

[MS-OXWSMTGS]: Calendaring Web Service Protocol Specification

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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	2.1.1	No change	No changes to the meaning, language, or formatting of the technical content.
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03/18/2011	2.1.1	No change	No changes to the meaning, language, and formatting of the technical content.

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1 Introduction

This document specifies the Calendaring Web Service protocol.

1.1 Glossary

The following terms are defined in [\[MS-GLOS\]](#):

Coordinated Universal Time (UTC)
Hypertext Transfer Protocol (HTTP)
resource
XML

The following terms are defined in [\[MS-OXGLOS\]](#):

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

The following terms are specific to this document:

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

1.2 References

1.2.1 Normative References

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

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

[MS-OXWSCDATA] Microsoft Corporation, "[Common Web Service Data Types](#)", July 2009.

[MS-OXWSCORE] Microsoft Corporation, "[Core Items Web Service Protocol Specification](#)", July 2009.

[MS-OXWSFOLD] Microsoft Corporation, "[Folders and Folder Permissions Web Service Protocol Specification](#)", July 2009.

[MS-OXWSGTZ] Microsoft Corporation, "[Get Server Time Zone Web Service Protocol Specification](#)", July 2009.

[MS-OXWSMSG] Microsoft Corporation, "[E-Mail Message Types Web Service Protocol Specification](#)", July 2009.

[MS-OXWSSRCH] Microsoft Corporation, "[Mailbox Search Web Service Protocol Specification](#)", July 2009.

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

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

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

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

[XMLNS] World Wide Web Consortium, "Namespaces in XML 1.0 (Third Edition)", W3C Recommendation 8 December 2009, <http://www.w3.org/TR/REC-xml-names/>

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

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

1.2.2 Informative References

[MS-GLOS] Microsoft Corporation, "[Windows Protocols Master Glossary](#)", March 2007.

[MS-OXGLOS] Microsoft Corporation, "[Exchange Server Protocols Master Glossary](#)", April 2008.

1.3 Overview

The Calendaring Web Service protocol specifies the messages for creating, getting, deleting, updating, moving, and copying **meeting** items on the server.

1.4 Relationship to Other Protocols

The Calendaring Web Service Protocol uses SOAP over **HTTP** and SOAP over HTTPS [[RFC2818](#)], as shown in the following figures.

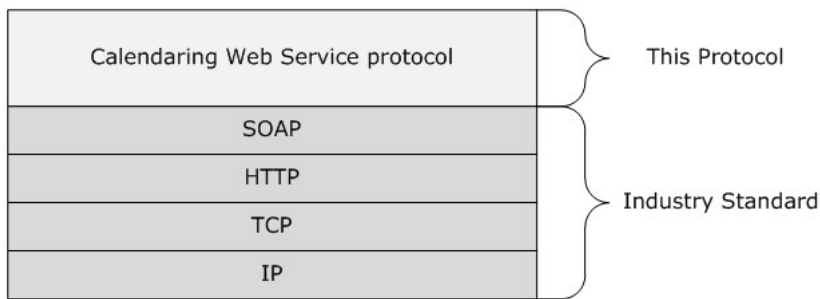


Figure 1: Calendaring Web Service Protocol HTTP stack

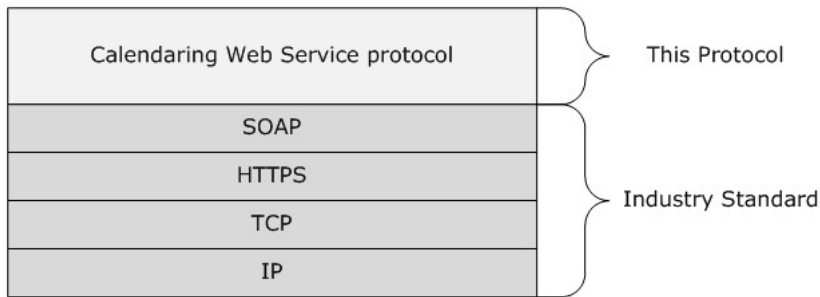


Figure 2: Calendaring Web Service Protocol HTTPS stack

1.5 Prerequisites/Preconditions

None.

1.6 Applicability Statement

This specification is applicable to client programs that create, update, or manage **calendar** items in the server **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 specified in section [2.1](#).
- **Protocol Versions:** This protocol specifies only one **WSDL port type** version.
- **Security and Authentication Methods:** This protocol relies on the **Web server** that is hosting it to perform authentication.
- **Localization:** This protocol includes text strings in various messages. Localization considerations for such strings are specified in section [3.1.4](#).
- Capability Negotiation: None.

1.8 Vendor-Extensible Fields

None.

1.9 Standards Assignments

None.

2 Messages

2.1 Transport

The SOAP version supported by this protocol is SOAP 1.1. For details see [\[SOAP1.1\]](#).

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 **Web Services Description Language (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	[MS-OXWSMTGS]
s	http://www.w3.org/2001/XMLSchema	[XMLSCHEMA2]
targetNamespace	http://schemas.microsoft.com/exchange/services/2006/messages	[MS-OXWSMTGS]
wsdl	http://schemas.xmlsoap.org/wsdl/	[WSDL]
t	http://schemas.microsoft.com/exchange/services/2006/types	[MS-OXWSMTGS]
m	http://schemas.microsoft.com/exchange/services/2006/messages	[MS-OXWSMTGS]
xs	http://www.w3.org/2001/XMLSchema	[XMLSCHEMA2]

2.2.2 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
t:CalendarItemCreateOrDeleteOperationType	Describes how meeting requests and cancellations are handled.
t:CalendarItemTypeType	Identifies the type of a calendar item.
t:CalendarItemUpdateOperationType	Specifies how meeting updates are communicated after a calendar item is updated.

Simple Type	Description
t:MeetingRequestTypeType	Describes the types of meeting requests.
t:ResponseTypeType	Represents the types of recipient responses that are received for a meeting.
t:CalendarPermissionLevelType	Specifies the permission level that a user has on a Calendar folder .
t:CalendarPermissionReadAccessType	Specifies whether a user has permission to read items in a Calendar folder.

