

[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. |
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| 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. |
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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 [\[RFC2119\]](#). Sections 1.5 and 1.9 are also normative but do not contain those terms. All other sections and examples in this specification are informative.

1.1 Glossary

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

- calendar**
- Calendar folder**
- Calendar object**
- Coordinated Universal Time (UTC)**
- delegate**
- Deleted Items folder**
- endpoint**
- Hypertext Transfer Protocol (HTTP)**
- Hypertext Transfer Protocol over Secure Sockets Layer (HTTPS)**
- Inbox folder**
- instance**
- mailbox**
- meeting request**
- Meeting Workspace**
- message store**
- optional attendee**
- organizer**
- permission**
- recipient**
- recurrence pattern**
- resource**
- Sent Items folder**
- SOAP**
- Uniform Resource Locator (URL)**
- web server**
- Web Services Description Language (WSDL)**
- WSDL message**
- WSDL port type**
- XML**
- XML namespace**
- XML schema**

The following terms are specific to this document:

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

1.2 References

References to Microsoft Open Specification documents 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.rfc-editor.org/rfc/rfc2616.txt>

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

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

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

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

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

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

1.2.2 Informative References

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

[MS-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.

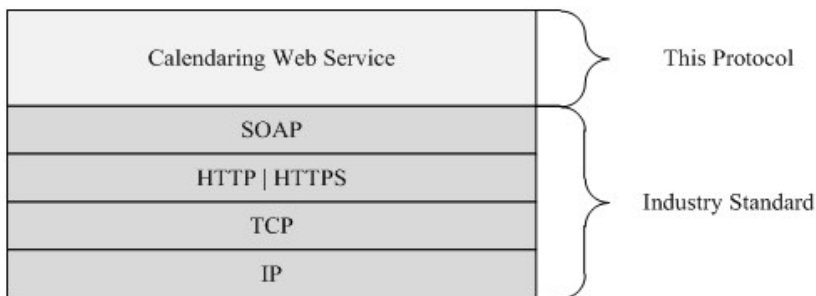


Figure 1: This protocol in relation to other protocols

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 **WellKnownResponseType** complex type, as specified in [\[MS-OXWSCDATA\]](#) section 2.2.4.65.

```
<xs:complexType name="AcceptItemType">
  <xs:complexContent>
    <xs:extension
      base="t:WellKnownResponseType"
    />
  </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 2.2.4.23.

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

```

<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 attendee'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 | <p>Specifies the status of the appointment. Valid values include:</p> <p>0 (zero): the calendar item represents an appointment</p> <p>1: the calendar item on the organizer's calendar represents a meeting</p> <p>3: the meeting request corresponding to the calendar item has been received</p> <p>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.</p> <p>7: the meeting corresponding to the attendee's calendar item has been cancelled</p> <p>This element is not valid if CalendarItemType is contained in a CreateItem request, as specified in section 3.1.4.2.</p> |
| 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:sequence>
  </xs:complexContent>
</xs:complexType>
```

```

    <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 **WellKnownResponseType** complex type, as specified in [\[MS-OXWSCDATA\]](#) section [2.2.4.65](#).

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



```

<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 2.2.4.24) | 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. <22> |

| 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. <23> |

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 (IMS-OXWSCDATA1 section 2.2.5.17) | Represents the intended status for the meeting item that is associated with the meeting request. |
| Start | xs:dateTime (XMLSCHEMA21) | 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 (XMLSCHEMA21) | 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 <24> 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 <25> specify the time zone for the start of the meeting item. |
| EndTimeZone | t:TimeZoneDefinitionType | SHOULD <26> 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. <27> |
| 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. <28> |
| EndWallClock | xs:dateTime | Specifies the ending time of the calendar item. <29> |
| StartTimeZoneId | xs:string | Specifies the start time zone identifier. <30> |
| EndTimeZoneId | xs:string | Specifies the end time zone identifier. <31> |

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. [<32>](#)

End: An element of type **dateTime** that represents the ending time of the calendar item. <33>

Location: An element of type **string**, as defined in [XMLSCHEMA2] section 3.2.1, that represents the location for the calendar item. <34>

Recurrence: An element of type **RecurrenceType**, as defined in section 2.2.4.20, that represents the recurrence for the calendar item. <35>

CalendarItemType: An element of type **string** that represents the type of calendar item. <36>

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

ProposedEnd: An element of type **dateTime** that represents the proposed end time of the calendar item. <38>

EnhancedLocation: An element of type **EnhancedLocationType**, as defined in section 2.2.4.10, that represents additional location information for the calendar item. <39>

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 2.2.4.24) | 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. [<40>](#)

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

