

# [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 | 2.2              | Minor          | Clarified the meaning 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 [\[MS-OXGLOS\]](#):

**appointment**  
**attendee**  
**calendar**  
**Calendar folder**  
**Calendar object**  
**conflict**  
**Coordinated Universal Time (UTC)**  
**delegate**  
**distribution list**  
**exception**  
**folder**  
**free/busy**  
**identifier**  
**instance**  
**mailbox**  
**meeting**  
**meeting request**  
**Meeting Workspace**  
**message**  
**optional attendee**  
**organizer**  
**permissions**  
**property**  
**recipient**  
**recurrence pattern**  
**resource**  
**Sent Items folder**  
**SOAP body**  
**SOAP fault**  
**SOAP header**  
**SOAP message**  
**store**  
**tentative**  
**Uniform Resource Locator (URL)**  
**Web server**  
**Web Services Description Language (WSDL)**  
**WSDL message**  
**WSDL port type**  
**XML**  
**XML namespace**  
**XML schema**

The following terms are specific to this document:

**MAY, SHOULD, MUST, SHOULD NOT, MUST NOT:** These terms (in all caps) are used as 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](mailto: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", W3C Note, May 2000, <http://www.w3.org/TR/2000/NOTE-SOAP-20000508/>

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

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

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

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

### 1.2.2 Informative References

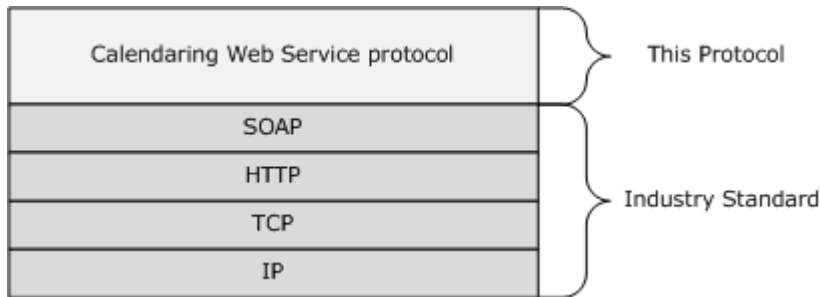
[MS-OXGLOS] Microsoft Corporation, "[Exchange Server Protocols Master Glossary](#)", April 2008.

## 1.3 Overview

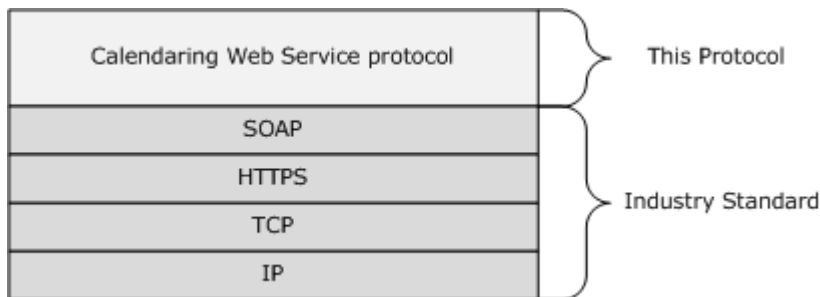
The Calendaring Web Service protocol specifies the messages for creating, getting, deleting, updating, moving, and copying **meeting** items on the server.