2.2.2.1 t:CalendarItemCreateOrDeleteOperationType Simple Type

The **CalendarItemCreateOrDeleteOperationType** simple type enumeration describes how meeting requests and cancellations are handled.

```
<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>
```

Enumeration

The following values are defined by the **CalendarItemCreateOrDeleteOperationType** simple type:

Value	Description
SendToNone	For the CreateItem ([MS-OXWSCORE] section 3.1.4.2) operation this value specifies that the meeting is created but no meeting request is sent to attendees. For the DeleteItem ([MS-OXWSCORE] section 3.1.4.3) operation this value specifies that the meeting is deleted but no meeting cancellation message is sent to attendees.
SendOnlyToAll	For the CreateItem operation this value specifies that the meeting is created and a meeting request is sent to all attendees, but no copy of the meeting request is saved. For the DeleteItem operation this value specifies that the meeting is deleted and a meeting cancellation message is sent to all attendees, but no copy of the meeting cancellation is saved.
SendToAllAndSaveCopy	For the CreateItem operation this value specifies that the meeting is created, a meeting request is sent to all attendees, and a copy of the meeting request is saved in the Sent Items folder . For the DeleteItem operation this value

Value	Description
	specifies that the meeting is deleted, a meeting cancellation message is sent to all attendees, and a copy of the meeting cancellation is saved in the Sent Items folder.

2.2.2.2 t:CalendarItemTypeType Simple Type

The **CalendarItemTypeType** simple type enumeration identifies 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>
```

Enumeration

The following values are defined by the **CalendarItemTypeType** simple type:

Value	Description
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 that contains the recurrence pattern for a calendar item.

2.2.2.3 t:CalendarItemUpdateOperationType Simple Type

The **CalendarItemUpdateOperationType** enumeration 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>

```

Enumeration

The following values are defined by the **CalendarItemUpdateOperationType** simple type:

Value	Description
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 identified by the SavedItemFolderId property.
SendOnlyToChanged	The calendar item is updated and the meeting update is sent only to attendees that are affected by the change in the meeting.
SendToAllAndSaveCopy	The calendar item is updated, the meeting update is sent to all attendees, and a copy is saved in the folder that is identified by the SavedItemFolderId property.
SendToChangedAndSaveCopy	The calendar item is updated, the meeting update is sent to all attendees that are affected by the change in the meeting, and a copy is saved in the folder that is identified by the SavedItemFolderId property.

2.2.2.4 t:MeetingRequestTypeType Simple Type

The **MeetingRequestTypeType** simple type enumeration describes the types of meeting requests.

```

<xs:simpleType name="MeetingRequestTypeType">
  <xs:restriction
    base="xs:string"
  >
    <xs:enumeration
      value="None"
    />
    <xs:enumeration
      value="FullUpdate"
    />
    <xs:enumeration
      value="InformationUpdate"
    />
  </xs:restriction>
</xs:simpleType>

```

```

<xs:enumeration
  value="NewMeetingRequest"
/>
<xs:enumeration
  value="Outdated"
/>
<xs:enumeration
  value="SilentUpdate"
/>
<xs:enumeration
  value="PrincipalWantsCopy"
/>
</xs:restriction>
</xs:simpleType>

```

Enumeration

The following values are defined by the **MeetingRequestType** simple type:

Value	Description
None	Indicates that the meeting request has no meeting type.
FullUpdate	Identifies the meeting request as a full update to an existing request. A full update has updated time and informational content.
InformationUpdate	Identifies the meeting request as only containing updated informational content.
NewMeetingRequest	Identifies the meeting request as a new meeting request.
Outdated	Identifies the meeting request as outdated.
SilentUpdate	Identifies the meeting request as a silent update to an existing meeting.
PrincipalWantsCopy	Specifies whether the manager wants a copy of the meeting request.

2.2.2.5 t:ResponseType Simple Type

The **ResponseType** simple type enumeration represents the types of recipient responses that are received for a meeting.

```

<xs:simpleType name="ResponseType">
  <xs:restriction
    base="xs:string"
  >
    <xs:enumeration
      value="Unknown"
    />
    <xs:enumeration
      value="Organizer"
    />
    <xs:enumeration
      value="Tentative"
    />
    <xs:enumeration
      value="Accept"
    />
  </xs:restriction>
</xs:simpleType>

```

```

    />
    <xs:enumeration
      value="Decline"
    />
    <xs:enumeration
      value="NoResponseReceived"
    />
  </xs:restriction>
</xs:simpleType>

```

Enumeration

The following values are defined by the **ResponseTypeType** simple type:

Value	Description
Unknown	Indicates that the recipient's response to the meeting is unknown.
Organizer	Indicates that the recipient is the meeting organizer .
Tentative	Indicates that the recipient has tentatively accepted the meeting.
Accept	Indicates that the recipient accepted the meeting.
Decline	Indicates that the recipient declined the meeting.
NoResponseReceived	Indicates that the recipient has not yet responded to the meeting request.

2.2.2.6 t:CalendarPermissionLevelType Simple Type

The **CalendarPermissionLevelType** 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>

```

Enumeration

The following values are defined by the **CalendarPermissionLevelType** simple type:

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

2.2.2.7 t:CalendarPermissionReadAccessType Simple Type

The **CalendarPermissionReadAccessType** simple type enumeration specifies whether a user has permission to read 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>
```

Enumeration

The following values are defined by the **CalendarPermissionReadAccessType** simple type:

Value	Description
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.

2.2.3 Complex Types

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

Complex Type	Description
t:AcceptItemType	Specifies an accept response object that is used to reply to a meeting request or calendar item.
t:AttendeeType	Specifies attendees and resources for a meeting.
t:CalendarFolderType	Specifies a folder that contains calendar items.

