

[MS-OXWSMTGS]: Calendaring Web Service Protocol Specification

Intellectual Property Rights Notice for Open Specifications Documentation

- **Technical Documentation.** Microsoft publishes Open Specifications documentation for protocols, file formats, languages, standards as well as overviews of the interaction among each of these technologies.
- **Copyrights.** This documentation is covered by Microsoft copyrights. Regardless of any other terms that are contained in the terms of use for the Microsoft website that hosts this documentation, you may make copies of it in order to develop implementations of the technologies described in the Open Specifications and may distribute portions of it in your implementations using these technologies or your documentation as necessary to properly document the implementation. You may also distribute in your implementation, with or without modification, any schema, IDL's, or code samples that are included in the documentation. This permission also applies to any documents that are referenced in the Open Specifications.
- **No Trade Secrets.** Microsoft does not claim any trade secret rights in this documentation.
- **Patents.** Microsoft has patents that may cover your implementations of the technologies described in the Open Specifications. Neither this notice nor Microsoft's delivery of the documentation grants any licenses under those or any other Microsoft patents. However, a given Open Specification may be covered by Microsoft [Open Specification Promise](#) or the [Community Promise](#). If you would prefer a written license, or if the technologies described in the Open Specifications are not covered by the Open Specifications Promise or Community Promise, as applicable, patent licenses are available by contacting iplg@microsoft.com.
- **Trademarks.** The names of companies and products contained in this documentation may be covered by trademarks or similar intellectual property rights. This notice does not grant any licenses under those rights.
- **Fictitious Names.** The example companies, organizations, products, domain names, e-mail addresses, logos, people, places, and events depicted in this documentation are fictitious. No association with any real company, organization, product, domain name, email address, logo, person, place, or event is intended or should be inferred.

Reservation of Rights. All other rights are reserved, and this notice does not grant any rights other than specifically described above, whether by implication, estoppel, or otherwise.

Tools. The Open Specifications do not require the use of Microsoft programming tools or programming environments in order for you to develop an implementation. If you have access to Microsoft programming tools and environments you are free to take advantage of them. Certain Open Specifications are intended for use in conjunction with publicly available standard specifications and network programming art, and assumes that the reader either is familiar with the aforementioned material or has immediate access to it.

Preliminary Documentation. This Open Specification provides documentation for past and current releases and/or for the pre-release (beta) version of this technology. This Open Specification is final

documentation for past or current releases as specifically noted in the document, as applicable; it is preliminary documentation for the pre-release (beta) versions. Microsoft will release final documentation in connection with the commercial release of the updated or new version of this technology. As the documentation may change between this preliminary version and the final version of this technology, there are risks in relying on preliminary documentation. To the extent that you incur additional development obligations or any other costs as a result of relying on this preliminary documentation, you do so at your own risk.

Revision Summary

Date	Revision History	Revision Class	Comments
07/15/2009	1.0	Major	Initial Availability.
11/04/2009	2.0.0	Major	Updated and revised the technical content.
02/10/2010	2.1.0	Minor	Updated the technical content.
05/05/2010	2.1.1	Editorial	Revised and edited the technical content.
08/04/2010	2.2	Minor	Clarified the meaning of the technical content.
11/03/2010	2.2	No change	No changes to the meaning, language, or formatting of the technical content.
03/18/2011	2.2	No change	No changes to the meaning, language, and formatting of the technical content.
08/05/2011	2.2	No change	No changes to the meaning, language, or formatting of the technical content.
10/07/2011	3.0	Major	Significantly changed the technical content.
01/20/2012	4.0	Major	Significantly changed the technical content.

Table of Contents

1 Introduction	5
1.1 Glossary	5
1.2 References	6
1.2.1 Normative References	6
1.2.2 Informative References	6
1.3 Overview	7
1.4 Relationship to Other Protocols	7
1.5 Prerequisites/Preconditions	7
1.6 Applicability Statement	8
1.7 Versioning and Capability Negotiation	8
1.8 Vendor-Extensible Fields	8
1.9 Standards Assignments	8
2 Messages	9
2.1 Transport	9
2.2 Common Message Syntax	9
2.2.1 Namespaces	9
2.2.2 Messages	9
2.2.3 Elements	9
2.2.4 Complex Types	10
2.2.4.1 t:AcceptItemType Complex Type	11
2.2.4.2 t:AttendeeType Complex Type	11
2.2.4.3 t:CalendarFolderType Complex Type	12
2.2.4.4 t:CalendarItemType Complex Type	12
2.2.4.5 t:CalendarPermissionSetType Complex Type	19
2.2.4.6 t:CalendarPermissionType Complex Type	20
2.2.4.7 t:CalendarViewType Complex Type	21
2.2.4.8 t:CancelCalendarItemType Complex Type	21
2.2.4.9 t:DeclineItemType Complex Type	22
2.2.4.10 t:MeetingCancellationMessageType Complex Type	22
2.2.4.11 t:MeetingMessageType Complex Type	22
2.2.4.12 t:MeetingRequestMessageType Complex Type	24
2.2.4.13 t:MeetingResponseMessageType Complex Type	30
2.2.4.14 t:NonEmptyArrayOfAttendeesType Complex Type	30
2.2.4.15 t:NonEmptyArrayOfDeletedOccurrencesType Complex Type	31
2.2.4.16 t:NonEmptyArrayOfOccurrenceInfoType Complex Type	31
2.2.4.17 t:OccurrenceInfoType Complex Type	32
2.2.4.18 t:RecurrenceType Complex Type	32
2.2.4.19 t:RemoveItemType Complex Type	33
2.2.4.20 t:TentativelyAcceptItemType Complex Type	33
2.2.4.21 t:TimeChangeType Complex Type	33
2.2.4.22 t:TimeZoneType Complex Type	34
2.2.5 Simple Types	35
2.2.5.1 t:CalendarItemCreateOrDeleteOperationType Simple Type	36
2.2.5.2 t:CalendarItemTypeType Simple Type	37
2.2.5.3 t:CalendarItemUpdateOperationType Simple Type	37
2.2.5.4 t:CalendarPermissionLevelType Simple Type	38
2.2.5.5 t:CalendarPermissionReadAccessType Simple Type	40
2.2.5.6 t:MeetingRequestTypeType Simple Type	40
2.2.5.7 t:ResponseTypeType Simple Type	41

2.2.6	Attributes	42
2.2.7	Groups	42
2.2.8	Attribute Groups	42
3	Protocol Details	43
3.1	ExchangeServicePortType Server Details	43
3.1.1	Abstract Data Model	43
3.1.2	Timers	43
3.1.3	Initialization	43
3.1.4	Message Processing Events and Sequencing Rules	43
3.1.4.1	CopyItem Operation	44
3.1.4.2	CreateItem Operation	45
3.1.4.3	DeleteItem Operation	46
3.1.4.4	GetItem Operation	47
3.1.4.5	MoveItem Operation	48
3.1.4.6	UpdateItem Operation	49
3.1.5	Timer Events	50
3.1.6	Other Local Events	50
4	Protocol Examples	51
4.1	Copying a Calendar Item	51
4.2	Creating a Calendar Item	52
4.3	Deleting a Calendar Item	53
4.4	Moving a Calendar Item	54
4.5	Retrieving a Calendar Item	55
4.6	Updating a Calendar Item	56
5	Security	58
5.1	Security Considerations for Implementers	58
5.2	Index of Security Parameters	58
6	Appendix A: Full WSDL	59
7	Appendix B: Full XML Schema	64
7.1	Messages Schema	64
7.2	Types Schema	64
8	Appendix C: Product Behavior	72
9	Change Tracking	73
10	Index	77

1 Introduction

The Calendaring Web Service Protocol enables clients to create, retrieve, update, move, copy, and delete calendar-related items (that is, appointments, meetings, meeting request messages, meeting response messages, and meeting cancellation messages) on the server.

Sections 1.8, 2, and 3 of this specification are normative and contain RFC 2119 language. Sections 1.5 and 1.9 are also normative but cannot contain RFC 2119 language. All other sections and examples in this specification are informative.

1.1 Glossary

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

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

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

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

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

1.2.1 Normative References

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

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

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

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

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

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

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

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

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

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

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

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

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

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

1.2.2 Informative References

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

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

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

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

1.3 Overview

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

1.4 Relationship to Other Protocols

A client that implements this protocol can use the Autodiscover Publishing and Lookup SOAP-Based Web Service Protocol, as described in [\[MS-OXWSADISC\]](#), or the Autodiscover Publishing and Lookup Protocol, as described in [\[MS-OXDCLI\]](#), to identify the target **endpoint (4)** to use for each operation.

This protocol uses the **SOAP** protocol, as described in [\[SOAP1.1\]](#), to specify the structure information exchanged between the client and the server. This protocol uses the **XML** protocol, as described in [\[XMLSCHEMA1\]](#) and [\[XMLSCHEMA2\]](#), to describe the message content sent to and from the server.

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

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

This protocol uses SOAP over **HTTP**, as described in [\[RFC2616\]](#), and SOAP over **HTTPS**, as described in [\[RFC2818\]](#), as shown in the following layering diagram.

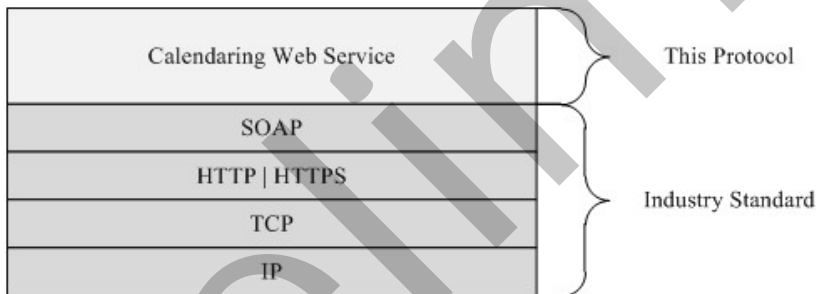


Figure 1: This protocol in relation to other protocols

1.5 Prerequisites/Preconditions

The endpoint (4) that is returned by either the Autodiscover Publishing Lookup SOAP-Based Web Service Protocol, as described in [\[MS-OXWSADISC\]](#), or the Autodiscover Publishing and Lookup Protocol, as described in [\[MS-OXDCLI\]](#), is required to form the HTTP request to the Web server that hosts this protocol. To retrieve the endpoint (4) as described in either the Autodiscover Publishing Lookup SOAP-Based Web Service Protocol or the Autodiscover Publishing and Lookup Protocol, the client needs to have a valid mail-enabled account. The operations that this protocol

defines cannot be accessed unless the correct endpoint (4) is identified in the HTTP Web requests that target this protocol.

1.6 Applicability Statement

This protocol is applicable to client applications that use Web services to create, retrieve, update, move, copy, and delete **calendar**-related items (that is, appointments, meetings, meeting request messages, meeting response messages, and meeting cancellation messages) in the server **store**.