## 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            | <a href="http://schemas.xmlsoap.org/wsdl/soap/">http://schemas.xmlsoap.org/wsdl/soap/</a>   | <a href="#">[SOAP1.1]</a>    |
| tns             | <a href="http://schemas.microsoft.com/exchange/services/2006/messages">http://schemas.microsoft.com/exchange/services/2006/messages</a> | [MS-OXWSMTGS]                |
| s               | <a href="http://www.w3.org/2001/XMLSchema">http://www.w3.org/2001/XMLSchema</a>   | <a href="#">[XMLSCHEMA2]</a> |
| targetNamespace | <a href="http://schemas.microsoft.com/exchange/services/2006/messages">http://schemas.microsoft.com/exchange/services/2006/messages</a> | [MS-OXWSMTGS]                |
| wsdl            | <a href="http://schemas.xmlsoap.org/wsdl/">http://schemas.xmlsoap.org/wsdl/</a>   | <a href="#">[WSDL]</a>       |
| t               | <a href="http://schemas.microsoft.com/exchange/services/2006/types">http://schemas.microsoft.com/exchange/services/2006/types</a>       | [MS-OXWSMTGS]                |
| m               | <a href="http://schemas.microsoft.com/exchange/services/2006/messages">http://schemas.microsoft.com/exchange/services/2006/messages</a> | [MS-OXWSMTGS]                |
| xs              | <a href="http://www.w3.org/2001/XMLSchema">http://www.w3.org/2001/XMLSchema</a>   | <a href="#">[XMLSCHEMA2]</a> |

#### 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  |
|---|--|
| <a href="#">t:CalendarItemCreateOrDeleteOperationType</a> | Describes how <b>meeting requests</b> and cancellations are handled.             |
| <a href="#">t:CalendarItemTypeType</a>                    | Identifies the type of a calendar item.  |
| <a href="#">t:CalendarItemUpdateOperationType</a>         | Specifies how meeting updates are communicated after a calendar item is updated. |

| Simple Type  | Description   |
|--|---|
| <a href="#">t:MeetingRequestTypeType</a>           | Describes the types of meeting requests.  |
| <a href="#">t:ResponseTypeType</a>                 | Represents the types of <b>recipient</b> responses that are received for a meeting. |
| <a href="#">t:CalendarPermissionLevelType</a>      | Specifies the <b>permission</b> level that a user has on a <b>Calendar folder</b> . |
| <a href="#">t:CalendarPermissionReadAccessType</a> | 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 <a href="#">CreateItem</a> operation this value specifies that the meeting is created but no meeting request is sent to <b>attendees</b> . For the <a href="#">DeleteItem</a> operation this value specifies that the meeting is deleted but no meeting cancellation <b>message</b> is sent to attendees.   |
| SendOnlyToAll        | For the <b>CreateItem</b> 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 <b>DeleteItem</b> 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 <b>CreateItem</b> 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 <b>Sent Items folder</b> . For the <b>DeleteItem</b> 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 <b>exception</b> to a recurring calendar item.                           |
| RecurringMaster | Specifies that the item is the master that contains the <b>recurrence pattern</b> 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: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 <b>folder</b> that is identified by the SavedItemFolderId <b>property</b> .                                  |
| 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: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 **MeetingRequestTypeType** 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:ResponseTypeType Simple Type

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

```

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

```

```

    />
    <xs:enumeration
      value="Accept"
    />
    <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 <b>organizer</b> .             |
| Tentative          | Indicates that the recipient has <b>tentatively</b> 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:restriction>
</xs:simpleType>

```

```

<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 <b>free/busy</b> time within the calendar and the subject and location of <b>appointments</b> .                             |
| 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.                |

| Value            | Description   |
|------------------|---|
| 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.



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

| Complex Type | Description        |
|--------------|--------------------|
|              | 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          | <a href="#">t:EmailAddressType</a> | Specifies a fully resolved e-mail address.                         |
| ResponseType     | <a href="#">t:ResponseTypeType</a> | Specifies the type of response received for a meeting.             |
| LastResponseTime | <a href="#">xs:dateTime</a>        | 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:element name="PermissionSet"
      type="t:PermissionSetType"
      minOccurs="0"
    />
  </xs:sequence>
</xs:extension>
</xs:complexContent>
</xs:complexType>