Complex Type	Description
t:CalendarItemType	Represents a server calendar item.
t:CalendarPermissionSetType	Defines the access that a user has to a Calendar folder.
t:CalendarPermissionType	Specifies the access that a user has to a Calendar folder.
t:CalendarViewType	Represents the settings that are used to return calendar items as they appear in a calendar.
t:CancelCalendarItemType	Specifies a response object used to cancel a meeting.
t:DeclineItemType	Specifies a response object for declining meeting requests or calendar items.
t:MeetingCancellationMessageType	Represents a meeting cancellation.
t:MeetingMessageType	Represents a meeting in the messaging server store.
t:MeetingRequestMessageType	Represents a meeting request in the messaging server store.
t:MeetingResponseMessageType	Represents a meeting response in the Exchange store.
t:NonEmptyArrayOfAttendeesType	Contains a list representing attendees and resources for a meeting.
t:NonEmptyArrayOfDeletedOccurrencesType	Contains a list of deleted occurrences of a recurring calendar item.
t:NonEmptyArrayOfOccurrenceInfoType	Contains a list of modified occurrences of a recurring calendar item.
t:OccurrenceInfoType	Represents a single modified occurrence of a recurring calendar item.
t:RecurrenceType	Contains the recurrence pattern for calendar items and meeting requests.
t:RemoveItemType	Specifies a response object that is used to remove a meeting item when a MeetingCancellation message is received.
t:TentativelyAcceptItemType	Specifies a tentative accept response object that is used to reply to a meeting request or calendar item.
t:TimeChangeType	Represents the date and time when the time changes to and from daylight saving time and standard time.
t:TimeZoneType	Represents the time zone of the location where a meeting is hosted.

2.2.3.1 t:AcceptItemType Complex Type

The **AcceptItemType** type specifies an accept response object that is used to reply to a meeting request or calendar item.

```

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

```

2.2.3.2 t:AttendeeType Complex Type

The **AttendeeType** 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"
    />
    <xs:element name="LastResponseTime"
      type="xs:dateTime"
    />
  </xs:sequence>
</xs:complexType>

```

Child Elements

Element	Type	Description
Mailbox	t:EmailAddressType ([MS-OXWSCDATA] section 2.2.3.25)	Specifies a fully resolved e-mail address.
ResponseType	t:ResponseTypeTypes (section 2.2.2.5)	Specifies the type of response received for a meeting.
LastResponseTime	xs:dateTime ([XMLSCHEMA2])	Specifies the date and time that the latest response was received.

2.2.3.3 t:CalendarFolderType Complex Type

The **CalendarFolderType** type specifies a folder that contains calendar items.

```

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

```

```

    <xs:element name="PermissionSet"
      type="t:PermissionSetType"
      minOccurs="0"
    />
  </xs:sequence>
</xs:extension>
</xs:complexContent>
</xs:complexType>

```

Child Elements

Element	Type	Description
SharingEffectiveRights	t:CalendarPermissionReadAccessType (section 2.2.2.7)	Specifies whether a user has permission to read items in a Calendar folder.
PermissionSet	t:PermissionSetType ([MS-OXWSFOLD] section 2.2.4.12)	Specifies all permissions that are configured for a Calendar folder.

2.2.3.4 t:CalendarItemType Complex Type

The **CalendarItemType** complex type represents a server calendar item.

```

<xs:complexType name="CalendarItemType">
  <xs:complexContent>
    <xs:extension
      base="t:ItemType"
    >
    <xs:sequence>
      <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="Start"
        type="xs:dateTime"
        minOccurs="0"
      />
      <xs:element name="End"
        type="xs:dateTime"
        minOccurs="0"
      />
      <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"
  />

```

```

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

```

Child Elements

Element	Type	Description
UID	xs:string ([XMLSCHEMA2])	Contains the unique identifier for the calendar item.
RecurrenceId	xs:dateTime	Identifies a specific instance of a recurring calendar item.
DateTimeStamp	xs:dateTime	Represents the date and time that the calendar item was created.
Start	xs:dateTime	Represents the start of a duration.
End	xs:dateTime	Represents the end of a duration.

Element	Type	Description
OriginalStart	xs:dateTime	Represents the original start time of a calendar item (only for occurrences/exceptions).
IsAllDayEvent	xs:boolean	Indicates whether a calendar item or meeting request represents an all-day event.
LegacyFreeBusyStatus	t:LegacyFreeBusyType ([MS-OXWSCDATA] section 2.2.2.15)	Represents the free/busy status of the calendar item.
Location	xs:string	Represents the location of a meeting or appointment.
When	xs:string	Provides information about when a calendar or meeting item occurs.
IsMeeting	xs:boolean	Indicates whether the calendar item is a meeting or appointment.
IsCancelled	xs:boolean	Indicates whether a meeting has been canceled.
IsRecurring	xs:boolean	Indicates whether a calendar item is part of a recurring item.
MeetingRequestWasSent	xs:boolean	Indicates whether a meeting request has been sent to requested attendees, including required and optional attendees , and resources.
IsResponseRequested	xs:boolean	Indicates whether a response to an item is requested.
CalendarItemType	t:CalendarItemTypeType	Represents the occurrence type of a calendar item.
MyResponseType	t:ResponseTypeType	Represents the status of the response to a calendar item.
Organizer	t:SingleRecipientType ([MS-OXWSCDATA] section 2.2.3.55)	Represents the organizer of a meeting.

Element	Type	Description
RequiredAttendees	t:NonEmptyArrayOfAttendeesType	Represents attendees that are required to attend a meeting.
OptionalAttendees	t:NonEmptyArrayOfAttendeesType	Contains attendees who are not required to attend a meeting.
Resources	t:NonEmptyArrayOfAttendeesType	Represents a scheduled resource for a meeting.
ConflictingMeetingCount	xs:int	Represents 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 2.2.3.38)	Identifies all calendar items that conflict with a meeting time.
AdjacentMeetings	t:NonEmptyArrayOfAllItemsType	Contains all calendar items that are adjacent to a meeting time.
Duration	xs:string	Represents the duration of a calendar item.
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.
Recurrence	t:RecurrenceType	Contains the recurrence pattern and the recurrence range for calendar items and meeting requests.
FirstOccurrence	t:OccurrenceInfoType	Represents the first occurrence of a recurring calendar item.
LastOccurrence	t:OccurrenceInfoType	Represents the last

Element	Type	Description
		occurrence of a recurring calendar item.
ModifiedOccurrences	t:NonEmptyArrayOfOccurrenceInfoType	Contains recurring calendar item occurrences that have been modified so that they differ from original occurrences (or instances of the recurring master item).
DeletedOccurrences	t:NonEmptyArrayOfDeletedOccurrencesType	Contains deleted occurrences of a recurring calendar item.
MeetingTimeZone	t:TimeZoneType	Represents the time zone of the location where the meeting is hosted. <1>
StartTimeZone	t:TimeZoneDefinitionType ([MS-OXWSGTZ] section 2.2.4.12)	Contains the calendar item start time zone information.
EndTimeZone	t:TimeZoneDefinitionType	Contains the calendar item end time zone information.
ConferenceType	xs:int	Describes the type of conferencing that is performed with a calendar item.
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 a Microsoft NetShow online meeting.

2.2.3.5 t:CalendarPermissionSetType Complex Type

The **CalendarPermissionType** 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>