1.7 Versioning and Capability Negotiation

This document covers versioning issues in the following areas:

- **Supported Transports:** This protocol uses SOAP 1.1, as described in section [2.1](#) and in [\[SOAP1.1\]](#).
- **Protocol Versions:** This protocol specifies only one **WSDL port type** version. The **WSDL** version of the request is identified by using the **RequestServerVersion** element, as described in [\[MS-OXWSCDATA\]](#) section 2.2.4.9, and the version of the server responding to the request is identified by using the **ServerVersionInfo** element, as described in [\[MS-OXWSCDATA\]](#) section 2.2.4.10.
- **Security and Authentication Methods:** This protocol relies on the **Web server** that is hosting it to perform authentication.
- **Localization:** This protocol includes text strings and dates and times in various messages.
- **Capability Negotiation:** This protocol does not support version negotiation.

1.8 Vendor-Extensible Fields

None.

1.9 Standards Assignments

None.

2 Messages

In the following sections, the schema definition might differ from the processing rules imposed by the protocol. The WSDL in this specification provides a base description of the protocol. The schema in this specification provides a base description of the message syntax. The text that specifies the WSDL and schema might specify restrictions that reflect actual protocol behavior. For example, the schema definition might allow for an element to be **empty**, **null**, or **not present** but the behavior of the protocol as specified restricts the same elements to being **non-empty**, **not null**, or **present**.

2.1 Transport

Messages are transported by using SOAP version 1.1, as specified in [\[SOAP1.1\]](#).

This protocol relies on the Web server that hosts the application to perform authentication. The protocol **MUST** support SOAP over HTTP, as specified in [\[RFC2616\]](#), and **SHOULD** support SOAP over HTTPS, as specified in [\[RFC2818\]](#).

2.2 Common Message Syntax

This section contains common definitions that are used by this protocol. The syntax of the definitions uses **XML schema**, as defined in [\[XMLSCHEMA1\]](#) and [\[XMLSCHEMA2\]](#), and WSDL, as defined in [\[WSDL\]](#).

2.2.1 Namespaces

This specification defines and references various **XML namespaces** using the mechanisms specified in [\[XMLNS\]](#). Although this specification associates a specific XML namespace prefix for each XML namespace that is used, the choice of any particular XML namespace prefix is implementation-specific and not significant for interoperability.

Prefix	Namespace URI	Reference
soap	http://schemas.xmlsoap.org/wsdl/soap/	[SOAP1.1]
tns	http://schemas.microsoft.com/exchange/services/2006/messages	
s	http://www.w3.org/2001/XMLSchema	[XMLSCHEMA2]
wsdl	http://schemas.xmlsoap.org/wsdl/	[WSDL]
t	http://schemas.microsoft.com/exchange/services/2006/types	
m	http://schemas.microsoft.com/exchange/services/2006/messages	
xs	http://www.w3.org/2001/XMLSchema	[XMLSCHEMA2]

2.2.2 Messages

This specification does not define any common **WSDL message** definitions.

2.2.3 Elements

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

2.2.4 Complex Types

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

Complex type name	Description
AcceptItemType (section 2.2.4.1)	Specifies a response object that is used to accept a meeting invitation or calendar item.
AttendeeType (section 2.2.4.2)	Specifies attendees and resources for a meeting.
CalendarFolderType (section 2.2.4.3)	Specifies a folder that contains calendar items.
CalendarItemType (section 2.2.4.4)	Specifies a server calendar item.
CalendarPermissionSetType (section 2.2.4.5)	Defines the access that a user has to a Calendar folder .
CalendarPermissionType (section 2.2.4.6)	Specifies the access that a user has to a Calendar folder.
CalendarViewType (section 2.2.4.7)	Specifies the settings that are used to return calendar items in the specified range as they appear in a calendar.
CancelCalendarItemType (section 2.2.4.8)	Specifies a response object that is used to cancel a meeting.
DeclineItemType (section 2.2.4.9)	Specifies a response object that is used to decline a meeting invitation or calendar item.
MeetingCancellationMessageType (section 2.2.4.10)	Specifies a meeting cancellation.
MeetingMessageType (section 2.2.4.11)	Specifies a meeting in the messaging server store.
MeetingRequestMessageType (section 2.2.4.12)	Specifies a meeting request in the messaging server store.
MeetingResponseMessageType (section 2.2.4.13)	Specifies a meeting response in the messaging server store.
NonEmptyArrayOfAttendeesType (section 2.2.4.14)	Contains a list of attendees and resources for a meeting.
NonEmptyArrayOfDeletedOccurrencesType (section 2.2.4.15)	Contains a list of deleted occurrences of a recurring meeting request or calendar item.
NonEmptyArrayOfOccurrenceInfoType (section 2.2.4.16)	Contains a list of modified occurrences of a recurring meeting request or calendar item.
OccurrenceInfoType (section 2.2.4.17)	Specifies a single occurrence of a recurring meeting request or calendar item.
RecurrenceType (section 2.2.4.18)	Specifies the recurrence pattern and recurrence range for calendar items and meeting requests.

Complex type name	Description
RemoveItemType (section 2.2.4.19)	Specifies a response object that is used to remove a meeting item when a meeting cancellation message is received.
TentativelyAcceptItemType (section 2.2.4.20)	Specifies a response object that is used to tentatively accept a meeting invitation or calendar item.
TimeChangeType (section 2.2.4.21)	Specifies the date and time when the time changes to and from daylight saving time and standard time.
TimeZoneType (section 2.2.4.22)	MAY<1> specify the time zone of the location where a meeting is hosted.

2.2.4.1 t:AcceptItemType Complex Type

The **AcceptItemType** complex type specifies a response object that is used to accept a meeting invitation or calendar item. This complex type extends the **WellKnownResponseType** complex type, as specified in [\[MS-OXWSCDATA\]](#) section 2.2.3.65.

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

2.2.4.2 t:AttendeeType Complex Type

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

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

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

Element name	Type	Description
Mailbox	t:EmailAddressType ([MS-OXWSCDATA] section 2.2.3.27)	Specifies a fully resolved e-mail address.
ResponseType	t:ResponseTypeType (section 2.2.5.7)	Specifies the meeting invitation response received by the meeting organizer from a meeting attendee.
LastResponseTime	xs:dateTime ([XMLSCHEMA2])	Specifies the date and time that the latest meeting invitation response was received by the meeting organizer from the meeting attendee.

2.2.4.3 t:CalendarFolderType Complex Type

The **CalendarFolderType** complex type specifies a folder that contains calendar items. This complex type extends the **BaseFolderType** complex type, as specified in [\[MS-OXWSFOLD\]](#) section 2.2.4.6.

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

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

Element name	Type	Description
SharingEffectiveRights	t:CalendarPermissionReadAccessType (section 2.2.5.5)	Specifies the permissions a user has to view items in a Calendar folder.
PermissionSet	t:CalendarPermissionSetType (section 2.2.4.5)	Specifies all permissions that are configured for a Calendar folder.

2.2.4.4 t:CalendarItemType Complex Type

The **CalendarItemType** complex type represents a server calendar item. This complex type extends the **ItemType** complex type, as specified in [\[MS-OXWSCORE\]](#) section 2.2.4.6.

```

<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>

```

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

Element name	Type	Description
UID	xs:string ([XMLSCHEMA2])	Contains the unique identifier for the calendar item.
RecurrenceId	xs:dateTime ([XMLSCHEMA2])	Specifies a specific instance of a recurring calendar item.
DateTimeStamp	xs:dateTime	Specifies the date and time that the calendar item was created.
Start	xs:dateTime	Specifies the start date and time of a duration.
End	xs:dateTime	Specifies the end date and time of a duration.
OriginalStart	xs:dateTime	Represents the original start time of a calendar item (only for occurrences/exceptions).
IsAllDayEvent	xs:boolean ([XMLSCHEMA2])	Indicates whether a calendar item or meeting request represents an all-day event.
LegacyFreeBusyStatus	t:LegacyFreeBusyType ([MS-OXWSCDATA] section 2.2.2.16)	Specifies the free/busy status of the calendar item.
Location	xs:string	Specifies the location of a meeting or appointment.
When	xs:string	Provides information about when a calendar or meeting item occurs.
IsMeeting	xs:boolean	Indicates whether the calendar item is a meeting or appointment.
IsCancelled	xs:boolean	Indicates whether a meeting has been

Element name	Type	Description
		canceled.
IsRecurring	xs:boolean	Indicates whether a calendar item is part of a recurring item.
MeetingRequestWasSent	xs:boolean	Indicates whether a meeting request has been sent to requested attendees, including required and optional attendees , and resources.
IsResponseRequested	xs:boolean	Indicates whether a response to an item is requested.
CalendarItemType	t:CalendarItemTypeType (section 2.2.5.2)	Specifies the occurrence type of a calendar item.
MyResponseType	t:ResponseTypeType (section 2.2.5.7)	Specifies the status of the response to a calendar item.
Organizer	t:SingleRecipientType ([MS-OXWSCDATA] section 2.2.3.60)	Specifies the organizer of a meeting.
RequiredAttendees	t:NonEmptyArrayOfAttendeesType (section 2.2.4.14)	Specifies attendees that are required to attend a meeting.
OptionalAttendees	t:NonEmptyArrayOfAttendeesType	Specifies attendees who are not required to attend a meeting.
Resources	t:NonEmptyArrayOfAttendeesType	Specifies a scheduled resource for a meeting.
ConflictingMeetingCount	xs:int ([XMLSCHEMA2])	Specifies the number of meetings that conflict with the calendar item.
AdjacentMeetingCount	xs:int	Indicates the total number of calendar items that are adjacent to a meeting time.
ConflictingMeetings	t:NonEmptyArrayOfAllItemsType ([MS-OXWSCDATA] section 2.2.3.42)	Indicates all calendar items that conflict with a meeting time.
AdjacentMeetings	t:NonEmptyArrayOfAllItemsType	Indicates all calendar items that are adjacent to a meeting time.
Duration	xs:string	Specifies the duration of a calendar item.

Element name	Type	Description
TimeZone	xs:string	Specifies a text description of a time zone.
AppointmentReplyTime	xs:dateTime	Specifies the date and time that an attendee replied to a meeting request.
AppointmentSequenceNumber	xs:int	Specifies the sequence number of a version of an appointment.
AppointmentState	xs:int	Specifies the status of the appointment. Valid values include: 0 (zero): the calendar item represents an appointment 1: the calendar item on the organizer's calendar represents a meeting 3: the meeting request corresponding to the calendar item has been received 5: the meeting corresponding to the organizer's calendar item has been cancelled 7: the meeting corresponding to the attendee's calendar item has been cancelled
Recurrence	t:RecurrenceType (section 2.2.4.18)	Specifies the recurrence pattern and the recurrence range for calendar items and meeting requests.
FirstOccurrence	t:OccurrenceInfoType (section 2.2.4.17)	Specifies the first occurrence of a recurring calendar item.
LastOccurrence	t:OccurrenceInfoType	Specifies the last occurrence of a recurring calendar item.
ModifiedOccurrences	t:NonEmptyArrayOfOccurrenceInfoType (section 2.2.4.16)	Specifies recurring calendar item occurrences that have been modified so that they differ from original occurrences (or instances of the recurring master item).