```

    <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:sequence>
</xs:complexType>

```

```

    />
    <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 [<41>](#) 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:complexType>

```

```

<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. <42> |
| 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. <43> |

| Simple type | Description |
|---|--|
| PresentersType (section 2.2.5.8) | Controls which participants are given presenter privileges when the meeting is scheduled. <44> |
| 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:restriction>
</xs:simpleType>
```

```

<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** ([IXMLSCHEMA2](#)) 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 **LobbyByPasType** simple type specifies the settings to bypass the online waiting area. [<45>](#)

```

<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. [<46>](#)

```
<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. [<47>](#)

```
<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. <48> |
| 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 | <p>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.</p> <p>The CopyItem ([MS-OXWSCORE] section 3.1.4.1.2.1) element that specifies the XML request MUST contain the following child elements:</p> <ul style="list-style-type: none">ToFolderId ([MS-OXWSCORE] section 2.2.4.15)ItemIds ([MS-OXWSCORE] section 2.2.4.15) <p>For each item being copied that is not a recurring calendar item, the ItemIds element MUST contain an ItemId child element ([MS-OXWSCORE] section 2.2.4.28).</p> <p>For each item being copied that is a recurring calendar item, the ItemIds element SHOULD contain a RecurringMasterItemId child element ([MS-OXWSCORE] section 2.2.4.28).</p> |
| CopyItemSoapOut | <p>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.</p> |

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 | <p>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.</p> <p>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:</p> <ul style="list-style-type: none"> 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) <p>The Items child element of the CreateItem element MUST NOT contain the following elements:</p> <ul style="list-style-type: none"> MeetingMessageType (section 2.2.4.12) MeetingRequestMessageType (section 2.2.4.13) MeetingCancellationMessageType (section 2.2.4.11) <p>All other child elements of the CreateItem element MUST be empty.</p> |
| CreateItemSoapOut | <p>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.</p> |

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 | <p>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.</p> <p>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).</p> <p>For each item being deleted that is not a recurring calendar item, the ItemIds element MUST contain an ItemId child element ([MS-OXWSCORE] section 2.2.4.28).</p> |

| 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 2.2.4.28) or an OccurrenceItemId child element ([MS-OXWSCORE] section 2.2.4.28). |
| 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. [<49>](#)

```
<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 | <p>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.</p> <p>The GetItem element ([MS-OXWSCORE] section 3.1.4.4.2.1) that specifies the XML request MUST contain the following child elements:</p> <p>ItemShape ([MS-OXWSCORE] section 3.1.4.4.3.2)</p> <p>ItemIds ([MS-OXWSCORE] section 3.1.4.4.3.2)</p> <p>For each item being retrieved that is not a recurring calendar item, the ItemIds element MUST contain an ItemId child element ([MS-OXWSCORE] section 2.2.4.28).</p> <p>For each item being retrieved that is a recurring calendar item, the ItemIds element SHOULD contain a RecurringMasterItemId child element ([MS-OXWSCORE] section 2.2.4.28) or an OccurrenceItemId child element ([MS-OXWSCORE] section 2.2.4.28).</p> |
| GetItemSoapOut | <p>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.</p> |

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 |
|------------------------|--|
| | <p>XML request MUST contain the following child elements:</p> <p>ToFolderId ([MS-OXWSCORE] section 2.2.4.15)</p> <p>ItemIds ([MS-OXWSCORE] section 2.2.4.15)</p> <p>For each item being moved that is not a recurring calendar item, the ItemIds element MUST contain an ItemId child element ([MS-OXWSCORE] section 2.2.4.28).</p> <p>For each item being moved that is a recurring calendar item, the ItemIds element SHOULD contain a RecurringMasterItemId child element ([MS-OXWSCORE] section 2.2.4.28).</p> |
| 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 | <p>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.</p> <p>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).</p> <p>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).</p> <p>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).</p> |
| UpdateItemSoapOut | <p>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.</p> |

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 | <p>Occurs if the MessageDisposition property is not set. This error code MUST be returned under the following conditions:</p> <ul style="list-style-type: none"> ▪ When the item that is being created or updated is a MessageType object. ▪ For the CancelCalendarItemType, AcceptItemType, DeclineItemType, or TentativelyAcceptItemType response objects. |
| ErrorInvalidRecipients | <p>Specifies that the recipient collection on your message or the attendee collection on your calendar item is invalid.</p> |
| ErrorCalendarInvalidDayForTimeChangePattern | <p>Specifies that invalid values of Day, WeekDay, and WeekendDay were used to define the time change pattern.</p> |
| ErrorCalendarDurationIsTooLong | <p>Specifies that the item duration of a calendar item exceeds five years.</p> |

3.1.5 Timer Events

None.

