the possible error code values.

Value	Description
ErrorCalendarCannotUseIdForOccurrenceId	Specifies that the OccurrenceId does not correspond to a valid occurrence of the recurringMasterId.
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.<48>

```
<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 2.2.4.27).
	For each item being retrieved that is a recurring calendar item, the **ItemIds** element SHOULD contain a **RecurringMasterItemId** child element ([MS-OXWSCORE] section 2.2.4.27) or an **OccurrenceItemId** child element ([MS-OXWSCORE] section 2.2.4.27).
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 2.2.4.10, set to "Success". The **ResponseCode** element, as specified in [MS-OXWSCDATA] section 2.2.4.37, 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 2.2.5.23. The following table describes some of the possible error code values.

Value	Description
ErrorCalendarCannotUseIdForOccurrenceId	Specifies that the OccurrenceId does not correspond to a valid occurrence of the recurringMasterId.
ErrorCalendarCannotUseIdForRecurringMasterId	Specifies that the recurringMasterId does not correspond to a valid occurrence of the OccurrenceId.
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 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>
```

3.1.4.5.1 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

Message name	Description
	XML request MUST contain the following child elements:
	ToFolderId ([MS-OXWSCORE] section 2.2.4.15)
	ItemIds ([MS-OXWSCORE] section 2.2.4.15)
	For each item being moved that is not a recurring calendar item, the **ItemIds** element MUST contain an **ItemId** child element ([MS-OXWSCORE] section 2.2.4.27).
	For each item being moved that is a recurring calendar item, the **ItemIds** element SHOULD contain a **RecurringMasterItemId** child element ([MS-OXWSCORE] section 2.2.4.27).
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 2.2.4.10, set to "Success". The **ResponseCode** element, as specified in [MS-OXWSCDATA] section 2.2.4.37, 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 2.2.5.23. 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 does not correspond to a valid occurrence of the recurringMasterId.
ErrorCalendarEndDateIsEarlierThanStartDate	Specifies that the end date/time must be changed so that it is greater than the start date/time.
ErrorCalendarInvalidRecurrence	Specifies that the internal structure of the objects that represent the recurrence is invalid.

3.1.4.6   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>
```

3.1.4.6.1   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 2.2.4.10, set to "Success". The **ResponseCode** element, as specified in [MS-OXWSCDATA] section 2.2.4.37, 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 2.2.5.23. 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.

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
<?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
<?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"?>
```

Release: February 10, 2014

```
<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 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 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 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="Exchange2013"
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="Exchange2013"
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: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: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:binding>
```

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

Release: February 10, 2014

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:	[MS-OXWSCORE] section 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-OXWSCORE-messages.xsd schemas have to be placed in the common folder along with the files listed in the table.

7.1 Messages Schema

This protocol uses the XML schema message definitions in MS-OXWSCORE-messages.xsd, as described in [MS-OXWSCORE] section 7.1.

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
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

```
<?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="Exchange2013" 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:complexType name="AcceptItemType">
    <xs:complexContent>
      <xs:extension base="t:WellKnownResponseObjectType"/>
    </xs:complexContent>
  </xs:complexType>
```