Element name	Type	Description
DeletedOccurrences	t:NonEmptyArrayOfDeletedOccurrencesType (section 2.2.4.15)	Specifies deleted occurrences of a recurring calendar item.
MeetingTimeZone	t:TimeZoneType (section 2.2.4.22)	MAY 2 specify the time zone of the location where the meeting is hosted.
StartTimeZone	t:TimeZoneDefinitionType ([MS-OXWSGTZ] section 2.2.4.12)	SHOULD 3 specify the calendar item start time zone information.
EndTimeZone	t:TimeZoneDefinitionType	SHOULD 4 specify the calendar item end time zone information.
ConferenceType	xs:int	Specifies the type of conferencing that is performed with a calendar item. Valid values include: 0 (zero): video conference 1: presentation 2: chat
AllowNewTimeProposal	xs:boolean	Indicates whether a new meeting time can be proposed for a meeting by an attendee.
IsOnlineMeeting	xs:boolean	Indicates whether the meeting is online.
MeetingWorkspaceUrl	xs:string	Contains the URL for the Meeting Workspace that is included in the calendar item.
NetShowUrl	xs:string	Specifies the URL for an online meeting.

2.2.4.5 t:CalendarPermissionSetType Complex Type

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

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

```

```

        type="t:ArrayOfUnknownEntriesType"
        minOccurs="0"
    />
</xs:sequence>
</xs:complexType>

```

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

Element name	Type	Description
CalendarPermissions	t:ArrayofCalendarPermissionsType ([MS-OXWSCDATA] section 2.2.3.4)	Contains an array of calendar permissions for a folder.
UnknownEntries	t:ArrayOfUnknownEntriesType ([MS-OXWSFOLD] section 2.2.4.4)	Contains an array of unknown permission entries that cannot be resolved against the directory service.

2.2.4.6 t:CalendarPermissionType Complex Type

The **CalendarPermissionType** complex type specifies the access that a user has to a Calendar folder. This complex type extends the **BasePermissionType** complex type, as specified in [\[MS-OXWSFOLD\]](#) section 2.2.4.3.

```

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

```

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

Element name	Type	Description
ReadItems	t:CalendarPermissionReadAccessType (section 2.2.5.5)	Specifies the permissions a user has to view items in a Calendar folder.
CalendarPermissionLevel	t:CalendarPermissionLevelType (section 2.2.5.5)	Specifies the permission

Element name	Type	Description
	2.2.5.4)	level that a user has on a Calendar folder. This element MUST exist if calendar permissions are set on a Calendar folder.

2.2.4.7 t:CalendarViewType Complex Type

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

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

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

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

2.2.4.8 t:CancelCalendarItemType Complex Type

The **CancelCalendarItemType** complex type specifies a response object used to cancel a meeting. This complex type extends the **SmartResponseType** complex type, as specified in [\[MS-OXWScore\]](#) section 2.2.4.18.

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

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

2.2.4.9 t:DeclineItemType Complex Type

The **DeclineItemType** complex type specifies a response object that is used to decline a meeting invitation or calendar item. This complex type extends the **WellKnownResponseType** complex type, as specified in [\[MS-OXWSCDATA\]](#) section 2.2.3.65.

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

2.2.4.10 t:MeetingCancellationMessageType Complex Type

The **MeetingCancellationMessageType** complex type represents a meeting cancellation. This complex type extends the **MeetingMessageType** complex type, as specified in section [2.2.4.11](#).

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

2.2.4.11 t:MeetingMessageType Complex Type

The **MeetingMessageType** complex type represents a meeting in the server data store. This complex type extends the **MessageType** complex type, as specified in [\[MS-OXWSMSG\]](#) section 2.2.4.1.

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

```

```

        type="xs:boolean"
        minOccurs="0"
      />
      <xs:element name="HasBeenProcessed"
        type="xs:boolean"
        minOccurs="0"
      />
      <xs:element name="ResponseType"
        type="t:ResponseTypeType"
        minOccurs="0"
      />
      <xs:element name="UID"
        type="xs:string"
        minOccurs="0"
      />
      <xs:element name="RecurrenceId"
        type="xs:dateTime"
        minOccurs="0"
      />
      <xs:element name="DateTimeStamp"
        type="xs:dateTime"
        minOccurs="0"
      />
    </xs:sequence>
  </xs:extension>
</xs:complexContent>
</xs:complexType>

```

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

Element name	Type	Description
AssociatedCalendarItemId	t:ItemIdType ([MS-OXWSCORE] section 2.2.4.15)	Represents an item identifier of the corresponding calendar item in a messaging server mailbox .
IsDelegated	xs:boolean ([XMLSCHEMA2])	Indicates whether a meeting was handled by an account that has delegate access.
IsOutOfDate	xs:boolean	Indicates whether a meeting message, request, response, or cancellation is out-of-date.
HasBeenProcessed	xs:boolean	Indicates whether a meeting message item has been processed.
ResponseType	t:ResponseTypeType (section 2.2.5.7)	Represents the type of recipient (1) response that is received for a meeting.
UID	xs:string ([XMLSCHEMA2])	Identifies a meeting message.
RecurrenceId	xs:dateTime ([XMLSCHEMA2])	Identifies a specific instance of a recurring calendar item.
DateTimeStamp	xs:dateTime	Indicates the date and time that an instance of a Calendar object was

Element name	Type	Description
		created.

2.2.4.12 t:MeetingRequestMessageType Complex Type

The **MeetingRequestMessageType** complex type represents a meeting request in the messaging server store. This complex type extends the **MeetingMessageType** complex type, as specified in section [2.2.4.11](#).

```

<xs:complexType name="MeetingRequestMessageType">
  <xs:complexContent>
    <xs:extension
      base="t:MeetingMessageType"
    >
      <xs:sequence>
        <xs:element name="MeetingRequestType"
          type="t:MeetingRequestTypeType"
          minOccurs="0"
        />
        <xs:element name="IntendedFreeBusyStatus"
          type="t:LegacyFreeBusyType"
          minOccurs="0"
        />
        <xs:element name="Start"
          type="xs:dateTime"
          minOccurs="0"
        />
        <xs:element name="End"
          type="xs:dateTime"
          minOccurs="0"
        />
        <xs:element name="OriginalStart"
          type="xs:dateTime"
          minOccurs="0"
        />
        <xs:element name="IsAllDayEvent"
          type="xs:boolean"
          minOccurs="0"
        />
        <xs:element name="LegacyFreeBusyStatus"
          type="t:LegacyFreeBusyType"
          minOccurs="0"
        />
        <xs:element name="Location"
          type="xs:string"
          minOccurs="0"
        />
        <xs:element name="When"
          type="xs:string"
          minOccurs="0"
        />
        <xs:element name="IsMeeting"
          type="xs:boolean"
          minOccurs="0"
        />
        <xs:element name="IsCancelled"
          type="xs:boolean"

```



```

    minOccurs="0"
  />
<xs:element name="IsRecurring"
  type="xs:boolean"
  minOccurs="0"
  />
<xs:element name="MeetingRequestWasSent"
  type="xs:boolean"
  minOccurs="0"
  />
<xs:element name="CalendarItemType"
  type="t:CalendarItemTypeType"
  minOccurs="0"
  />
<xs:element name="MyResponseType"
  type="t:ResponseTypeType"
  minOccurs="0"
  />
<xs:element name="Organizer"
  type="t:SingleRecipientType"
  minOccurs="0"
  />
<xs:element name="RequiredAttendees"
  type="t:NonEmptyArrayOfAttendeesType"
  minOccurs="0"
  />
<xs:element name="OptionalAttendees"
  type="t:NonEmptyArrayOfAttendeesType"
  minOccurs="0"
  />
<xs:element name="Resources"
  type="t:NonEmptyArrayOfAttendeesType"
  minOccurs="0"
  />
<xs:element name="ConflictingMeetingCount"
  type="xs:int"
  minOccurs="0"
  />
<xs:element name="AdjacentMeetingCount"
  type="xs:int"
  minOccurs="0"
  />
<xs:element name="ConflictingMeetings"
  type="t:NonEmptyArrayOfAllItemsType"
  minOccurs="0"
  />
<xs:element name="AdjacentMeetings"
  type="t:NonEmptyArrayOfAllItemsType"
  minOccurs="0"
  />
<xs:element name="Duration"
  type="xs:string"
  minOccurs="0"
  />
<xs:element name="TimeZone"
  type="xs:string"
  minOccurs="0"
  />
<xs:element name="AppointmentReplyTime"

```

```

        type="xs:dateTime"
        minOccurs="0"
    />
<xs:element name="AppointmentSequenceNumber"
    type="xs:int"
    minOccurs="0"
    />
<xs:element name="AppointmentState"
    type="xs:int"
    minOccurs="0"
    />
<xs:element name="Recurrence"
    type="t:RecurrenceType"
    minOccurs="0"
    />
<xs:element name="FirstOccurrence"
    type="t:OccurrenceInfoType"
    minOccurs="0"
    />
<xs:element name="LastOccurrence"
    type="t:OccurrenceInfoType"
    minOccurs="0"
    />
<xs:element name="ModifiedOccurrences"
    type="t:NonEmptyArrayOfOccurrenceInfoType"
    minOccurs="0"
    />
<xs:element name="DeletedOccurrences"
    type="t:NonEmptyArrayOfDeletedOccurrencesType"
    minOccurs="0"
    />
<xs:element name="MeetingTimeZone"
    type="t:TimeZoneType"
    minOccurs="0"
    />
<xs:element name="StartTimeZone"
    type="t:TimeZoneDefinitionType"
    minOccurs="0"
    />
<xs:element name="EndTimeZone"
    type="t:TimeZoneDefinitionType"
    minOccurs="0"
    />
<xs:element name="ConferenceType"
    type="xs:int"
    minOccurs="0"
    />
<xs:element name="AllowNewTimeProposal"
    type="xs:boolean"
    minOccurs="0"
    />
<xs:element name="IsOnlineMeeting"
    type="xs:boolean"
    minOccurs="0"
    />
<xs:element name="MeetingWorkspaceUrl"
    type="xs:string"
    minOccurs="0"
    />

```

```

<xs:element name="NetShowUrl"
  type="xs:string"
  minOccurs="0"
  />
</xs:sequence>
</xs:extension>
</xs:complexContent>
</xs:complexType>

```

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

Element name	Type	Description
MeetingRequestType	t:MeetingRequestTypeType (section 2.2.5.6)	Specifies the type of meeting request.
IntendedFreeBusyStatus	t:LegacyFreeBusyType ([MS-OXWSCDATA] section 2.2.2.16)	Represents the intended status for the meeting item that is associated with the meeting request.
Start	xs:dateTime ([XMLSCHEMA2])	Represents the start time of the meeting.
End	xs:dateTime	Specifies the end of the duration for a single occurrence of a meeting.
OriginalStart	xs:dateTime	Specifies the original start time for the meeting item (only for occurrences/exceptions).
IsAllDayEvent	xs:boolean ([XMLSCHEMA2])	Specifies whether the meeting is an all-day event.
LegacyFreeBusyStatus	t:LegacyFreeBusyType ([MS-OXWSCDATA] section 2.2.2.16)	Represents the free/busy status of the meeting item.
Location	xs:string ([XMLSCHEMA2])	Represents the location of the meeting.
When	xs:string	Provides information about when the meeting occurs.
IsMeeting	xs:boolean	Indicates whether the calendar item is a meeting or an appointment.
IsCancelled	xs:boolean	Indicates whether the meeting has been