```

### Child Elements

| Element                | Type   | Description   |
|------------------------|--|---|
| SharingEffectiveRights | <a href="#">t:CalendarPermissionReadAccessType</a> | Specifies whether a user has permission to read items in a Calendar folder. |
| PermissionSet          | <a href="#">t:PermissionSetType</a>                | 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           | <a href="#">xs:string</a>   | Contains the unique <b>identifier</b> for the calendar item.        |
| RecurrenceId  | <a href="#">xs:dateTime</a> | Identifies a specific <b>instance</b> of a recurring calendar item. |
| DateTimeStamp | <a href="#">xs:dateTime</a> | Represents the date and time that the calendar                      |

| Element               | Type                                   | Description   |
|-----------------------|--|---|
|                       |  | item was created.   |
| Start                 | <a href="#">xs:dateTime</a>            | Represents the start of a duration.   |
| End                   | <a href="#">xs:dateTime</a>            | Represents the end of a duration.   |
| OriginalStart         | <a href="#">xs:dateTime</a>            | Represents the original start time of a calendar item (only for occurrences/exceptions)   |
| IsAllDayEvent         | <a href="#">xs:boolean</a>             | Indicates whether a calendar item or meeting request represents an all-day event.   |
| LegacyFreeBusyStatus  | <a href="#">t:LegacyFreeBusyType</a>   | Represents the free/busy status of the calendar item.   |
| Location              | <a href="#">xs:string</a>              | Represents the location of a meeting or appointment.  |
| When                  | <a href="#">xs:string</a>              | Provides information about when a calendar or meeting item occurs.  |
| IsMeeting             | <a href="#">xs:boolean</a>             | Indicates whether the calendar item is a meeting or appointment.  |
| IsCancelled           | <a href="#">xs:boolean</a>             | Indicates whether a meeting has been canceled.  |
| IsRecurring           | <a href="#">xs:boolean</a>             | Indicates whether a calendar item is part of a recurring item.  |
| MeetingRequestWasSent | <a href="#">xs:boolean</a>             | Indicates whether a meeting request has been sent to requested attendees, including required and <b>optional attendees</b> , and resources. |
| IsResponseRequested   | <a href="#">xs:boolean</a>             | Indicates whether a response to an item is requested.   |
| CalendarItemType      | <a href="#">t:CalendarItemTypeType</a> | Represents the occurrence type of a   |

| Element                   | Type   | Description   |
|---------------------------|--|---|
|                           |  | calendar item.  |
| MyResponseType            | <a href="#">t:ResponseTypeType</a>             | Represents the status of the response to a calendar item.                         |
| Organizer                 | <a href="#">t:SingleRecipientType</a>          | Represents the organizer of a meeting.  |
| RequiredAttendees         | <a href="#">t:NonEmptyArrayOfAttendeesType</a> | Represents attendees that are required to attend a meeting.                       |
| OptionalAttendees         | <b>t:NonEmptyArrayOfAttendeesType</b>          | Contains attendees who are not required to attend a meeting.                      |
| Resources                 | <b>t:NonEmptyArrayOfAttendeesType</b>          | Represents a scheduled resource for a meeting.                                    |
| ConflictingMeetingCount   | <a href="#">xs:int</a>                         | Represents the number of meetings that <b>conflict</b> with the calendar item.    |
| AdjacentMeetingCount      | <a href="#">xs:int</a>                         | Indicates the total number of calendar items that are adjacent to a meeting time. |
| ConflictingMeetings       | <a href="#">t:NonEmptyArrayOfAllItemsType</a>  | Identifies all calendar items that conflict with a meeting time.                  |
| AdjacentMeetings          | <b>t:NonEmptyArrayOfAllItemsType</b>           | Contains all calendar items that are adjacent to a meeting time.                  |
| Duration                  | <a href="#">xs:string</a>                      | Represents the duration of a calendar item.                                       |
| TimeZone                  | <a href="#">xs:string</a>                      | Provides a text description of a time zone.                                       |
| AppointmentReplyTime      | <a href="#">xs:dateTime</a>                    | Represents the date and time that an attendee replied to a meeting request.       |
| AppointmentSequenceNumber | <a href="#">xs:int</a>                         | Specifies the sequence number of a version of an appointment.                     |
| AppointmentState          | <a href="#">xs:int</a>                         | Specifies the status of the appointment.  |
| Recurrence                | <a href="#">t:RecurrenceType</a>               | Contains the recurrence   |