3.1.6 Other Local Events

None.

4 Protocol Examples

4.1 Copying a Calendar Item

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

Request:

```
<?xml version="1.0" encoding="utf-8"?>
<soap:Envelope xmlns:soap="http://schemas.xmlsoap.org/soap/envelope/"
  xmlns:t="http://schemas.microsoft.com/exchange/services/2006/types">
  <soap:Header>
    <t:RequestServerVersion Version="Exchange2010" />
  </soap:Header>
  <soap:Body>
    <CopyItem xmlns="http://schemas.microsoft.com/exchange/services/2006/messages">
      <ToFolderId>
        <t:DistinguishedFolderId Id="inbox"/>
      </ToFolderId>
      <ItemIds>
        <t:ItemId Id="AS4AUnV"/>
      </ItemIds>
    </CopyItem>
  </soap:Body>
</soap:Envelope>
```

Response:

```
<?xml version="1.0" encoding="utf-8" ?>
<soap:Envelope xmlns:soap="http://schemas.xmlsoap.org/soap/envelope/"
  xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
  xmlns:xsd="http://www.w3.org/2001/XMLSchema">
  <soap:Header>
    <t:ServerVersionInfo MajorVersion="8" MinorVersion="1" MajorBuildNumber="344"
      MinorBuildNumber="0" Version="Exchange2010"
      xmlns:t="http://schemas.microsoft.com/exchange/services/2006/types" />
  </soap:Header>
  <soap:Body>
    <CopyItemResponse xmlns:m="http://schemas.microsoft.com/exchange/services/2006/messages"
      xmlns:t="http://schemas.microsoft.com/exchange/services/2006/types"
      xmlns="http://schemas.microsoft.com/exchange/services/2006/messages">
      <m:ResponseMessages>
        <m:CopyItemResponseMessage ResponseClass="Success">
          <m:ResponseCode>NoError</m:ResponseCode>
          <m:Items>
            <t:Message>
              <t:ItemID Id="AAMkAd" ChangeKey="FwAAABY" />
            </t:Message>
          </m:Items>
        </m:CopyItemResponseMessage>
      </m:ResponseMessages>
    </CopyItemResponse>
  </soap:Body>
</soap:Envelope>
```

4.2 Creating a Calendar Item

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

Request:

```
<?xml 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 version="1.0" encoding="utf-8"?>
```

```

<soap:Envelope xmlns:soap="http://schemas.xmlsoap.org/soap/envelope/"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:xsd="http://www.w3.org/2001/XMLSchema">
  <soap:Header>
    <t:ServerVersionInfo MajorVersion="8" MinorVersion="1" MajorBuildNumber="344"
MinorBuildNumber="0" Version="Exchange2010"
xmlns:t="http://schemas.microsoft.com/exchange/services/2006/types" />
  </soap:Header>
  <soap:Body>
    <m:CreateItemResponse
xmlns:t="http://schemas.microsoft.com/exchange/services/2006/types"
xmlns:m="http://schemas.microsoft.com/exchange/services/2006/messages">
      <m:ResponseMessages>
        <m:CreateItemResponseMessage ResponseClass="Success">
          <m:ResponseCode>NoError</m:ResponseCode>
          <m:Items>
            <t:CalendarItem>
              <t:ItemId Id="AAMkA=" ChangeKey="DwAAA" />
            </t:CalendarItem>
          </m:Items>
        </m:CreateItemResponseMessage>
      </m:ResponseMessages>
    </m:CreateItemResponse>
  </soap:Body>
</soap:Envelope>

```

4.3 Deleting a Calendar Item

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

Request:

```

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

```

Response:

```

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

```

```

    <soap:Header>
      <t:ServerVersionInfo MajorVersion="8" MinorVersion="1" MajorBuildNumber="344"
MinorBuildNumber="0" Version="Exchange2010"
xmlns:t="http://schemas.microsoft.com/exchange/services/2006/types" />
    </soap:Header>
    <soap:Body>
      <m:DeleteItemResponse
xmlns:t="http://schemas.microsoft.com/exchange/services/2006/types"
xmlns:m="http://schemas.microsoft.com/exchange/services/2006/messages">
        <m:ResponseMessages>
          <m:DeleteItemResponseMessage ResponseClass="Success">
            <m:ResponseCode>NoError</m:ResponseCode>
          </m:DeleteItemResponseMessage>
        </m:ResponseMessages>
      </m:DeleteItemResponse>
    </soap:Body>
  </soap:Envelope>