Element name	Type	Description
		cancelled.
IsRecurring	xs:boolean	Indicates whether the meeting is part of a recurring series of meetings.
MeetingRequestWasSent	xs:boolean	Indicates whether a meeting request has been sent to requested attendees.
CalendarItemType	t:CalendarItemTypeType (section 2.2.4.4)	Represents the occurrence type of a meeting item.
MyResponseType	t:ResponseTypeType (section 2.2.5.7)	Identifies the type of the response to the meeting request (sent for the organizer's meeting item).
Organizer	t:SingleRecipientType ([MS-OXWSCDATA] section 2.2.3.60)	Represents the organizer of the meeting.
RequiredAttendees	t:NonEmptyArrayOfAttendeesType (section 2.2.4.14)	Represents attendees that are required to attend the meeting.
OptionalAttendees	t:NonEmptyArrayOfAttendeesType	Represents attendees who are not required to attend the meeting.
Resources	t:NonEmptyArrayOfAttendeesType	Represents a scheduled resource for the meeting.
ConflictingMeetingCount	xs:int ([XMLSCHEMA2])	Represents the number of calendar items that conflict with the meeting item.
AdjacentMeetingCount	xs:int	Represents the total number of calendar items that are adjacent to the meeting time.
ConflictingMeetings	t:NonEmptyArrayOfAllItemsType ([MS-OXWSCDATA] section 2.2.3.42)	Identifies all calendar items that conflict with the meeting time.
AdjacentMeetings	t:NonEmptyArrayOfAllItemsType	Identifies all calendar items that are adjacent to the meeting time.
Duration	xs:string	Represents the duration of the meeting.

Element name	Type	Description
TimeZone	xs:string	Provides a text description of a time zone.
AppointmentReplyTime	xs:dateTime	Represents the date and time that an attendee replied to a meeting request.
AppointmentSequenceNumber	xs:int	Specifies the sequence number of a version of an appointment.
AppointmentState	xs:int	Specifies the status of the appointment. Valid values include: 3: the organizer's meeting request has been sent; the attendee's meeting request has been received
Recurrence	t:RecurrenceType (section 2.2.4.18)	Contains the recurrence pattern for meeting items and meeting requests.
FirstOccurrence	t:OccurrenceInfoType (section 2.2.4.17)	Represents the first occurrence of a recurring meeting item.
LastOccurrence	t:OccurrenceInfoType	Represents the last occurrence of a recurring meeting item.
ModifiedOccurrences	t:NonEmptyArrayOfOccurrenceInfoType (section 2.2.4.16)	Contains an array of recurring meeting item occurrences that have been modified so that they are different from the original instances of the recurrence master item.
DeletedOccurrences	t:NonEmptyArrayOfDeletedOccurrencesType (section 2.2.4.15)	Contains an array of deleted occurrences of a recurring meeting item.
MeetingTimeZone	t:TimeZoneType (section 2.2.4.22)	MAY<5> specify the time zone of the location where the meeting is hosted.
StartTimeZone	t:TimeZoneDefinitionType ([MS-OXWSGTZ] section 2.2.4.12)	SHOULD<6> specify the time zone for the start of the meeting

Element name	Type	Description
		item.
EndTimeZone	t:TimeZoneDefinitionType	SHOULD <7> specify the time zone for the end of the meeting item.
ConferenceType	xs:int	Describes the type of conferencing that is performed with the meeting item. Valid values include: 0 (zero): video conference 1: presentation 2: chat
AllowNewTimeProposal	xs:boolean	Indicates whether a new meeting time can be proposed for the meeting by an attendee.
IsOnlineMeeting	xs:boolean	Indicates whether the meeting is online.
MeetingWorkspaceUrl	xs:string	Contains the URL for the Meeting Workspace that is included in the meeting item.
NetShowUrl	xs:string	Specifies the URL for an online meeting.

2.2.4.13 t:MeetingResponseMessageType Complex Type

The **MeetingResponseMessageType** complex type represents a meeting response in the messaging server store. This complex type extends the **MeetingMessageType** complex type, as specified in section [2.2.4.11](#).

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

2.2.4.14 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>

```

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

Element name	Type	Description
Attendee	t:AttendeeType (section 2.2.4.2)	Represents an attendee or resource for a meeting.

2.2.4.15 t:NonEmptyArrayOfDeletedOccurrencesType Complex Type

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

```

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

```

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

Element name	Type	Description
DeletedOccurrence	t:DeletedOccurrenceInfoType ([MS-OXWSCDATA] section 2.2.3.22)	Represents a deleted occurrence of a recurring calendar item.

2.2.4.16 t:NonEmptyArrayOfOccurrenceInfoType Complex Type

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

```

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

```

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

Element name	Type	Description
Occurrence	t:OccurrenceInfoType (section 2.2.4.17)	Represents a modified occurrence of a recurring calendar item.

2.2.4.17 t:OccurrenceInfoType Complex Type

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

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

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

Element name	Type	Description
ItemId	t:ItemIdType ([MS-OXWSCORE] section 2.2.4.15)	Contains the identifier of a modified occurrence of a recurring calendar item.
Start	xs:dateTime ([XMLSCHEMA2])	Contains the start time of a modified occurrence of a recurring calendar item.
End	xs:dateTime	Contains the end time of a modified occurrence of a recurring calendar item.
OriginalStart	xs:dateTime	Contains the original start time of a modified occurrence of a recurring calendar item.

2.2.4.18 t:RecurrenceType Complex Type

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


```

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

```

The **RecurrencePatternTypes** group specifies the recurrence pattern for calendar items and meeting requests, as specified in [\[MS-OXWSCDATA\]](#) section 2.2.6.1.

The **RecurrenceRangeTypes** group specifies the recurrence patterns with numbered recurrences, non-ending recurrence patterns, and recurrence patterns with a set start and end date, as specified in [\[MS-OXWSCDATA\]](#) section 2.2.6.2.

2.2.4.19 t:RemoveItemType Complex Type

The **RemoveItemType** complex type specifies a response object that is used to remove a meeting item when a meeting cancellation message item is received. This complex type extends the **ResponseObjectType** complex type, as specified in [\[MS-OXWSCDATA\]](#) section 2.2.3.59.

```

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

```

2.2.4.20 t:TentativelyAcceptItemType Complex Type

The **TentativelyAcceptItemType** complex type specifies a response object that is used to tentatively accept a meeting invitation or calendar item. This complex type extends the **WellKnownResponseObjectType** complex type, as specified in [\[MS-OXWSCDATA\]](#) section 2.2.3.65.

```

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

```

2.2.4.21 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>

```

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

Element name	Type	Description
Offset	xs:duration ([XMLSCHEMA2])	Specifies the offset from the duration specified by the BaseOffset element (section 2.2.4.22).
Time	xs:time ([XMLSCHEMA2])	Specifies the time when the time changes between standard time and daylight saving time.

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

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

2.2.4.22 t:TimeZoneType Complex Type

The **TimeZoneType** complex type MAY [<8>](#) represent the time zone of the location where a meeting is hosted.

```

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

```

```

        type="t:TimeChangeType"
      />
    </xs:sequence>
  </xs:sequence>
  <xs:attribute name="TimeZoneName"
    type="xs:string"
    use="optional"
  />
</xs:complexType>

```

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

Element name	Type	Description
BaseOffset	xs:duration ([XMLSCHEMA2])	Specifies the hourly offset from Coordinated Universal Time (UTC) for the current time zone.
Standard	t:TimeChangeType (section 2.2.4.21)	Specifies the date and time when the time changes from daylight saving time to standard time.
Daylight	t:TimeChangeType	Specifies the date and time when the time changes from standard time to daylight saving time.

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

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

2.2.5 Simple Types

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

Simple type	Description
CalendarItemCreateOrDeleteOperationType (section 2.2.5.1)	Specifies how meeting requests and cancellations are handled.
CalendarItemTypeType (section 2.2.5.2)	Identifies the type of a calendar item.
CalendarItemUpdateOperationType (section 2.2.5.3)	Specifies how meeting updates are communicated after a calendar item is updated.
CalendarPermissionLevelType (section 2.2.5.4)	Specifies the permission level that a user has on a Calendar folder.
CalendarPermissionReadAccessType (section 2.2.5.5)	Specifies the permissions a user has to view items in a Calendar folder.
MeetingRequestTypeType (section 2.2.5.6)	Describes the types of meeting requests.

Simple type	Description
ResponseTypeType (section 2.2.5.7)	Represents the types of recipient (1) responses that are received for a meeting.

2.2.5.1 t:CalendarItemCreateOrDeleteOperationType Simple Type

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

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

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

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

2.2.5.2 t:CalendarItemTypeType Simple Type

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

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

The following table lists the **xs:string** ([IXMLSCHEMA2](#)) enumeration values that are defined by the **CalendarItemTypeType** simple type.

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

2.2.5.3 t:CalendarItemUpdateOperationType Simple Type

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

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

```

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

```

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

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

2.2.5.4 t:CalendarPermissionLevelType Simple Type

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

```

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

```

```

        value="FreeBusyTimeOnly"
    />
<xs:enumeration
    value="None"
    />
<xs:enumeration
    value="NoneditingAuthor"
    />
<xs:enumeration
    value="Owner"
    />
<xs:enumeration
    value="PublishingAuthor"
    />
<xs:enumeration
    value="PublishingEditor"
    />
<xs:enumeration
    value="Reviewer"
    />
</xs:restriction>
</xs:simpleType>

```

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

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

Value	Meaning
PublishingEditor	The user can create, read, edit, and delete all items in the folder, and create subfolders.
Reviewer	The user can read all items in the folder.

2.2.5.5 t:CalendarPermissionReadAccessType Simple Type

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

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

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

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

2.2.5.6 t:MeetingRequestType Simple Type

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

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



```

        value="None"
      />
    <xs:enumeration
      value="FullUpdate"
    />
    <xs:enumeration
      value="InformationalUpdate"
    />
    <xs:enumeration
      value="NewMeetingRequest"
    />
    <xs:enumeration
      value="Outdated"
    />
    <xs:enumeration
      value="SilentUpdate"
    />
    <xs:enumeration
      value="PrincipalWantsCopy"
    />
  </xs:restriction>
</xs:simpleType>

```

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

Value	Meaning
None	Indicates that the meeting request has no meeting type.
FullUpdate	Identifies the meeting request as an updated meeting request. This value indicates that the attendee has not yet responded to the original meeting request.
InformationalUpdate	Identifies the meeting request as an updated meeting request. This value indicates that the attendee had previously accepted or tentatively accepted the original meeting request.
NewMeetingRequest	Identifies the meeting request as a new meeting request.
Outdated	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.