| Element              | Type  | Description   |
|----------------------|---|---|
|                      |   | pattern and the recurrence range for calendar items and meeting requests.   |
| FirstOccurrence      | <a href="#">t:OccurrenceInfoType</a>                    | Represents the first occurrence of a recurring calendar item.   |
| LastOccurrence       | <b>t:OccurrenceInfoType</b>                             | Represents the last occurrence of a recurring calendar item.  |
| ModifiedOccurrences  | <a href="#">t:NonEmptyArrayOfOccurrenceInfoType</a>     | Contains recurring calendar item occurrences that have been modified so that they differ from original occurrences (or instances of the recurring master item). |
| DeletedOccurrences   | <a href="#">t:NonEmptyArrayOfDeletedOccurrencesType</a> | Contains deleted occurrences of a recurring calendar item.  |
| MeetingTimeZone      | <a href="#">t:TimeZoneType</a>                          | Represents the time zone of the location where the meeting is hosted. <1>   |
| StartTimeZone        | <a href="#">t:TimeZoneDefinitionType</a>                | Contains the calendar item start time zone information.   |
| EndTimeZone          | <b>t:TimeZoneDefinitionType</b>                         | Contains the calendar item end time zone information.   |
| ConferenceType       | <a href="#">xs:int</a>                                  | Describes the type of conferencing that is performed with a calendar item.  |
| AllowNewTimeProposal | <a href="#">xs:boolean</a>                              | Indicates whether a new meeting time can be proposed for a meeting by an attendee.  |
| IsOnlineMeeting      | <a href="#">xs:boolean</a>                              | Indicates whether the meeting is online.  |
| MeetingWorkspaceUrl  | <a href="#">xs:string</a>                               | Contains the <b>URL</b> for the <b>Meeting Workspace</b> that is included in the calendar item.   |

| Element    | Type                      | Description   |
|------------|---------------------------|---|
| NetShowUrl | <a href="#">xs:string</a> | 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 | <a href="#">t:ArrayOfCalendarPermissionsType</a> | Contains an array of calendar permissions for a folder.  |
| UnknownEntries      | <a href="#">t:ArrayOfUnknownEntriesType</a>      | 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:complexContent>
</xs:complexType>
```

```

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

```

### Child Elements

| Element                 | Type   | Description   |
|-------------------------|--|---|
| ReadItems               | <a href="#">t:CalendarPermissionReadAccessType</a> | Specifies the read access type for a user when accessing a Calendar folder.   |
| CalendarPermissionLevel | <a href="#">t:CalendarPermissionLevelType</a>      | Specifies the permission level that a user has on a Calendar folder. This element <b>MUST</b> 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 | <a href="#">xs:dateTime</a> | Contains the start of the time span for a Calendar View. |
| EndDate   | <a href="#">xs:dateTime</a> | 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:WellKnownResponseObjectType"
    />
  </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:sequence>
  </xs:complexContent>
</xs:complexType>

```

```

<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>

```

## Child Elements

| Element                  | Type                               | Description   |
|--------------------------|------------------------------------|---|
| AssociatedCalendarItemId | <a href="#">t:ItemIdType</a>       | Represents an item identifier of the corresponding calendar item in a messaging server <b>mailbox</b> . |
| IsDelegated              | <a href="#">xs:boolean</a>         | Indicates whether a meeting was handled by an account that has <b>delegate</b> access.                  |
| IsOutOfDate              | <a href="#">xs:boolean</a>         | Indicates whether a meeting message, request, response, or cancellation is out-of-date.                 |
| HasBeenProcessed         | <a href="#">xs:boolean</a>         | Indicates whether a meeting message item has been processed.  |
| ResponseType             | <a href="#">t:ResponseTypeType</a> | Represents the type of recipient response that is received for a meeting.                               |
| UID                      | <a href="#">xs:string</a>          | Identifies a calendar item.   |
| RecurrenceId             | <a href="#">xs:dateTime</a>        | Identifies a specific instance of a recurring calendar item.  |
| DateTimeStamp            | <a href="#">xs:dateTime</a>        | Indicates the date and time that an instance of a <b>Calendar object</b> 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:sequence>
  </xs:extension>
</xs:complexType>
```