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

```xml
        <!-- 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: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">
      <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>
```

```xml
<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:WellKnownResponseObjectType"/>
  </xs:complexContent>
</xs:complexType>
<xs:complexType name="EnhancedLocationType">
  <xs:sequence>
    <xs:element name="DisplayName" type="xs:string"/>
    <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="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="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 -->
```

```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="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>
```

```xml
<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"/>
  </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="RecurrenceType">
  <xs:sequence>
    <xs:group ref="t:RecurrencePatternTypes"/>
    <xs:group ref="t:RecurrenceRangeTypes"/>
  </xs:sequence>
</xs:complexType>
<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:WellKnownResponseObjectType"/>
          </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 released service packs:

- Microsoft Exchange Server 2007

- Microsoft Exchange Server 2010

- Microsoft Exchange Server 2013

Exceptions, if any, are noted below. If a service pack or Quick Fix Engineering (QFE) number appears with the product version, behavior changed in that service pack or QFE. The new behavior also applies to subsequent service packs of the product unless otherwise specified. If a product edition appears with the product version, behavior is different in that product edition.

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

<1> Section 2.2.4: Exchange 2007 and Exchange 2010 do not support the **OnlineMeetingSettingsType** complex type.

<2> Section 2.2.4: Exchange 2007 supports the **TimeZoneType** complex type. Exchange 2010 and Exchange 2013 do not support the **TimeZoneType** complexType.

<3> Section 2.2.4.3: Exchange 2007 does not support the **SharingEffectiveRights** element.

<4> Section 2.2.4.4: Exchange 2007 supports the **MeetingTimeZone** element. Exchange 2010 and Exchange 2013 do not support the **MeetingTimeZone** element.

<5> Section 2.2.4.4: Exchange 2007 does not support the **StartTimeZone** element.

<6> Section 2.2.4.4: Exchange 2007 does not support the **EndTimeZone** element.

<7> Section 2.2.4.4: Exchange 2007 and Exchange 2010 do not support the **EnhancedLocation** element.

<8> Section 2.2.4.4: Exchange 2007 and Exchange 2010 do not support the **StartWallClock** element.

<9> Section 2.2.4.4: Exchange 2007 and Exchange 2010 do not support the **EndWallClock** element.

<10> Section 2.2.4.4: Exchange 2007 and Exchange 2010 do not support the **StartTimeZoneId** element.

<11> Section 2.2.4.4: Exchange 2007 and Exchange 2010 do not support the **EndTimeZoneId** element.

<12> Section 2.2.4.4: Exchange 2007 and Exchange 2010 do not support the **IntendedFreeBusyStatus** element.

<13> Section 2.2.4.4: Exchange 2007 and Exchange 2010 do not support the **JoinOnlineMeetingUrl** element.

<14> Section 2.2.4.4: Exchange 2007 and Exchange 2010 do not support the **OnlineMeetingSettings** element.

<15> Section 2.2.4.4: Exchange 2007 and Exchange 2010 do not support the **IsOrganizer** element.

<16> Section 2.2.4.10: Exchange 2007 and Exchange 2010 do not support the **EnhancedLocationType** complex type.

<17> Section 2.2.4.11: Exchange 2007 and Exchange 2010 do not support the **Start** element.

<18> Section 2.2.4.11: Exchange 2007 and Exchange 2010 do not support the **End** element.

<19> Section 2.2.4.11: Exchange 2007 and Exchange 2010 do not support the **Location** element.

<20> Section 2.2.4.11: Exchange 2007 and Exchange 2010 do not support the **Recurrence** element.

<21> Section 2.2.4.11: Exchange 2007 and Exchange 2010 do not support the **CalendarItemType** element.

<22> Section 2.2.4.12: Exchange 2007 and Exchange 2010 do not use the **IsOrganizer** element.

<23> Section 2.2.4.13: Exchange 2007 supports the **MeetingTimeZone** element. Exchange 2010 and Exchange 2013 do not support the **MeetingTimeZone** element.

<24> Section 2.2.4.13: Exchange 2007 does not support the **StartTimeZone** element.

<25> Section 2.2.4.13: Exchange 2007 does not support the **EndTimeZone** element.

<26> Section 2.2.4.13: Exchange 2007 and Exchange 2010 do not support the **EnhancedLocation** element.

<27> Section 2.2.4.13: Exchange 2007 and Exchange 2010 do not support the **StartWallClock** element.

<28> Section 2.2.4.13: Exchange 2007 and Exchange 2010 do not support the **EndWallClock** element.

<29> Section 2.2.4.13: Exchange 2007 and Exchange 2010 do not support the **StartTimeZoneId** element.

<30> Section 2.2.4.13: Exchange 2007 and Exchange 2010 do not support the **EndTimeZoneId** element.

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

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

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

<34> Section 2.2.4.14: Exchange 2007 and Exchange 2010 do not support the **Recurrence** element.

<35> Section 2.2.4.14: Exchange 2007 and Exchange 2010 do not support the **CalendarItemType** element.

<36> Section 2.2.4.14: Exchange 2007 and Exchange 2010 do not support the **ProposedStart** element.

<37> Section 2.2.4.14: Exchange 2007 and Exchange 2010 do not support the **ProposedEnd** element.

<38> Section 2.2.4.14: Exchange 2007 and Exchange 2010 do not support the **EnhancedLocation** element.

<39> Section 2.2.4.19: Exchange 2007 and Exchange 2010 do not support the **OnlineMeetingSettingsType** complex type.

<40> Section 2.2.4.24: Exchange 2007 supports the **TimeZoneType** complex type. Exchange 2010 and Exchange 2013 do not support the **TimeZoneType** complexType.

<41> Section 2.2.5: Exchange 2007 and Exchange 2010 do not support the **LobbyBypassType** simple type.

<42> Section 2.2.5: Exchange 2007 and Exchange 2010 do not support the **OnlineMeetingAccessLevelType** simple type.

<43> Section 2.2.5: Exchange 2007 and Exchange 2010 do not support the **PresentersType** simple type.

<44> Section 2.2.5.6: Exchange 2007 and Exchange 2010 do not support the **LobbyBypassType** simple type.

<45> Section 2.2.5.8: Exchange 2007 and Exchange 2010 do not use the **OnlineMeetingAccessLevelType** simple type.

<46> Section 2.2.5.9: Exchange 2007 and Exchange 2010 do not use the **PresentersType** simple type.

<47> Section 2.2.5.9: Exchange 2007 and Exchange 2010 do not user the Internal enumeration value.

<48> Section 3.1.4.4: Exchange 2007, the initial release version of Exchange 2010, and Exchange 2010 SP1 do not include the **DateTimePrecision** part.

9   Change Tracking

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

10 Index