2.2.5.7 t:ResponseTypeType Simple Type

The **ResponseTypeType** simple type specifies the type of recipient (1) response that is received for a meeting.

```

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

```

```

    value="Unknown"
  />
  <xs:enumeration
    value="Organizer"
  />
  <xs:enumeration
    value="Tentative"
  />
  <xs:enumeration
    value="Accept"
  />
  <xs:enumeration
    value="Decline"
  />
  <xs:enumeration
    value="NoResponseReceived"
  />
</xs:restriction>
</xs:simpleType>

```

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

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

2.2.6 Attributes

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

2.2.7 Groups

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

2.2.8 Attribute Groups

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

3 Protocol Details

The client side of this protocol is simply a pass-through. That is, no additional timers or other state is required on the client side of this protocol. Calls made by the higher-layer protocol or application are passed directly to the transport, and the results returned by the transport are passed directly back to the higher-layer protocol or application.

3.1 ExchangeServicePortType Server Details

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

3.1.1 Abstract Data Model

None.

3.1.2 Timers

None.

3.1.3 Initialization

None.

3.1.4 Message Processing Events and Sequencing Rules

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

Operation name	Description
CopyItem ([MS-OXWSCORE] section 3.1.4.1)	Copies calendar-related items on the server.
CreateItem ([MS-OXWSCORE] section 3.1.4.2)	Creates calendar-related items on the server. Can also be used to cancel a meeting, and when a meeting is cancelled, it can be used to remove the meeting item and corresponding meeting cancellation message from the server.
DeleteItem ([MS-OXWSCORE] section 3.1.4.3)	Deletes calendar-related items on the server.
GetItem ([MS-OXWSCORE] section 3.1.4.4)	Retrieves calendar-related items from the server.
MoveItem ([MS-OXWSCORE] section 3.1.4.6)	Moves calendar-related items on the server.
UpdateItem ([MS-OXWSCORE] section 3.1.4.8)	Updates calendar-related items on the server.

3.1.4.1 CopyItem Operation

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

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

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

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

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

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

Message name	Description
CopyItemSoapIn	<p>The CopyItemSoapIn message is specified in [MS-OXWSCORE] section 3.1.4.1.1.1. It specifies the CopyItem operation request to copy one or more calendar-related items on the server.</p> <p>The CopyItem ([MS-OXWSCORE] section 3.1.4.1.2.1) element that specifies the XML request MUST contain the following child elements:</p> <ul style="list-style-type: none">ToFolderId ([MS-OXWSCORE] section 2.2.4.1)ItemIds ([MS-OXWSCORE] section 2.2.4.1) <p>For each item being copied that is not a recurring calendar item, the ItemIds element MUST contain an ItemId child element ([MS-OXWSCORE] section 2.2.4.9).</p> <p>For each item being copied that is a recurring calendar item, the ItemIds element SHOULD contain a RecurringMasterItemId child element ([MS-OXWSCORE] section 2.2.4.9).</p>
CopyItemSoapOut	<p>The CopyItemSoapOut message is specified in [MS-OXWSCORE] section 3.1.4.1.1.2. It specifies the server response to the CopyItem operation request.</p>

3.1.4.2 CreateItem Operation

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

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

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

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

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

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

Message name	Description
CreateItemSoapIn	<p>The CreateItemSoapIn message is specified in [MS-OXWSCORE] section 3.1.4.2.1.1. It specifies the CreateItem operation request to create one or more calendar-related items on the server.</p> <p>The Items child element ([MS-OXWSCDATA] section 2.2.3.42) of the CreateItem element ([MS-OXWSCORE] section 3.1.4.2.2.1) that specifies the XML request MUST contain at least one of the following elements:</p> <ul style="list-style-type: none"> CalendarItemType (section 2.2.4.4) MeetingMessageType (section 2.2.4.11) MeetingRequestMessageType (section 2.2.4.12) MeetingCancellationMessageType (section 2.2.4.10) AcceptItemType (section 2.2.4.1) TentativelyAcceptItemType (section 2.2.4.20) DeclineItemType (section 2.2.4.9) CancelCalendarItemType (section 2.2.4.8)

Message name	Description
	RemoveItemType (section 2.2.4.19) All other elements MUST be empty.
CreateItemSoapOut	The CreateItemSoapOut message is specified in [MS-OXWSCORE] section 3.1.4.2.1.2. It specifies the server response to the CreateItem operation request.

3.1.4.3 DeleteItem Operation

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

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

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

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

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

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

Message name	Description
DeleteItemSoapIn	<p>The DeleteItemSoapIn message is specified in [MS-OXWSCORE] section 3.1.4.3.1.1. It specifies the DeleteItem operation request to delete one or more calendar-related items on the server.</p> <p>The DeleteItem element ([MS-OXWSCORE] section 3.1.4.3.2.1) that specifies the XML request MUST contain the ItemIds child element ([MS-OXWSCORE] section 3.1.4.3.3.2).</p> <p>For each item being deleted that is not a recurring calendar item, the ItemIds element MUST contain an ItemId child element ([MS-OXWSCORE] section 2.2.4.9).</p> <p>For each item being deleted that is a recurring calendar item, the ItemIds element can contain a RecurringMasterItemId child element ([MS-OXWSCORE] section 2.2.4.9) or an OccurrenceItemId child element ([MS-OXWSCORE] section 2.2.4.9).</p>

Message name	Description
	section 2.2.4.9).
DeleteItemSoapOut	The DeleteItemSoapOut message is specified in [MS-OXWSCORE] section 3.1.4.3.1.2. It specifies the server response to the DeleteItem operation request.

3.1.4.4 GetItem Operation

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

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

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

The following is the WSDL binding specification for the **GetItem** operation. [<9>](#)

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

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

Message name	Description
GetItemSoapIn	<p>The GetItemSoapIn message is specified in [MS-OXWSCORE] section 3.1.4.4.1.1. It specifies the GetItem operation request to retrieve one or more calendar-related items from the server.</p> <p>The GetItem element ([MS-OXWSCORE] section 3.1.4.4.2.1) that specifies the XML request MUST contain the following child elements:</p> <p>ItemShape ([MS-OXWSCORE] section 3.1.4.4.3.2)</p> <p>ItemIds ([MS-OXWSCORE] section 3.1.4.4.3.2)</p> <p>For each item being retrieved that is not a recurring calendar item, the ItemIds element MUST contain an ItemId child element ([MS-OXWSCORE] section 2.2.4.9).</p> <p>For each item being retrieved that is a recurring calendar item, the ItemIds element</p>

Message name	Description
	SHOULD contain a RecurringMasterItemId child element ([MS-OXWSCORE] section 2.2.4.9) or an OccurrenceItemId child element ([MS-OXWSCORE] section 2.2.4.9).
GetItemSoapOut	The GetItemSoapOut message is specified in [MS-OXWSCORE] section 3.1.4.4.1.2. It specifies the server response to the GetItem operation request.

3.1.4.5 MoveItem Operation

The **MoveItem** operation moves one or more calendar-related items on the server. This operation is specified in [\[MS-OXWSCORE\]](#) section 3.1.4.6.

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

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

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

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

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

Message name	Description
MoveItemSoapIn	<p>The MoveItemSoapIn message is specified in [MS-OXWSCORE] section 3.1.4.6.1.1. It specifies the MoveItem operation request to move one or more calendar-related items on the server.</p> <p>The MoveItem element ([MS-OXWSCORE] section 3.1.4.6.2.1) that specifies the XML request MUST contain the following child elements:</p> <ul style="list-style-type: none"> ToFolderId ([MS-OXWSCORE] section 2.2.4.1) ItemIds ([MS-OXWSCORE] section 2.2.4.1) <p>For each item being moved that is not a recurring calendar item, the ItemIds element MUST contain an ItemId child element ([MS-OXWSCORE] section 2.2.4.9).</p> <p>For each item being moved that is a recurring calendar item, the ItemIds element</p>

Message name	Description
	SHOULD contain a RecurringMasterItemId child element ([MS-OXWScore] section 2.2.4.9).
MoveItemSoapOut	The MoveItemSoapOut message is specified in [MS-OXWScore] section 3.1.4.6.1.2. It specifies the server response to the MoveItem operation request.

3.1.4.6 UpdateItem Operation

The **UpdateItem** operation updates one or more calendar-related items on the server. This operation is specified in [\[MS-OXWScore\]](#) section 3.1.4.8.

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

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

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

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

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

Message name	Description
UpdateItemSoapIn	<p>The UpdateItemSoapIn message is specified in [MS-OXWScore] section 3.1.4.8.1.1. It specifies the UpdateItem operation request to update one or more calendar-related items on the server.</p> <p>The UpdateItem element ([MS-OXWScore] section 3.1.4.8) that specifies the XML request MUST contain an ItemChanges element ([MS-OXWScore] section 3.1.4.8.3.2) that contains one or more ItemChange elements ([MS-OXWScore] section 3.1.4.8.3.9).</p> <p>For each item being updated that is not a recurring calendar item, the ItemChange element MUST contain an ItemId child element ([MS-OXWScore] section 3.1.4.8.3.7).</p> <p>For each item being updated that is a recurring calendar item, the ItemChange element can contain a RecurringMasterItemId child element ([MS-</p>

Message name	Description
	OXWScore section 3.1.4.8.3.7) or an OccurrenceItemId child element (MS-OXWScore section 3.1.4.8.3.7).
UpdateItemSoapOut	The UpdateItemSoapOut message is specified in MS-OXWScore section 3.1.4.8.1.2. It specifies the server response to the UpdateItem operation request.

3.1.5 Timer Events

None.

3.1.6 Other Local Events

None.