```

Child Elements

Element	Type	Description
CalendarPermissions	t:ArrayofCalendarPermissionsType ([MS-OXWSCDATA] section 2.2.3.4)	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.

2.2.3.6 t:CalendarPermissionType Complex Type

The **CalendarPermissionType** type specifies the access that a user has to a Calendar folder.

```

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

```

Child Elements

Element	Type	Description
ReadItems	t:CalendarPermissionReadAccessType	Specifies the read access type for a user when accessing a Calendar folder.
CalendarPermissionLevel	t:CalendarPermissionLevelType	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.

2.2.3.7 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.

```
<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>
```

Attributes

Name	Type	Description
StartDate	xs:dateTime	Contains the start of the time span for a Calendar View.
EndDate	xs:dateTime	Contains the end of the time span for a Calendar View.

2.2.3.8 t:CancelCalendarItemType Complex Type

The **CancelCalendarItemType** type specifies a response object used to cancel a meeting.

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

2.2.3.9 t:DeclineItemType Complex Type

The **DeclineItemType** type specifies a response object for declining meeting requests or calendar items.

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

2.2.3.10 t:MeetingCancellationMessageType Complex Type

The **MeetingCancellationMessageType** complex type represents a meeting cancellation.

```
<xs:complexType name="MeetingCancellationMessageType">
  <xs:complexContent>
    <xs:extension
      base="t:MeetingMessageType"
    />
  </xs:complexContent>
</xs:complexType>
```

2.2.3.11 t:MeetingMessageType Complex Type

The **MeetingMessageType** complex type represents a meeting in the messaging server store.

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

```

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

```

Child Elements

Element	Type	Description
AssociatedCalendarItemId	t:ItemIdType (IMS-OXWSCORE section 2.2.3.13)	Represents an item identifier of the corresponding calendar item in a messaging server mailbox .
IsDelegated	xs:boolean	Indicates whether a meeting was handled by an account that has delegate access.
IsOutOfDate	xs:boolean	Indicates whether a meeting message, request, response, or cancellation is out-of-date.
HasBeenProcessed	xs:boolean	Indicates whether a meeting message item has been processed.
ResponseType	t:ResponseTypeType	Represents the type of recipient response that is received for a meeting.
UID	xs:string	Identifies a calendar item.
RecurrenceId	xs:dateTime	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.

2.2.3.12 t:MeetingRequestMessageType Complex Type

The **MeetingRequestMessageType** complex type represents a meeting request in the messaging server store.

```

<xs:complexType name="MeetingRequestMessageType">
  <xs:complexContent>
    <xs:extension
      base="t:MeetingMessageType"
    >
      <xs:sequence>
        <xs:element name="MeetingRequestType"
          type="t:MeetingRequestTypeType"
          minOccurs="0"
        />
        <xs:element name="IntendedFreeBusyStatus"
          type="t:LegacyFreeBusyType"
          minOccurs="0"
        />
        <xs:element name="Start"
          type="xs:dateTime"
          minOccurs="0"
        />
        <xs:element name="End"
          type="xs:dateTime"
          minOccurs="0"
        />
        <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"
  />
<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"
  />

```

```

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

```


Child Elements

Element	Type	Description
MeetingRequestType	t:MeetingRequestTypeType	Describes the types of meeting requests.
IntendedFreeBusyStatus	t:LegacyFreeBusyType ([MS-OXWSCDATA] section 2.2.2.15)	Represents the intended status for the calendar item that is associated with the meeting request.
Start	xs:dateTime	Represents the start of the meeting.
End	xs:dateTime	Specifies the end of the duration for a single occurrence of a meeting request.
OriginalStart	xs:dateTime	Specifies the original start time for the calendar item (only for occurrences/exceptions).
IsAllDayEvent	xs:boolean	Specifies whether the calendar item is an all-day event.
LegacyFreeBusyStatus	t:LegacyFreeBusyType	Represents the free/busy status of the calendar item.
Location	xs:string	Represents the location of a meeting or appointment.
When	xs:string	Provides information about when a meeting or appointment occurs.
IsMeeting	xs:boolean	Indicates whether the calendar item is a meeting or an appointment.
IsCancelled	xs:boolean	Indicates whether a meeting has been cancelled.
IsRecurring	xs:boolean	Indicates whether a calendar item, meeting request is part of a recurring item.
MeetingRequestWasSent	xs:boolean	Indicates whether a meeting request has been sent to requested attendees.