```

<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     | <a href="#">t:MeetingRequestTypeType</a> | Describes the types of meeting requests.  |
| IntendedFreeBusyStatus | <a href="#">t:LegacyFreeBusyType</a>     | Represents the intended status for the calendar item that is associated with the meeting request. |
| Start                  | <a href="#">xs:dateTime</a>              | Represents the start of the meeting.  |
| End                    | <a href="#">xs:dateTime</a>              | Specifies the end of the duration for a single occurrence of a meeting request.                   |
| OriginalStart          | <a href="#">xs:dateTime</a>              | Specifies the original start time for the calendar item (only for occurrences/exceptions)         |
| IsAllDayEvent          | <a href="#">xs:boolean</a>               | Specifies whether the calendar item is an all-day event.  |
| LegacyFreeBusyStatus   | <b>t:LegacyFreeBusyType</b>              | Represents the free/busy status of the calendar item.   |
| Location               | <a href="#">xs:string</a>                | Represents the location of a meeting or appointment.  |
| When                   | <a href="#">xs:string</a>                | Provides information about when a meeting or appointment occurs.                                  |
| IsMeeting              | <a href="#">xs:boolean</a>               | Indicates whether the calendar item is a meeting or an appointment.                               |
| IsCancelled            | <a href="#">xs:boolean</a>               | Indicates whether a meeting has been cancelled.   |
| IsRecurring            | <a href="#">xs:boolean</a>               | Indicates whether a calendar item, meeting  |

| Element                 | Type   | Description  |
|-------------------------|--|--|
|                         |  | request is part of a recurring item.   |
| MeetingRequestWasSent   | <a href="#">xs:boolean</a>                     | Indicates whether a meeting request has been sent to requested attendees.                            |
| CalendarItemType        | <a href="#">t:CalendarItemTypeType</a>         | Represents the occurrence type of a calendar item.   |
| MyResponseType          | <a href="#">t:ResponseTypeType</a>             | Identifies the type of the response to the meeting request (sent for the organizer's calendar item). |
| Organizer               | <a href="#">t:SingleRecipientType</a>          | Represents the organizer of a meeting.   |
| RequiredAttendees       | <a href="#">t:NonEmptyArrayOfAttendeesType</a> | Represents attendees that are required to attend a meeting.  |
| OptionalAttendees       | <b>t:NonEmptyArrayOfAttendeesType</b>          | Represents attendees who are not required to attend a meeting.                                       |
| Resources               | <b>t:NonEmptyArrayOfAttendeesType</b>          | Represents a scheduled resource for a meeting.   |
| ConflictingMeetingCount | <a href="#">xs:int</a>                         | Represents the number of meetings that conflict with the calendar item.                              |
| AdjacentMeetingCount    | <a href="#">xs:int</a>                         | Represents the total number of calendar items that are adjacent to a meeting time.                   |
| ConflictingMeetings     | <a href="#">t:NonEmptyArrayOfAllItemsType</a>  | identifies all calendar items that conflict with a meeting time.                                     |
| AdjacentMeetings        | <b>t:NonEmptyArrayOfAllItemsType</b>           | identifies all calendar items that are adjacent to a meeting time.                                   |
| Duration                | <a href="#">xs:string</a>                      | Represents the duration of a calendar item.  |
| TimeZone                | <a href="#">xs:string</a>                      | Provides a text description of a time zone.  |
| AppointmentReplyTime    | <a href="#">xs:dateTime</a>                    | Represents the date and time that an attendee  |