Preliminary

4 Protocol Examples

4.1 Copying a Calendar Item

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

Request:

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

Response:

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

4.2 Creating a Calendar Item

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

Request:

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

Response:

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

```

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

```

4.3 Deleting a Calendar Item

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

Request:

```

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

```

Response:

```

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

```

```

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

```

4.4 Moving a Calendar Item

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

Request:

```

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

```

Response:

```

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

```

```

    <t:ServerVersionInfo MajorVersion="8" MinorVersion="1" MajorBuildNumber="344"
MinorBuildNumber="0" Version="Exchange2010"
xmlns:t="http://schemas.microsoft.com/exchange/services/2006/types" />
  </soap:Header>
  <soap:Body>
    <MoveItemResponse xmlns:m="http://schemas.microsoft.com/exchange/services/2006/messages"
xmlns:t="http://schemas.microsoft.com/exchange/services/2006/types"
xmlns="http://schemas.microsoft.com/exchange/services/2006/messages">
      <m:ResponseMessages>
        <m:MoveItemResponseMessage ResponseClass="Success">
          <m:ResponseCode>NoError</m:ResponseCode>
          <m:Items>
            <t:Message>
              <t:ItemID Id="AAMkAd" ChangeKey="FwAAABY" />
            </t:Message>
          </m:Items>
        </m:MoveItemResponseMessage>
      </m:ResponseMessages>
    </MoveItemResponse>
  </soap:Body>
</soap:Envelope>

```

4.5 Retrieving a Calendar Item

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

Request:

```

<?xml version="1.0" encoding="utf-8"?>
<soap:Envelope xmlns:soap="http://schemas.xmlsoap.org/soap/envelope/"
xmlns:t="http://schemas.microsoft.com/exchange/services/2006/types">
  <soap:Header>
    <t:RequestServerVersion Version="Exchange2010" />
  </soap:Header>
  <soap:Body>
    <GetItem xmlns="http://schemas.microsoft.com/exchange/services/2006/messages">
      <ItemShape>
        <t:BaseShape>IdOnly</t:BaseShape>
        <t:AdditionalProperties>
          <t:FieldURI FieldURI="item:Subject"/>
        </t:AdditionalProperties>
      </ItemShape>
      <ItemIds>
        <t:ItemId Id="AsdD89=" ChangeKey="Jajs3==" />
      </ItemIds>
    </GetItem>
  </soap:Body>
</soap:Envelope>

```

Response:

```

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

```

```

<soap:Header>
  <t:ServerVersionInfo MajorVersion="8" MinorVersion="1" MajorBuildNumber="344"
MinorBuildNumber="0" Version="Exchange2010"
xmlns:t="http://schemas.microsoft.com/exchange/services/2006/types" />
</soap:Header>
<soap:Body>
  <GetItemResponse xmlns:m="http://schemas.microsoft.com/exchange/services/2006/messages"
xmlns:t="http://schemas.microsoft.com/exchange/services/2006/types"
xmlns="http://schemas.microsoft.com/exchange/services/2006/messages">
    <m:ResponseMessages>
      <m:GetItemResponseMessage ResponseClass="Success">
        <m:ResponseCode>NoError</m:ResponseCode>
        <m:Items>
          <t:CalendarItem>
            <t:ItemId Id="ASUAd" ChangeKey="otlIqB==" />
          </t:CalendarItem>
        </m:Items>
      </m:GetItemResponseMessage>
    </m:ResponseMessages>
  </GetItemResponse>
</soap:Body>
</soap:Envelope>

```

4.6 Updating a Calendar Item

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

Request:

```

<?xml version="1.0" encoding="utf-8"?>
<soap:Envelope xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:m="http://schemas.microsoft.com/exchange/services/2006/messages"
xmlns:t="http://schemas.microsoft.com/exchange/services/2006/types"
xmlns:soap="http://schemas.xmlsoap.org/soap/envelope/">
  <soap:Header>
    <t:RequestServerVersion Version="Exchange2010" />
  </soap:Header>
  <soap:Body>
    <m:UpdateItem ConflictResolution="AlwaysOverwrite"
SendMeetingInvitationsOrCancellations="SendToAllAndSaveCopy">
      <m:ItemChanges>
        <t:ItemChange>
          <t:ItemId Id="AAMkA=" ChangeKey="DwAAA" />
          <t:Updates>
            <t:SetItemField>
              <t:FieldURI FieldURI="item:Subject" />
              <t:CalendarItem>
                <t:Subject>Status Meeting - Rescheduled/Moved</t:Subject>
              </t:CalendarItem>
            </t:SetItemField>
            <t:SetItemField>
              <t:FieldURI FieldURI="calendar:Location" />
              <t:CalendarItem>
                <t:Location>Conf Room 34</t:Location>
              </t:CalendarItem>
            </t:SetItemField>
          </t:Updates>
        </t:ItemChange>
      </m:ItemChanges>
    </m:UpdateItem>
  </soap:Body>
</soap:Envelope>

```



```

        </t:SetItemField>
        <t:SetItemField>
          <t:FieldURI FieldURI="calendar:Start" />
          <t:CalendarItem>
            <t:Start>2009-03-05T17:00:00Z</t:Start>
          </t:CalendarItem>
        </t:SetItemField>
        <t:SetItemField>
          <t:FieldURI FieldURI="calendar:End" />
          <t:CalendarItem>
            <t:End>2009-03-05T18:00:00Z</t:End>
          </t:CalendarItem>
        </t:SetItemField>
      </t:Updates>
    </t:ItemChange>
  </m:ItemChanges>
</m:UpdateItem>
</soap:Body>
</soap:Envelope>

```

Response:

```

<?xml version="1.0" encoding="utf-8"?>
<soap:Envelope xmlns:soap=http://schemas.xmlsoap.org/soap/envelope/
  xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
  xmlns:xsd="http://www.w3.org/2001/XMLSchema">
  <soap:Header>
    <t:ServerVersionInfo MajorVersion="8" MinorVersion="1" MajorBuildNumber="344"
      MinorBuildNumber="0" Version="Exchange2010"
      xmlns:t="http://schemas.microsoft.com/exchange/services/2006/types" />
  </soap:Header>
  <soap:Body>
    <m:UpdateItemResponse
      xmlns:t="http://schemas.microsoft.com/exchange/services/2006/types"
      xmlns:m="http://schemas.microsoft.com/exchange/services/2006/messages">
      <m:ResponseMessages>
        <m:UpdateItemResponseMessage ResponseClass="Success">
          <m:ResponseCode>NoError</m:ResponseCode>
          <m:Items>
            <t:CalendarItem>
              <t:ItemId Id="AAMkA=" ChangeKey="DwAAA" />
            </t:CalendarItem>
          </m:Items>
          <m:ConflictResults>
            <t:Count>0</t:Count>
          </m:ConflictResults>
        </m:UpdateItemResponseMessage>
      </m:ResponseMessages>
    </m:UpdateItemResponse>
  </soap:Body>
</soap:Envelope>

```

5 Security

5.1 Security Considerations for Implementers

None.

5.2 Index of Security Parameters

None.

Preliminary

6 Appendix A: Full WSDL

The XML files that are listed in the following table are required in order to implement the functionality specified in this document.

File name	Description	Section
MS-OXWSMTGS.wsdl	Contains the WSDL for the implementation of this protocol.	6
MS-OXWSCORE-messages.xsd	Contains the XML schema message definitions that are used in this protocol.	[MS-OXWSCORE] section 7.1
MS-OXWSMTGS-types.xsd	Contains the XML schema type definitions that are used in this protocol.	7.2

These files have to be placed in a common folder for the WSDL to validate and operate. Also, any schema files that are included in or imported into the MS-OXWSMTGS-types.xsd or MS-OXWSCORE-messages.xsd schemas have to be placed in the common folder with these files.

This section contains the contents of the MS-OXWSMTGS.wsdl file.

```
<?xml version="1.0" encoding="utf-8"?>
<wsdl:definitions xmlns:soap="http://schemas.xmlsoap.org/wsdl/soap/"
xmlns:tns="http://schemas.microsoft.com/exchange/services/2006/messages"
xmlns:s="http://www.w3.org/2001/XMLSchema"
xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/"
xmlns:t="http://schemas.microsoft.com/exchange/services/2006/types"
targetNamespace="http://schemas.microsoft.com/exchange/services/2006/messages">
  <wsdl:types>
    <xs:schema id="messages" elementFormDefault="qualified" version="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:portType>
</wsdl:definitions>
```

```

</wsdl:operation>
<wsdl:operation name="DeleteItem">
  <wsdl:input message="tns:DeleteItemSoapIn"/>
  <wsdl:output message="tns:DeleteItemSoapOut"/>
</wsdl:operation>
<wsdl:operation name="UpdateItem">
  <wsdl:input message="tns:UpdateItemSoapIn"/>
  <wsdl:output message="tns:UpdateItemSoapOut"/>
</wsdl:operation>
<wsdl:operation name="MoveItem">
  <wsdl:input message="tns:MoveItemSoapIn"/>
  <wsdl:output message="tns:MoveItemSoapOut"/>
</wsdl:operation>
<wsdl:operation name="CopyItem">
  <wsdl:input message="tns:CopyItemSoapIn"/>
  <wsdl:output message="tns:CopyItemSoapOut"/>
</wsdl:operation>
</wsdl:portType>
<wsdl:binding name="ExchangeServiceBinding" type="tns:ExchangeServicePortType">
  <wsdl:documentation>
    <wsi:Claim conformsTo="http://ws-i.org/profiles/basic/1.0"
xmlns:wsi="http://ws-i.org/schemas/conformanceClaim/" />
  </wsdl:documentation>
  <soap:binding style="document" transport="http://schemas.xmlsoap.org/soap/http"/>
  <wsdl:operation name="GetItem">
    <soap:operation
soapAction="http://schemas.microsoft.com/exchange/services/2006/messages/GetItem"/>
    <wsdl:input>
      <soap:header message="tns:GetItemSoapIn" part="Impersonation"
use="literal"/>
      <soap:header message="tns:GetItemSoapIn" part="MailboxCulture"
use="literal"/>
      <soap:header message="tns:GetItemSoapIn" part="RequestVersion"
use="literal"/>
      <soap:header message="tns:GetItemSoapIn" part="TimeZoneContext"
use="literal"/>
      <soap:header message="tns:GetItemSoapIn" part="DateTimePrecision"
use="literal" />
      <soap:body parts="request" use="literal"/>
    </wsdl:input>
    <wsdl:output>
      <soap:body parts="GetItemResult" use="literal"/>
      <soap:header message="tns:GetItemSoapOut" part="ServerVersion"
use="literal"/>
    </wsdl:output>
  </wsdl:operation>
  <wsdl:operation name="CreateItem">
    <soap:operation
soapAction="http://schemas.microsoft.com/exchange/services/2006/messages/CreateItem"/>
    <wsdl:input>
      <soap:header message="tns:CreateItemSoapIn" part="Impersonation"
use="literal"/>
      <soap:header message="tns:CreateItemSoapIn" part="MailboxCulture"
use="literal"/>
      <soap:header message="tns:CreateItemSoapIn" part="RequestVersion"
use="literal"/>
      <soap:header message="tns:CreateItemSoapIn" part="TimeZoneContext"
use="literal"/>
      <soap:body parts="request" use="literal"/>
    </wsdl:input>
  </wsdl:operation>
</wsdl:binding>
</wsdl:service>

```

```

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

```

```

        </wsdl: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:part name="DateTimePrecision" element="t:DateTimePrecision" />
</wsdl:message>
<wsdl:message name="GetItemSoapOut">
    <wsdl:part name="GetItemResult" element="tns:GetItemResponse"/>
    <wsdl:part name="ServerVersion" element="t:ServerVersionInfo"/>
</wsdl:message>
<wsdl:message name="CreateItemSoapIn">
    <wsdl:part name="request" element="tns:CreateItem"/>
    <wsdl:part name="Impersonation" element="t:ExchangeImpersonation"/>
    <wsdl:part name="MailboxCulture" element="t:MailboxCulture"/>
    <wsdl:part name="RequestVersion" element="t:RequestServerVersion"/>
    <wsdl:part name="TimeZoneContext" element="t:TimeZoneContext"/>
</wsdl:message>
<wsdl:message name="CreateItemSoapOut">
    <wsdl:part name="CreateItemResult" element="tns:CreateItemResponse"/>
    <wsdl:part name="ServerVersion" element="t:ServerVersionInfo"/>
</wsdl:message>
<wsdl:message name="DeleteItemSoapIn">
    <wsdl:part name="request" element="tns>DeleteItem"/>
    <wsdl:part name="Impersonation" element="t:ExchangeImpersonation"/>
    <wsdl:part name="MailboxCulture" element="t:MailboxCulture"/>
    <wsdl:part name="RequestVersion" element="t:RequestServerVersion"/>
</wsdl:message>
<wsdl:message name="DeleteItemSoapOut">
    <wsdl:part name="DeleteItemResult" element="tns>DeleteItemResponse"/>
    <wsdl:part name="ServerVersion" element="t:ServerVersionInfo"/>
</wsdl:message>
<wsdl:message name="UpdateItemSoapIn">
    <wsdl:part name="request" element="tns:UpdateItem"/>
    <wsdl:part name="Impersonation" element="t:ExchangeImpersonation"/>
    <wsdl:part name="MailboxCulture" element="t:MailboxCulture"/>
    <wsdl:part name="RequestVersion" element="t:RequestServerVersion"/>