Element	Type	Description
CalendarItemType	t:CalendarItemTypeType	Represents the occurrence type of a calendar item.
MyResponseType	t:ResponseTypeType	Identifies the type of the response to the meeting request (sent for the organizer's calendar item).
Organizer	t:SingleRecipientType ([MS-OXWSCDATA] section 2.2.3.55)	Represents the organizer of a meeting.
RequiredAttendees	t:NonEmptyArrayOfAttendeesType	Represents attendees that are required to attend a meeting.
OptionalAttendees	t:NonEmptyArrayOfAttendeesType	Represents attendees who are not required to attend a meeting.
Resources	t:NonEmptyArrayOfAttendeesType	Represents a scheduled resource for a meeting.
ConflictingMeetingCount	xs:int	Represents the number of meetings that conflict with the calendar item.
AdjacentMeetingCount	xs:int	Represents the total number of calendar items that are adjacent to a meeting time.
ConflictingMeetings	t:NonEmptyArrayOfAllItemsType ([MS-OXWSCDATA] section 2.2.3.38)	Identifies all calendar items that conflict with a meeting time.
AdjacentMeetings	t:NonEmptyArrayOfAllItemsType	Identifies all calendar items that are adjacent to a meeting time.
Duration	xs:string	Represents the duration of a calendar item.
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

Element	Type	Description
		the appointment.
Recurrence	t:RecurrenceType	Contains the recurrence pattern for calendar items and meeting requests.
FirstOccurrence	t:OccurrenceInfoType	Represents the first occurrence of a recurring calendar item.
LastOccurrence	t:OccurrenceInfoType	Represents the last occurrence of a recurring calendar item.
ModifiedOccurrences	t:NonEmptyArrayOfOccurrenceInfoType	Contains an array of recurring calendar item occurrences that have been modified so that they are different from the original instances of the recurrence master item.
DeletedOccurrences	t:NonEmptyArrayOfDeletedOccurrencesType	Contains an array of deleted occurrences of a recurring calendar item.
MeetingTimeZone	t:TimeZoneType	Represents the time zone of the location where the meeting is hosted. <2>
StartTimeZone	t:TimeZoneDefinitionType ([MS-OXWSGTZ] section 2.2.4.12)	Specifies the time zone for the start of a calendar item.
EndTimeZone	t:TimeZoneDefinitionType	Specifies the time zone for the end of a calendar item.
ConferenceType	xs:int	Describes the type of conferencing that is performed with a calendar item.
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

Element	Type	Description
		calendar item.
NetShowUrl	xs:string	Specifies the URL for an online meeting.

2.2.3.13 t:MeetingResponseMessageType Complex Type

The **MeetingResponseMessageType** complex type represents a meeting response in the Exchange store.

```
<xs:complexType name="MeetingResponseMessageType">
  <xs:complexContent>
    <xs:extension
      base="t:MeetingMessageType"
    />
  </xs:complexContent>
</xs:complexType>
```

2.2.3.14 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>
```

Child Elements

Element	Type	Description
Attendee	t:AttendeeType	Represents attendees and resources for a meeting.

2.2.3.15 t:NonEmptyArrayOfDeletedOccurrencesType Complex Type

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

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

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

Child Elements

Element	Type	Description
DeletedOccurrence	t:DeletedOccurrenceInfoType ([MS-OXWSCDATA] section 2.2.3.20)	Represents a deleted occurrence of a recurring calendar item.

2.2.3.16 t:NonEmptyArrayOfOccurrenceInfoType Complex Type

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

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

Child Elements

Element	Type	Description
Occurrence	t:OccurrenceInfoType	Represents a single modified occurrence of a recurring calendar item.

2.2.3.17 t:OccurrenceInfoType Complex Type

The **OccurrenceInfoType** class represents a single modified occurrence of a recurring calendar item.

```
<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>
```

Child Elements

Element	Type	Description
ItemId	t:ItemIdType ([MS-OXWSCORE] section 2.2.3.13)	Contains the identifier of a modified occurrence of a recurring calendar item.
Start	xs:dateTime	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.

2.2.3.18 t:RecurrenceType Complex Type

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

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

The t:RecurrencePatternTypes group specifies the recurrence pattern for calendar items and meeting requests.

The t:RecurrenceRangeTypes group specifies the recurrence patterns with numbered recurrences, non-ending recurrence patterns, and recurrence patterns with a set start and end date.

2.2.3.19 t:RemoveItemType Complex Type

The **RemoveItemType** type specifies a response object that is used to remove a meeting item when a MeetingCancellation message element is received.

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

2.2.3.20 t:TentativelyAcceptItemType Complex Type

The **TentativelyAcceptItemType** type specifies a tentative accept response object that is used to reply to a meeting request or calendar item.

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

2.2.3.21 t:TimeChangeType Complex Type

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

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

Child Elements

Element	Type	Description
Offset	xs:duration ([XMLSCHEMA2])	Contains the offset from the BaseOffset.
Time	xs:time ([XMLSCHEMA2])	Contains the time when the time changes between standard time and daylight saving time.

Attributes

Name	Type	Description
TimeZoneName	xs:string ([XMLSCHEMA2])	Contains a value that represents a time zone name.

2.2.3.22 t:TimeZoneType Complex Type

The **TimeZoneType** complex type represents 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>
```

Child Elements

Element	Type	Description
BaseOffset	xs:duration	Contains the hourly offset from Coordinated Universal Time (UTC) for the current time zone.
Standard	t:TimeChangeType	Represents the date and time when the time changes from daylight saving time to standard time.
Daylight	t:TimeChangeType	Represents the date and time when the time changes from standard time to daylight saving time.

2.2.4 Elements

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

2.2.5 Attributes

This specification does not define any common XML Schema attribute definitions.

2.2.6 Groups

This section does not define any common XML Schema group definitions.

2.2.7 Attribute Groups

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

2.2.8 Messages

This specification does not define any common XML schema message 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.

Operation	Description
GetItem ([MS-OXWSCORE] section 3.1.4.4)	Defines a request to get an item from a mailbox in the server.
DeleteItem ([MS-OXWSCORE] section 3.1.4.3)	Defines a request to delete an item from a mailbox in the server.
UpdateItem ([MS-OXWSCORE] section 3.1.4.7)	Defines a request to update an item in a mailbox.
MoveItem ([MS-OXWSCORE] section 3.1.4.5)	Defines a request to move an item in the server.
CopyItem ([MS-OXWSCORE] section 3.1.4.1)	Defines a request to copy an item in a mailbox in the server.
CreateItem ([MS-OXWSCORE] section 3.1.4.2)	Defines a request to create an item in the server.

3.1.1 Abstract Data Model

This protocol is a stateless protocol.

3.1.2 Timers

None.

3.1.3 Initialization

None.