| Element                   | Type  | Description  |
|---------------------------|---|--|
|                           |   | replied to a meeting request.  |
| AppointmentSequenceNumber | <a href="#">xs:int</a>                                  | Specifies the sequence number of a version of an appointment.  |
| AppointmentState          | <a href="#">xs:int</a>                                  | Specifies the status of the appointment.   |
| Recurrence                | <a href="#">t:RecurrenceType</a>                        | Contains the recurrence pattern for calendar items and meeting requests.   |
| FirstOccurrence           | <a href="#">t:OccurrenceInfoType</a>                    | Represents the first occurrence of a recurring calendar item.  |
| LastOccurrence            | <b>t:OccurrenceInfoType</b>                             | Represents the last occurrence of a recurring calendar item.   |
| ModifiedOccurrences       | <a href="#">t:NonEmptyArrayOfOccurrenceInfoType</a>     | 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        | <a href="#">t:NonEmptyArrayOfDeletedOccurrencesType</a> | Contains an array of deleted occurrences of a recurring calendar item.   |
| MeetingTimeZone           | <a href="#">t:TimeZoneType</a>                          | Represents the time zone of the location where the meeting is hosted. <2>  |
| StartTimeZone             | <a href="#">t:TimeZoneDefinitionType</a>                | Specifies the time zone for the start of a calendar item.  |
| EndTimeZone               | <b>t:TimeZoneDefinitionType</b>                         | Specifies the time zone for the end of a calendar item.  |
| ConferenceType            | <a href="#">xs:int</a>                                  | Describes the type of conferencing that is performed with a calendar item.   |
| AllowNewTimeProposal      | <a href="#">xs:boolean</a>                              | Indicates whether a new meeting time can be proposed for a meeting by an attendee.   |

| Element             | Type                       | Description   |
|---------------------|----------------------------|---|
| IsOnlineMeeting     | <a href="#">xs:boolean</a> | Indicates whether the meeting is online.  |
| MeetingWorkspaceUrl | <a href="#">xs:string</a>  | Contains the URL for the Meeting Workspace that is included in the calendar item. |
| NetShowUrl          | <a href="#">xs:string</a>  | 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 | <a href="#">t:AttendeeType</a> | 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 | <a href="#">t:DeletedOccurrenceInfoType</a> | 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 | <a href="#">t:OccurrenceInfoType</a> | 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:sequence>
</xs:complexType>

```