```

```
<wsdl:part name="TimeZoneContext" element="t:TimeZoneContext"/>
</wsdl:message>
<wsdl:message name="UpdateItemSoapOut">
  <wsdl:part name="UpdateItemResult" element="tns:UpdateItemResponse"/>
  <wsdl:part name="ServerVersion" element="t:ServerVersionInfo"/>
</wsdl:message>
<wsdl:message name="MoveItemSoapIn">
  <wsdl:part name="request" element="tns:MoveItem"/>
  <wsdl:part name="Impersonation" element="t:ExchangeImpersonation"/>
  <wsdl:part name="MailboxCulture" element="t:MailboxCulture"/>
  <wsdl:part name="RequestVersion" element="t:RequestServerVersion"/>
</wsdl:message>
<wsdl:message name="MoveItemSoapOut">
  <wsdl:part name="MoveItemResult" element="tns:MoveItemResponse"/>
  <wsdl:part name="ServerVersion" element="t:ServerVersionInfo"/>
</wsdl:message>
<wsdl:message name="CopyItemSoapIn">
  <wsdl:part name="request" element="tns:CopyItem"/>
  <wsdl:part name="Impersonation" element="t:ExchangeImpersonation"/>
  <wsdl:part name="MailboxCulture" element="t:MailboxCulture"/>
  <wsdl:part name="RequestVersion" element="t:RequestServerVersion"/>
</wsdl:message>
<wsdl:message name="CopyItemSoapOut">
  <wsdl:part name="CopyItemResult" element="tns:CopyItemResponse"/>
  <wsdl:part name="ServerVersion" element="t:ServerVersionInfo"/>
</wsdl:message>
</wsdl:definitions>
```

7 Appendix B: Full XML Schema

For ease of implementation, the following sections provide the full XML schema for this protocol.

Schema name	Prefix	Section
Messages schema	m:	[MS-OXWSCORE] section 7.1
Types schema	t:	7.2

These files have to be placed in a common folder in order for the WSDL to validate and operate. Also, any schema files that are included in or imported into the MS-OXWSMTGS-types.xsd or MS-OXWSCORE-messages.xsd schemas have to be placed in the common folder along with the files listed in the table.

7.1 Messages Schema

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

7.2 Types Schema

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

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

File name	Defining specification
MS-OXWSMSG-types.xsd	[MS-OXWSMSG] section 7.1
MS-OXWSGTZ-types.xsd	[MS-OXWSGTZ] section 7.2
MS-OXWSSRCH-types.xsd	[MS-OXWSSRCH] section 7.2
MS-OXWSCDATA-types.xsd	[MS-OXWSCDATA] section 7.2

```
<?xml version="1.0" encoding="utf-8"?>
<xs:schema xmlns:t="http://schemas.microsoft.com/exchange/services/2006/types"
xmlns:xs="http://www.w3.org/2001/XMLSchema"
targetNamespace="http://schemas.microsoft.com/exchange/services/2006/types"
elementFormDefault="qualified" version="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:ResponseTypeType" minOccurs="0"/>
        <xs:element name="LastResponseTime" type="xs:dateTime" minOccurs="0"/>
    </xs:sequence>
</xs:complexType>
<xs:complexType name="CalendarFolderType">
    <xs:complexContent>
        <xs:extension base="t:BaseFolderType">
            <xs:sequence>
                <xs:element name="SharingEffectiveRights"
type="t:CalendarPermissionReadAccessType" minOccurs="0"/>
                <xs:element name="PermissionSet" type="t:CalendarPermissionSetType"
minOccurs="0"/>
            </xs:sequence>
        </xs:extension>
    </xs:complexContent>
</xs:complexType>
<xs:simpleType name="CalendarItemCreateOrDeleteOperationType">
    <xs:restriction base="xs:string">
        <xs:enumeration value="SendToNone"/>
        <xs:enumeration value="SendOnlyToAll"/>
        <xs:enumeration value="SendToAllAndSaveCopy"/>
    </xs:restriction>
</xs:simpleType>
<xs:complexType name="CalendarItemType">
    <xs:complexContent>
        <xs:extension base="t:ItemType">
            <xs:sequence>
                <!-- iCalendar properties -->
                <xs:element name="UID" type="xs:string" minOccurs="0"/>
                <xs:element name="RecurrenceId" type="xs:dateTime" minOccurs="0"/>
                <xs:element name="DateTimeStamp" type="xs:dateTime" minOccurs="0"/>
                <!-- Single and Occurrence only -->
                <xs:element name="Start" type="xs:dateTime" minOccurs="0"/>
                <xs:element name="End" type="xs:dateTime" minOccurs="0"/>
                <!-- Occurrence only -->
                <xs:element name="OriginalStart" type="xs:dateTime" minOccurs="0"/>
                <xs:element name="IsAllDayEvent" type="xs:boolean" minOccurs="0"/>
                <xs:element name="LegacyFreeBusyStatus" type="t:LegacyFreeBusyType"
minOccurs="0"/>
                <xs:element name="Location" type="xs:string" minOccurs="0"/>
                <xs:element name="When" type="xs:string" minOccurs="0"/>
                <xs:element name="IsMeeting" type="xs:boolean" minOccurs="0"/>
                <xs:element name="IsCancelled" type="xs:boolean" minOccurs="0"/>
                <xs:element name="IsRecurring" type="xs:boolean" minOccurs="0"/>
                <xs:element name="MeetingRequestWasSent" type="xs:boolean"
minOccurs="0"/>
            </xs:sequence>
        </xs:extension>
    </xs:complexContent>
</xs:complexType>

```

```

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"
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"
type="t:NonEmptyArrayOfAllItemsType" minOccurs="0"/>
<xs:element name="AdjacentMeetings"
type="t:NonEmptyArrayOfAllItemsType" minOccurs="0"/>
<xs:element name="Duration" type="xs:string" minOccurs="0"/>
<xs:element name="TimeZone" type="xs:string" minOccurs="0"/>
<xs:element name="AppointmentReplyTime" type="xs:dateTime"
minOccurs="0"/>
<xs:element name="AppointmentSequenceNumber" type="xs:int"
minOccurs="0"/>
<xs:element name="AppointmentState" type="xs:int" minOccurs="0"/>
<!-- Recurrence specific data, only valid if CalendarItemType is
RecurringMaster -->
<xs:element name="Recurrence" type="t:RecurrenceType"
minOccurs="0"/>
<xs:element name="FirstOccurrence" type="t:OccurrenceInfoType"
minOccurs="0"/>
<xs:element name="LastOccurrence" type="t:OccurrenceInfoType"
minOccurs="0"/>
<xs:element name="ModifiedOccurrences"
type="t:NonEmptyArrayOfOccurrenceInfoType" minOccurs="0"/>
<xs:element name="DeletedOccurrences"
type="t:NonEmptyArrayOfDeletedOccurrencesType" minOccurs="0"/>
<xs:element name="MeetingTimeZone" type="t:TimeZoneType"
minOccurs="0"/>
<xs:element name="StartTimeZone" type="t:TimeZoneDefinitionType"
minOccurs="0"/>
<xs:element name="EndTimeZone" type="t:TimeZoneDefinitionType"
minOccurs="0"/>
<xs:element name="ConferenceType" type="xs:int" minOccurs="0"/>
<xs:element name="AllowNewTimeProposal" type="xs:boolean"
minOccurs="0"/>
<xs:element name="IsOnlineMeeting" type="xs:boolean" minOccurs="0"/>
<xs:element name="MeetingWorkspaceUrl" type="xs:string"
minOccurs="0"/>
<xs:element name="NetShowUrl" type="xs:string" minOccurs="0"/>
</xs:sequence>
</xs:extension>
</xs:complexContent>
</xs:complexType>
<xs:simpleType name="CalendarItemTypeType">
<xs:restriction base="xs:string">

```

```

        <xs:enumeration value="Single"/>
        <xs:enumeration value="Occurrence"/>
        <xs:enumeration value="Exception"/>
        <xs:enumeration value="RecurringMaster"/>
    </xs:restriction>
</xs:simpleType>
<xs:simpleType name="CalendarItemUpdateOperationType">
    <xs:restriction base="xs:string">
        <xs:enumeration value="SendToNone"/>
        <xs:enumeration value="SendOnlyToAll"/>
        <xs:enumeration value="SendOnlyToChanged"/>
        <xs:enumeration value="SendToAllAndSaveCopy"/>
        <xs:enumeration value="SendToChangedAndSaveCopy"/>
    </xs:restriction>
</xs:simpleType>
<xs:simpleType name="CalendarPermissionLevelType">
    <xs:restriction base="xs:string">
        <xs:enumeration value="None"/>
        <xs:enumeration value="Owner"/>
        <xs:enumeration value="PublishingEditor"/>
        <xs:enumeration value="Editor"/>
        <xs:enumeration value="PublishingAuthor"/>
        <xs:enumeration value="Author"/>
        <xs:enumeration value="NoneditingAuthor"/>
        <xs:enumeration value="Reviewer"/>
        <xs:enumeration value="Contributor"/>
        <xs:enumeration value="FreeBusyTimeOnly"/>
        <xs:enumeration value="FreeBusyTimeAndSubjectAndLocation"/>
        <xs:enumeration value="Custom"/>
    </xs:restriction>
</xs:simpleType>
<xs:simpleType name="CalendarPermissionReadAccessType">
    <xs:restriction base="xs:string">
        <xs:enumeration value="None"/>
        <xs:enumeration value="TimeOnly"/>
        <xs: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>
<xs:complexType name="DeclineItemType">
  <xs:complexContent>
    <xs:extension base="t:WellKnownResponseType"/>
  </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: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:sequence>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>