3.1.4 Message Processing Events and Sequencing

This protocol includes the operations listed in the following table.

Operation	Description
GetItem	Gets items in the server.
DeleteItem	Deletes items in the server.
UpdateItem	Updates items in the server.
MoveItem	Moves items in the server.

Operation	Description
CopyItem	Copies items in the server.
CreateItem	Creates items in the server.

3.1.4.1 GetItem

This protocol uses the **GetItem** operation specified in [\[MS-OXWSCORE\]](#) section 3.1.4.4 to get calendar item elements.

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

Request

Message Format	Description
tns:GetItemSoapIn ([MS-OXWSCORE] section 3.1.4.4.3.1)	Specifies the SOAP message that defines the calendar item to get. The Items ([MS-OXWSCDATA] section 2.2.3.38) child element of the GetItem ([MS-OXWSCORE] section 3.1.4.4.2.1) child element that specifies the XML request MUST contain the following elements: t:ItemResponseShapeType ([MS-OXWSCDATA] section 2.2.3.35), t:ItemIdType ([MS-OXWSCORE] section 2.2.3.13). If the calendar item is recurring, then the XML request SHOULD contain the following elements: t:OccurrenceItemIdType ([MS-OXWSCORE] section 2.2.3.11), and t:RecurringMasterItemIdType ([MS-OXWSCORE] section 2.2.3.12). All other elements MUST be empty.

Response

Message Format	Description
tns:GetItemSoapOut ([MS-OXWSCORE] section 3.1.4.4.3.2)	Specifies the SOAP message returned by the server in response. The server returns a t:ItemResponseShapeType ([MS-OXWSCDATA] section 2.2.3.35) element that contains properties associated with the distribution list item.

3.1.4.2 DeleteItem

This protocol uses the **DeleteItem** operation specified in [\[MS-OXWSCORE\]](#) section 3.1.4.3 to delete calendar item elements.

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

Request

Message Format	Description
tns>DeleteItemSoapIn	Specifies the SOAP message that defines the calendar item to delete. The

Message Format	Description
[MS-OXWSCORE] section 3.1.4.3.3.1)	Items ([MS-OXWSCDATA] section 2.2.3.38) child element of the DeleteItem ([MS-OXWSCORE] section 3.1.4.3.2.1) child element that specifies the XML request MUST contain one or more t:ItemType ([MS-OXWSCORE] section 2.2.3.13) elements. If the calendar item is for a recurring meeting , t:OccurrenceItemType ([MS-OXWSCORE] section 2.2.3.11) and t:RecurringMasterItemType ([MS-OXWSCORE] section 2.2.3.12) elements can be included. All other elements MUST be empty.

Response

Message Format	Description
tns>DeleteItemSoapOut ([MS-OXWSCORE] section 3.1.4.3.3.2)	Specifies the SOAP message returned by the server in response.

3.1.4.3 UpdateItem

This protocol uses the **UpdateItem** operation specified in [\[MS-OXWSCORE\]](#) section 3.1.4.7 to update calendar item elements.

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

Request

Message Format	Description
tns:UpdateItemSoapIn ([MS-OXWSCORE] section 3.1.4.7.4.1)	Specifies the SOAP message that defines the calendar item to update. The Items ([MS-OXWSCDATA] section 2.2.3.38) child element of the UpdateItem ([MS-OXWSCORE] section 3.1.4.7) child element that specifies the XML request MUST contain one of the following elements: CalendarItemType (section 2.2.3.4), MeetingMessageType (section 2.2.3.11), MeetingRequestMessageType (section 2.2.3.12), MeetingCancellationMessageType (section 2.2.3.10). All other elements MUST be empty.

Response

Message Format	Description
tns:UpdateItemSoapOut ([MS-OXWSCORE] section 3.1.4.7.4.2)	Specifies the SOAP message returned by the server in response.

3.1.4.4 MoveItem

This protocol uses the **MoveItem** operation specified in [\[MS-OXWSCORE\]](#) section 3.1.4.5 to move calendar item elements.

```
<wsdl:operation name="MoveItem">
```

```

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

```

Request

Message Format	Description
tns:MoveItemSoapIn ([MS-OXWSCORE] section 3.1.4.5.3.1)	Specifies the SOAP message that defines the calendar item to move. The Items ([MS-OXWSCDATA] section 2.2.3.38) child element of the MoveItem ([MS-OXWSCORE] section 3.1.4.5.2.1) child element that specifies the XML request MUST contain the following elements: t:TargetFolderIdType ([MS-OXWSFOLD] section 2.2.4.14), and t:ItemIdType ([MS-OXWSCORE] section 2.2.3.13). If the calendar item is recurring, then the XML request SHOULD contain the following elements: t:OccurrenceItemIdType ([MS-OXWSCORE] section 2.2.3.11), and t:RecurringMasterItemIdType ([MS-OXWSCORE] section 2.2.3.12). All other elements MUST be empty.

Response

Message Format	Description
tns:MoveItemSoapOut ([MS-OXWSCORE] section 3.1.4.5.3.2)	Specifies the SOAP message returned by the server in response.

3.1.4.5 CopyItem

This protocol uses the **CopyItem** operation specified in [\[MS-OXWSCORE\]](#) section 3.1.4.1 to copy calendar item elements.

```

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

```

Request

Message Format	Description
tns:CopyItemSoapIn ([MS-OXWSCORE] section 3.1.4.1.3.1)	Specifies the SOAP message that defines the calendar item to copy. The Items ([MS-OXWSCDATA] section 2.2.3.38) child element of the CopyItem ([MS-OXWSCORE] section 3.1.4.1.2.1) child element that specifies the XML request MUST contain the following elements: t:TargetFolderIdType ([MS-OXWSFOLD] section 2.2.4.14), and t:ItemIdType ([MS-OXWSCORE] section 2.2.3.13). If the calendar item is recurring, then the XML request SHOULD contain the following elements: t:OccurrenceItemIdType ([MS-OXWSCORE] section 2.2.3.11), and t:RecurringMasterItemIdType ([MS-OXWSCORE] section 2.2.3.12). All other elements MUST be empty.