```

    />
    <xs:element name="OriginalStart"
      type="xs:dateTime"
    />
  </xs:sequence>
</xs:complexType>

```

#### Child Elements

| Element       | Type                         | Description   |
|---------------|------------------------------|---|
| ItemId        | <a href="#">t:ItemIdType</a> | Contains the identifier of a modified occurrence of a recurring calendar item.          |
| Start         | <a href="#">xs:dateTime</a>  | Contains the start time of a modified occurrence of a recurring calendar item.          |
| End           | <a href="#">xs:dateTime</a>  | Contains the end time of a modified occurrence of a recurring calendar item.            |
| OriginalStart | <a href="#">xs:dateTime</a>  | 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:ResponseObjectType"
    />
</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  | <a href="#">xs:duration</a> | Contains the offset from the BaseOffset.  |
| Time    | <a href="#">xs:time</a>     | Contains the time when the time changes between standard time and daylight saving time. |

## Attributes

| Name         | Type                      | Description  |
|--------------|---------------------------|--|
| TimeZoneName | <a href="#">xs:string</a> | 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 | <a href="#">xs:duration</a>      | Contains the hourly offset from <b>Coordinated Universal Time (UTC)</b> for the current time zone. |
| Standard   | <a href="#">t:TimeChangeType</a> | Represents the date and time when the time changes from daylight saving time to standard time.     |
| Daylight   | <b>t:TimeChangeType</b>          | 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   |
|----------------------------|---|
| <a href="#">GetItem</a>    | Defines a request to get an item from a mailbox in the server.    |
| <a href="#">DeleteItem</a> | Defines a request to delete an item from a mailbox in the server. |
| <a href="#">UpdateItem</a> | Defines a request to update an item in a mailbox.                 |
| <a href="#">MoveItem</a>   | Defines a request to move an item in the server.                  |
| <a href="#">CopyItem</a>   | Defines a request to copy an item in a mailbox in the server.     |
| <a href="#">CreateItem</a> | 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                  |
|----------------------------|------------------------------|
| <a href="#">GetItem</a>    | Gets items in the server.    |
| <a href="#">DeleteItem</a> | Deletes items in the server. |
| <a href="#">UpdateItem</a> | Updates items in the server. |
| <a href="#">MoveItem</a>   | Moves items in the server.   |
| <a href="#">CopyItem</a>   | Copies items in the server.  |
| <a href="#">CreateItem</a> | 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  |
|-----------------------------------|--|
| <a href="#">tns:GetItemSoapIn</a> | Specifies the <b>SOAP message</b> that defines the calendar item to get. The <b>Items</b> ( <a href="#">[MS-OXWSCDATA]</a> section 2.2.3.38) child element of the <b>GetItem</b> ( <a href="#">[MS-OXWSCORE]</a> section 3.1.4.4.2.1) child element that specifies the <b>XML</b> request MUST contain the following elements: <b>t:ItemResponseShapeType</b> ( <a href="#">[MS-OXWSCDATA]</a> section 2.2.3.35), <b>t:ItemIdType</b> ( <a href="#">[MS-OXWSCORE]</a> section 2.2.3.13). If the calendar item is recurring, then the XML request SHOULD contain the following elements: <b>t:OccurrenceItemIdType</b> ( <a href="#">[MS-OXWSCORE]</a> section 2.2.3.11), and <b>t:RecurringMasterItemIdType</b> ( <a href="#">[MS-OXWSCORE]</a> section 2.2.3.12). All other elements MUST be empty. |

Response

| Message Format                     | Description   |
|------------------------------------|---|
| <a href="#">tns:GetItemSoapOut</a> | Specifies the SOAP message returned by the server in response. The server returns a <b>t:ItemResponseShapeType</b> ( <a href="#">[MS-OXWSCDATA]</a> section 2.2.3.35) element that contains properties associated with the <b>distribution list</b> 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   |
|---|---|
| <a href="#">tns&gt;DeleteItemSoapIn</a> | Specifies the SOAP message that defines the calendar item to delete. The <b>Items</b> ( <a href="#">[MS-OXWSCDATA]</a> section 2.2.3.38) child element of the <b>DeleteItem</b> ( <a href="#">[MS-OXWSCORE]</a> section 3.1.4.3.2.1) child element that specifies the XML request MUST contain one or more <b>t:ItemIdType</b> ( <a href="#">[MS-OXWSCORE]</a> section 2.2.3.13) elements. If the calendar item is for a <b>recurring meeting</b> , <b>t:OccurrenceItemIdType</b> ( <a href="#">[MS-OXWSCORE]</a> section 2.2.3.11) and <b>t:RecurringMasterItemIdType</b> ( <a href="#">[MS-OXWSCORE]</a> section 2.2.3.12) elements |

| Message Format | Description  |
|----------------|--|
|                | can be included. All other elements MUST be empty. |

Response

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

Response

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

Response

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

Response

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

#### Response

| Message Format                        | Description  |
|---------------------------------------|--|
| <a href="#">tns:CreateItemSoapOut</a> | 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.

| WSDL or schema name      | Prefix | Section             |
|--------------------------|--------|---------------------|
| MS-OXWSMTGS.wsdl         | wsdl:  | <a href="#">6.1</a> |
| MS-OXWSMTGS-types.xsd    | t:     | <a href="#">6.2</a> |
| MS-OXWSMTGS-messages.xsd | m:     | <a href="#">6.3</a> |

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                |
|---|--------------------------|
| <a href="#">[MS-OXWSCORE]</a> , section <a href="#">6.3</a> | 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             |
|---|-----------------------|
| <a href="#">[MS-OXWSMSG]</a> , section <a href="#">6.1</a>  | MS-OXWSMSG-types.xsd  |
| <a href="#">[MS-OXWSGTZ]</a> , section <a href="#">6.2</a>  | MS-OXWSGTZ-types.xsd  |
| <a href="#">[MS-OXWSSRCH]</a> , section <a href="#">6.2</a> | MS-OXWSSRCH-types.xsd |

| Defining specification                                       | File name              |
|--|------------------------|
| <a href="#">[MS-OXWSCDATA]</a> , section <a href="#">6.3</a> | 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:schema>
```

```

</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"/>