```

4.4 Moving a Calendar Item

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

Request:

```

<?xml 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:Updates>
        </t:ItemChange>
      </m:ItemChanges>
    </m:UpdateItem>
  </soap:Body>
</soap:Envelope>

```

```

        </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>
<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>

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>
```

```

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

```



```

<!-- 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>

```

```

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

```

```

<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>

```

```

<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:sequence>
  </xs:sequence>

```

```
        <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 2.2.4.4:](#) Exchange 2007 and Exchange 2010 do not support the **OnlineMeetingSettingsType** complex type.

[<2> Section 2.2.4.4:](#) 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 2010 do not return the **ResponseType** element if the recipient (1) has not yet responded to the meeting request.

<23> [Section 2.2.4.12:](#) Exchange 2007 and Exchange 2010 do not use the **IsOrganizer** element.

<24> [Section 2.2.4.13:](#) Exchange 2007 supports the **MeetingTimeZone** element. Exchange 2010 and Exchange 2013 do not support the **MeetingTimeZone** element.

<25> [Section 2.2.4.13:](#) Exchange 2007 does not support the **StartTimeZone** element.

<26> [Section 2.2.4.13:](#) Exchange 2007 does not support the **EndTimeZone** element.

<27> [Section 2.2.4.13:](#) Exchange 2007 and Exchange 2010 do not support the **EnhancedLocation** element.

<28> [Section 2.2.4.13:](#) Exchange 2007 and Exchange 2010 do not support the **StartWallClock** element.

<29> [Section 2.2.4.13:](#) Exchange 2007 and Exchange 2010 do not support the **EndWallClock** element.

<30> [Section 2.2.4.13:](#) Exchange 2007 and Exchange 2010 do not support the **StartTimeZoneId** element.

<31> [Section 2.2.4.13:](#) Exchange 2007 and Exchange 2010 do not support the **EndTimeZoneId** element.

<32> [Section 2.2.4.14:](#) Exchange 2007 and Exchange 2010 do not support the **Start** element.

<33> [Section 2.2.4.14:](#) Exchange 2007 and Exchange 2010 do not support the **End** element.

<34> [Section 2.2.4.14:](#) Exchange 2007 and Exchange 2010 do not support the **Location** element.

<35> [Section 2.2.4.14:](#) Exchange 2007 and Exchange 2010 do not support the **Recurrence** element.

<36> [Section 2.2.4.14](#): Exchange 2007 and Exchange 2010 do not support the **CalendarItemType** element.

<37> [Section 2.2.4.14](#): Exchange 2007 and Exchange 2010 do not support the **ProposedStart** element.

<38> [Section 2.2.4.14](#): Exchange 2007 and Exchange 2010 do not support the **ProposedEnd** element.

<39> [Section 2.2.4.14](#): Exchange 2007 and Exchange 2010 do not support the **EnhancedLocation** element.

<40> [Section 2.2.4.19](#): Exchange 2007 and Exchange 2010 do not support the **OnlineMeetingSettingsType** complex type.

<41> [Section 2.2.4.24](#): Exchange 2007 supports the **TimeZoneType** complex type. Exchange 2010 and Exchange 2013 do not support the **TimeZoneType** complexType.

<42> [Section 2.2.5](#): Exchange 2007 and Exchange 2010 do not support the **LobbyBypassType** simple type.

<43> [Section 2.2.5](#): Exchange 2007 and Exchange 2010 do not support the **OnlineMeetingAccessLevelType** simple type.

<44> [Section 2.2.5](#): Exchange 2007 and Exchange 2010 do not support the **PresentersType** simple type.

<45> [Section 2.2.5.6](#): Exchange 2007 and Exchange 2010 do not support the **LobbyBypassType** simple type.

<46> [Section 2.2.5.8](#): Exchange 2007 and Exchange 2010 do not use the **OnlineMeetingAccessLevelType** simple type.

<47> [Section 2.2.5.9](#): Exchange 2007 and Exchange 2010 do not use the **PresentersType** simple type.

<48> [Section 2.2.5.9](#): Exchange 2007 and Exchange 2010 do not use the Internal enumeration value.

<49> [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.

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