Response

Message Format	Description
tns:CopyItemSoapOut ([MS-OXWSCORE] section 3.1.4.1.3.2)	Specifies the SOAP message returned by the server in response.

3.1.4.6 CreateItem

This protocol uses the **CreateItem** operation specified in [\[MS-OXWSCORE\]](#) section 3.1.4.2 to create calendar or meeting item elements. Several calendar related items can be generated using this operation: Calendar item, meeting message, meeting request message, meeting cancellation message, cancel calendar item, remove calendar item, or meeting accept/decline message.

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

Request

Message Format	Description
tns:CreateItemSoapIn ([MS-OXWSCORE] section 3.1.4.2.3.1)	Specifies the SOAP message that defines the calendar item to create. The Items ([MS-OXWSCDATA] section 2.2.3.38) child element of the CreateItem ([MS-OXWSCORE] section 3.1.4.2.2.1) child element that specifies the XML request MUST contain one of the following elements: CalendarItemType (section 2.2.3.4), MeetingMessageType (section 2.2.3.11), MeetingRequestMessageType (section 2.2.3.12), MeetingCancellationMessageType (section 2.2.3.10), AcceptItemType (section 2.2.3.1), TentativelyAcceptItemType (section 2.2.3.20), DeclineItemType (section 2.2.3.9), CancelCalendarItemType (section 2.2.3.8), or RemoveItemType (section 2.2.3.19). All other elements MUST be empty.

Response

Message Format	Description
tns:CreateItemSoapOut ([MS-OXWSCORE] section 3.1.4.2.3.2)	Specifies the SOAP message returned by the server in response.

3.1.5 Timer Events

None.

3.1.6 Other Local Events

None.

3.2 Client 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.

3.2.1 Client Abstract Data Model

None.

3.2.2 Client Timers

None.

3.2.3 Client Initialization

None.

3.2.4 Client Message Processing Events and Sequencing

None.

3.2.5 Client Timer Events

None.

3.2.6 Client Other Local Events

None.

4 Protocol Examples

None.

5 Security

5.1 Security Considerations for Implementors

This protocol does not use additional security mechanisms.

5.2 Index of Security Parameters

None.

6 Appendix A: Full WSDL

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

WSDL or schema name	Prefix	Section
MS-OXWSMTGS.wsdl	wsdl:	6.1
MS-OXWSMTGS-types.xsd	t:	6.2
MS-OXWSMTGS-messages.xsd	m:	6.3

These files need 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-OXWSGTRM-types.xsd or MS-OXWSGTRM-messages.xsd schemas need to be placed in the common folder with these files.

For ease of implementation, the full WSDL and schemas are provided in the following sections.

6.1 WSDL

This section contains the content of the MS-OXWSMTGS.wsdl file and information about additional files that this WSDL file requires to operate correctly.

For MS-OXWSMTGS.wsdl to operate correctly, the file shown in the following table needs to be present in the folder that contains the WSDL, types schema, and messages schema files for this protocol.

Defining specification	File name
[MS-OXWSCORE] section 6.3	MS-OXWSCORE-messages.xsd

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

```

targetNamespace="http://schemas.microsoft.com/exchange/services/2006/types"
xmlns="http://schemas.microsoft.com/exchange/services/2006/types"
xmlns:tns="http://schemas.microsoft.com/exchange/services/2006/types"
xmlns:xs="http://www.w3.org/2001/XMLSchema"
  <xs:import namespace="http://www.w3.org/XML/1998/namespace"/>
</xs:schema>
</wsdl:types>
<wsdl:portType name="ExchangeServicePortType">
  <wsdl:operation name="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:body parts="request" use="literal"/>
    </wsdl:input>
    <wsdl:output>
      <soap:body parts="GetItemResult" use="literal"/>
      <soap:header message="tns:GetItemSoapOut" part="ServerVersion"
use="literal"/>
    </wsdl:output>
  </wsdl:operation>
  <wsdl:operation name="CreateItem">

```

```

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

```

```

        use="literal"/>
        <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: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: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:definitions>

```

6.2 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.

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

Defining specification	File name
[MS-OXWSMSG] , section 6.1	MS-OXWSMSG-types.xsd
[MS-OXWSGTZ] section 6.3	MS-OXWSGTZ-types.xsd
[MS-OXWSSRCH] section 6.3	MS-OXWSSRCH-types.xsd

Defining specification	File name
[MS-OXWSCDATA] section 6.3	MS-OXWSCDATA-types.xsd