```



```

minOccurs="0"/>
        <xs:element name="LastOccurrence" type="t:OccurrenceInfoType"
type="t:NonEmptyArrayOfOccurrenceInfoType" minOccurs="0"/>
        <xs:element name="ModifiedOccurrences"
type="t:NonEmptyArrayOfDeletedOccurrencesType" 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: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:

- Microsoft® Exchange Server 2010

Exceptions, if any, are noted below. If a service pack number appears with the product version, behavior changed in that service pack. 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 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 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

This section identifies changes that were made to the [MS-OXWSMTGS] protocol document between the May 2010 and August 2010 releases. Changes are classified as New, Major, Minor, Editorial, or No change.

The revision class **New** means that a new document is being released.

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

- A document revision that incorporates changes to interoperability requirements or functionality.
- An extensive rewrite, addition, or deletion of major portions of content.
- The removal of a document from the documentation set.
- Changes made for template compliance.

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

The revision class **Editorial** means that the language and formatting in the technical content was changed. Editorial changes apply to grammatical, formatting, and style issues.

The revision class **No change** means that no new technical or language changes were introduced. The technical content of the document is identical to the last released version, but minor editorial and formatting changes, as well as updates to the header and footer information, and to the revision summary, may have been made.

Major and minor changes can be described further using the following change types:

- New content added.
- Content updated.
- Content removed.
- New product behavior note added.
- Product behavior note updated.
- Product behavior note removed.
- New protocol syntax added.
- Protocol syntax updated.
- Protocol syntax removed.
- New content added due to protocol revision.
- Content updated due to protocol revision.
- Content removed due to protocol revision.
- New protocol syntax added due to protocol revision.

- Protocol syntax updated due to protocol revision.
- Protocol syntax removed due to protocol revision.
- New content added for template compliance.
- Content updated for template compliance.
- Content removed for template compliance.
- Obsolete document removed.

Editorial changes are always classified with the change type "Editorially updated."

Some important terms used in the change type descriptions are defined as follows:

- **Protocol syntax** refers to data elements (such as packets, structures, enumerations, and methods) as well as interfaces.
- **Protocol revision** refers to changes made to a protocol that affect the bits that are sent over the wire.

The changes made to this document are listed in the following table. For more information, please contact [protocol@microsoft.com](mailto:protocol@microsoft.com).

| Section                                    | Tracking number (if applicable) and description  | Major change (Y or N) | Change type     |
|--|--|-----------------------|-----------------|
| <a href="#">1.1 Glossary</a>               | 57310<br>Added the following terms to the list of glossary terms defined in [MS-OXGLOS]: "appointment", "attendee", "calendar", "Calendar folder", "Calendar object", "conflict", "Coordinated Universal Time (UTC)", "delegate", "distribution list", "exception", "folder", "free/busy", "identifier", "instance", "mailbox", "meeting", "meeting request", "Meeting Workspace", "message", "optional attendee", "organizer", "permissions", "property", "recipient", "recurrence pattern", "resource", "Sent Items folder", "SOAP message", "store", "tentative", "Uniform Resource Locator (URL)", "Web server". | N                     | Content update. |
| <a href="#">1.2.1 Normative References</a> | 55751<br>Moved [MS-OXGLOS] from Normative References section to Informative References section.  | N                     | Content update. |
| <a href="#">1.2.1 Normative References</a> | 57735<br>Deleted unused references and added normative reference for document referenced in topics.  | N                     | Content update. |
| <a href="#">3.1.4.2 DeleteItem</a>         | 57310<br>Changed "contact item to "calendar item".   | N                     | Content update. |



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