MS-OXWSMTGS-types.xsd file:

```

<?xml version="1.0" encoding="utf-8"?>
<xs:schema xmlns:t="http://schemas.microsoft.com/exchange/services/2006/types"
xmlns:tns="http://schemas.microsoft.com/exchange/services/2006/types"
xmlns:xs="http://www.w3.org/2001/XMLSchema"
targetNamespace="http://schemas.microsoft.com/exchange/services/2006/types"
elementFormDefault="qualified" version="Exchange2010" id="types">
  <xs:import namespace="http://www.w3.org/XML/1998/namespace"/>
  <xs:include schemaLocation="MS-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:complexType name="AcceptItemType">
    <xs:complexContent>
      <xs:extension base="t:WellKnownResponseType"/>
    </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:ResponseType" 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: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:simpleType>
<xs:complexType name="CalendarItemType">
  <xs:complexContent>
    <xs:extension base="t:ItemType">
      <xs:sequence>
        <!-- iCalendar properties -->
        <xs:element name="UID" type="xs:string" minOccurs="0"/>
        <xs:element name="RecurrenceId" type="xs:dateTime" minOccurs="0"/>
        <xs:element name="DateTimeStamp" type="xs:dateTime" minOccurs="0"/>
        <!-- Single and Occurrence only -->
        <xs:element name="Start" type="xs:dateTime" minOccurs="0"/>
        <xs:element name="End" type="xs:dateTime" minOccurs="0"/>
        <!-- Occurrence only -->
        <xs:element name="OriginalStart" type="xs:dateTime" minOccurs="0"/>
        <xs:element name="IsAllDayEvent" type="xs:boolean" minOccurs="0"/>
        <xs:element name="LegacyFreeBusyStatus" type="t:LegacyFreeBusyType"
minOccurs="0"/>
        <xs:element name="Location" type="xs:string" minOccurs="0"/>
        <xs:element name="When" type="xs:string" minOccurs="0"/>
        <xs:element name="IsMeeting" type="xs:boolean" minOccurs="0"/>
        <xs:element name="IsCancelled" type="xs:boolean" minOccurs="0"/>
        <xs:element name="IsRecurring" type="xs:boolean" minOccurs="0"/>
        <xs:element name="MeetingRequestWasSent" type="xs:boolean"
minOccurs="0"/>
        <xs:element name="IsResponseRequested" type="xs:boolean"
minOccurs="0"/>
        <xs:element name="CalendarItemType" type="t:CalendarItemTypeType"
minOccurs="0"/>
        <xs:element name="MyResponseType" type="t:ResponseTypeType"
minOccurs="0"/>
        <xs:element name="Organizer" type="t:SingleRecipientType"
minOccurs="0"/>
        <xs:element name="RequiredAttendees"
type="t:NonEmptyArrayOfAttendeesType" minOccurs="0"/>
        <xs:element name="OptionalAttendees"
type="t:NonEmptyArrayOfAttendeesType" minOccurs="0"/>
        <xs:element name="Resources" type="t:NonEmptyArrayOfAttendeesType"
minOccurs="0"/>
        <!-- Conflicting and adjacent meetings -->
        <xs:element name="ConflictingMeetingCount" type="xs:int"
minOccurs="0"/>
        <xs:element name="AdjacentMeetingCount" type="xs:int"
minOccurs="0"/>
        <xs:element name="ConflictingMeetings"
type="t:NonEmptyArrayOfAllItemsType" minOccurs="0"/>
        <xs:element name="AdjacentMeetings"
type="t:NonEmptyArrayOfAllItemsType" minOccurs="0"/>
        <xs:element name="Duration" type="xs:string" minOccurs="0"/>
        <xs:element name="TimeZone" type="xs:string" minOccurs="0"/>
        <xs:element name="AppointmentReplyTime" type="xs:dateTime"
minOccurs="0"/>
        <xs:element name="AppointmentSequenceNumber" type="xs:int"
minOccurs="0"/>
        <xs:element name="AppointmentState" type="xs:int" minOccurs="0"/>
        <!-- Recurrence specific data, only valid if CalendarItemType is
RecurringMaster -->
        <xs:element name="Recurrence" type="t:RecurrenceType"
minOccurs="0"/>
        <xs:element name="FirstOccurrence" type="t:OccurrenceInfoType"
minOccurs="0"/>

```



```

        <xs:element name="LastOccurrence" type="t:OccurrenceInfoType"
minOccurs="0"/>
        <xs:element name="ModifiedOccurrences"
type="t:NonEmptyArrayOfOccurrenceInfoType" minOccurs="0"/>
        <xs:element name="DeletedOccurrences"
type="t:NonEmptyArrayOfDeletedOccurrencesType" minOccurs="0"/>
        <xs:element name="MeetingTimeZone" type="t:TimeZoneType"
minOccurs="0"/>
        <xs:element name="StartTimeZone" type="t:TimeZoneDefinitionType"
minOccurs="0"/>
        <xs:element name="EndTimeZone" type="t:TimeZoneDefinitionType"
minOccurs="0"/>
        <xs:element name="ConferenceType" type="xs:int" minOccurs="0"/>
        <xs:element name="AllowNewTimeProposal" type="xs:boolean"
minOccurs="0"/>
        <xs:element name="IsOnlineMeeting" type="xs:boolean" minOccurs="0"/>
        <xs:element name="MeetingWorkspaceUrl" type="xs:string"
minOccurs="0"/>
        <xs:element name="NetShowUrl" type="xs:string" minOccurs="0"/>
    </xs: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:restriction>

```

```

        <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="MeetingCancellationMessageType">
    <xs:complexContent>
        <xs:extension base="t:MeetingMessageType"/>
    </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:sequence>
        </xs:extension>
    </xs:complexContent>
</xs:complexType>
<xs:complexType name="MeetingRequestMessageType">
    <xs:complexContent>
        <xs:extension base="t:MeetingMessageType">
            <xs:sequence>
                <!-- MeetingRequest properties -->
            </xs:sequence>
        </xs:extension>
    </xs:complexContent>
</xs:complexType>

```

```

        <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"/>

```

```

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:sequence>
</xs:extension>
</xs:complexContent>
</xs:complexType>
<xs:complexType name="MeetingResponseMessageType">
  <xs:complexContent>
    <xs:extension base="t:MeetingMessageType"/>
  </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="TentativelyAcceptItemType">
        <xs:complexContent>
            <xs:extension base="t:WellKnownResponseObjectType"/>
        </xs:complexContent>
    </xs:complexType>
    <xs:complexType name="TimeChangeType">
        <xs:sequence>
            <xs:element name="Offset" type="xs:duration"/>
            <xs:group ref="t:TimeChangePatternTypes" minOccurs="0"/>
            <xs:element name="Time" type="xs:time"/>
        </xs:sequence>
        <xs:attribute name="TimeZoneName" type="xs:string" use="optional"/>
    </xs:complexType>
    <xs:complexType name="TimeZoneType">
        <xs:sequence minOccurs="0">
            <xs:element name="BaseOffset" type="xs:duration"/>
            <xs:sequence minOccurs="0">
                <xs:element name="Standard" type="t:TimeChangeType"/>
                <xs:element name="Daylight" type="t:TimeChangeType"/>
            </xs:sequence>
        </xs:sequence>
        <xs:attribute name="TimeZoneName" type="xs:string" use="optional"/>
    </xs:complexType>
</xs:schema>

```

6.3 Messages Schema

No messages schema file is specified for this protocol.

7 Appendix B: 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 2010

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 2.2.3.4:](#) This child element is obsolete for Exchange 2010.

[<2> Section 2.2.3.12:](#) This child element is obsolete for Exchange 2010.

8 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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