```

```

        <xs:element name="Organizer" type="t:SingleRecipientType"
minOccurs="0"/>
        <xs:element name="RequiredAttendees"
type="t:NonEmptyArrayOfAttendeesType" minOccurs="0"/>
        <xs:element name="OptionalAttendees"
type="t:NonEmptyArrayOfAttendeesType" minOccurs="0"/>
        <xs:element name="Resources" type="t:NonEmptyArrayOfAttendeesType"
minOccurs="0"/>
        <!-- Conflicting and adjacent meetings -->
        <xs:element name="ConflictingMeetingCount" type="xs:int"
minOccurs="0"/>
        <xs:element name="AdjacentMeetingCount" type="xs:int"
minOccurs="0"/>
        <xs:element name="ConflictingMeetings"
type="t:NonEmptyArrayOfAllItemsType" minOccurs="0"/>
        <xs:element name="AdjacentMeetings"
type="t:NonEmptyArrayOfAllItemsType" minOccurs="0"/>
        <xs:element name="Duration" type="xs:string" minOccurs="0"/>
        <xs:element name="TimeZone" type="xs:string" minOccurs="0"/>
        <xs:element name="AppointmentReplyTime" type="xs:dateTime"
minOccurs="0"/>
        <xs:element name="AppointmentSequenceNumber" type="xs:int"
minOccurs="0"/>
        <xs:element name="AppointmentState" type="xs:int" minOccurs="0"/>
        <!-- Recurrence specific data, only valid if CalendarItemType is
RecurringMaster -->
        <xs:element name="Recurrence" type="t:RecurrenceType"
minOccurs="0"/>
        <xs:element name="FirstOccurrence" type="t:OccurrenceInfoType"
minOccurs="0"/>
        <xs:element name="LastOccurrence" type="t:OccurrenceInfoType"
minOccurs="0"/>
        <xs:element name="ModifiedOccurrences"
type="t:NonEmptyArrayOfOccurrenceInfoType" minOccurs="0"/>
        <xs:element name="DeletedOccurrences"
type="t:NonEmptyArrayOfDeletedOccurrencesType" minOccurs="0"/>
        <xs:element name="MeetingTimeZone" type="t:TimeZoneType"
minOccurs="0"/>
        <xs:element name="StartTimeZone" type="t:TimeZoneDefinitionType"
minOccurs="0"/>
        <xs:element name="EndTimeZone" type="t:TimeZoneDefinitionType"
minOccurs="0"/>
        <xs:element name="ConferenceType" type="xs:int" minOccurs="0"/>
        <xs:element name="AllowNewTimeProposal" type="xs:boolean"
minOccurs="0"/>
        <xs:element name="IsOnlineMeeting" type="xs:boolean" minOccurs="0"/>
        <xs:element name="MeetingWorkspaceUrl" type="xs:string"
minOccurs="0"/>
        <xs:element name="NetShowUrl" type="xs:string" minOccurs="0"/>
    </xs:sequence>
</xs:extension>
</xs:complexContent>
</xs:complexType>
<xs: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:restriction>
</xs:simpleType>

```

```

        <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>
```

8 Appendix C: Product Behavior

The information in this specification is applicable to the following Microsoft products or supplemental software. References to product versions include released service packs:

- Microsoft® Exchange Server 2007
- Microsoft® Exchange Server 2010
- Microsoft® Exchange Server 15 Technical Preview

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

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

[<1> Section 2.2.4:](#) Exchange 2007 supports the **TimeZoneType** complex type. Exchange 2010 does not support the **TimeZoneType** complexType.

[<2> Section 2.2.4.4:](#) Exchange 2007 supports the **MeetingTimeZone** element. Exchange 2010 does not support the **MeetingTimeZone** element.

[<3> Section 2.2.4.4:](#) Exchange 2007 does not support the **StartTimeZone** element.

[<4> Section 2.2.4.4:](#) Exchange 2007 does not support the **EndTimeZone** element.

[<5> Section 2.2.4.12:](#) Exchange 2007 supports the **MeetingTimeZone** element. Exchange 2010 does not support the **MeetingTimeZone** element.

[<6> Section 2.2.4.12:](#) Exchange 2007 does not support the **StartTimeZone** element.

[<7> Section 2.2.4.12:](#) Exchange 2007 does not support the **EndTimeZone** element.

[<8> Section 2.2.4.22:](#) Exchange 2007 supports the **TimeZoneType** complex type. Exchange 2010 does not support the **TimeZoneType** complexType.

[<9> Section 3.1.4.4:](#) Exchange 2007, the initial release version of Exchange 2010, and Exchange 2010 SP1 do not include the **DateTimePrecision** part.

9 Change Tracking

This section identifies changes that were made to the [MS-OXWSMTGS] protocol document between the October 2011 and January 2012 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.

Section	Tracking number (if applicable) and description	Major change (Y or N)	Change type
1 Introduction	Updated content to describe the types of items that the protocol enables clients to act upon.	N	Content updated.
1.3 Overview	Updated content to describe the types of items that the protocol enables clients to act upon.	N	Content updated.
1.4 Relationship to Other Protocols	Added information about this protocol's relationship to the Mailbox Search Web Service Protocol.	N	Content updated.
1.6 Applicability Statement	Updated content to describe the types of items that the protocol enables clients to act upon.	N	Content updated.
2.2.1 Namespaces	Removed table row where the Prefix column contained 'targetNamespace'.	N	Content updated.
2.2.4.3 t:CalendarFolderType Complex Type	Updated the description of the SharingEffectiveRights child element.	N	Content updated.
2.2.4.4 t:CalendarItemType Complex Type	Updated the description of the AppointmentState element.	N	Content updated.
2.2.4.4 t:CalendarItemType Complex Type	Updated the description of the ConferenceType element.	N	Content updated.

Section	Tracking number (if applicable) and description	Major change (Y or N)	Change type
2.2.4.11 t:MeetingMessageType Complex Type	Updated the description of the UID child element.	N	Content updated.
2.2.4.12 t:MeetingRequestMessageType Complex Type	Updated the description of the AppointmentState element.	N	Content updated.
2.2.4.12 t:MeetingRequestMessageType Complex Type	Updated the description of the ConferenceType element.	N	Content updated.
2.2.4.21 t:TimeChangeType Complex Type	Updated the description of the Offset element to add a section reference for the BaseOffset element.	N	Content updated.
2.2.4.22 t:TimeZoneType Complex Type	Updated content to specify the TimeZoneName attribute.	Y	Content updated.
2.2.5.1 t:CalendarItemCreateOrDeleteOperationType Simple Type	Updated the meaning of enumeration values SendToNone, SendOnlyToAll, and SendToAllAndSaveCopy.	N	Content updated.
2.2.5.3 t:CalendarItemUpdateOperationType Simple Type	Updated the meaning of values SendToAllAndSaveCopy and SendToChangedAndSaveCopy to specify that a copy of the updated meeting request is saved in the Sent Items folder.	N	Content updated.
2.2.5.3 t:CalendarItemUpdateOperationType Simple Type	Updated the meaning of enumeration values SendOnlyToChanged and SendToChangedAndSaveCopy to specify which attendees will receive a meeting update.	N	Content updated.
2.2.5.6 t:MeetingRequestTypeType Simple Type	Updated the meaning of enumeration values FullUpdate and InformationalUpdate.	N	Content updated.
3.1.4 Message Processing Events and Sequencing Rules	Updated the description of each operation.	N	Content updated.
3.1.4.1 CopyItem Operation	Changed "calendar items" to "calendar-related items" in the operation definition.	N	Content updated.
3.1.4.1 CopyItem Operation	Updated the description of the CopyItemSoapIn message to specify requirements for message contents in the context of this protocol.	Y	Content updated.

Section	Tracking number (if applicable) and description	Major change (Y or N)	Change type
3.1.4.2 CreateItem Operation	Updated the operation definition to specify the purpose of the operation.	N	Content updated.
3.1.4.2 CreateItem Operation	Updated the description of the CreateItemSoapIn message to specify requirements for message contents in the context of this protocol.	Y	Content updated.
3.1.4.3 DeleteItem Operation	Changed "calendar items" to "calendar-related items" in the operation definition.	N	Content updated.
3.1.4.3 DeleteItem Operation	Updated the description of the DeleteItemSoapIn message to specify requirements for message contents in the context of this protocol.	Y	Content updated.
3.1.4.4 GetItem Operation	Changed "calendar items" to "calendar-related items" in the operation definition.	N	Content updated.
3.1.4.4 GetItem Operation	Updated the description of the GetItemSoapIn message to specify requirements for message contents in the context of this protocol.	Y	Content updated.
3.1.4.5 MoveItem Operation	Changed "calendar items" to "calendar-related items" in the operation definition.	N	Content updated.
3.1.4.5 MoveItem Operation	Updated the description of the MoveItemSoapIn message to specify requirements for message contents in the context of this protocol.	Y	Content updated.
3.1.4.6 UpdateItem Operation	Changed "calendar items" to "calendar-related items" in the operation definition.	N	Content updated.
3.1.4.6 UpdateItem Operation	Updated the description of the UpdateItemSoapIn message to specify requirements for message contents in the context of this protocol.	Y	Content updated.
8 Appendix C: Product Behavior	Added Exchange 15 Technical Preview to the list of applicable product versions.	Y	Content updated.

10 Index

A

Abstract data model
[server](#) 43
[Applicability](#) 8
[Attribute groups](#) 42
[Attributes](#) 42

C

[Capability negotiation](#) 8
[Change tracking](#) 73
[Complex types](#) 10
[t:AcceptItemType Complex Type](#) 11
[t:AttendeeType Complex Type](#) 11
[t:CalendarFolderType Complex Type](#) 12
[t:CalendarItemType Complex Type](#) 12
[t:CalendarPermissionSetType Complex Type](#) 19
[t:CalendarPermissionType Complex Type](#) 20
[t:CalendarViewType Complex Type](#) 21
[t:CancelCalendarItemType Complex Type](#) 21
[t:DeclineItemType Complex Type](#) 22
[t:MeetingCancellationMessageType Complex Type](#) 22
[t:MeetingMessageType Complex Type](#) 22
[t:MeetingRequestMessageType Complex Type](#) 24
[t:MeetingResponseMessageType Complex Type](#) 30
[t:NonEmptyArrayOfAttendeesType Complex Type](#) 30
[t:NonEmptyArrayOfDeletedOccurrencesType Complex Type](#) 31
[t:NonEmptyArrayOfOccurrenceInfoType Complex Type](#) 31
[t:OccurrenceInfoType Complex Type](#) 32
[t:RecurrenceType Complex Type](#) 32
[t:RemoveItemType Complex Type](#) 33
[t:TentativelyAcceptItemType Complex Type](#) 33
[t:TimeChangeType Complex Type](#) 33
[t:TimeZoneType Complex Type](#) 34

D

Data model - abstract
[server](#) 43

E

Events
[local - server](#) 50
[timer - server](#) 50

F

[Fields - vendor-extensible](#) 8
[Full WSDL](#) 59

G

[Glossary](#) 5
[Groups](#) 42

I

[Implementer - security considerations](#) 58
[Index of security parameters](#) 58
[Informative references](#) 6
Initialization
[server](#) 43
[Introduction](#) 5

L

Local events
[server](#) 50

M

Message processing
[server](#) 43
Messages
[attribute groups](#) 42
[attributes](#) 42
[complex types](#) 10
[elements](#) 9
[enumerated](#) 9
[groups](#) 42
[namespaces](#) 9
[simple types](#) 35
[syntax](#) 9
[t:AcceptItemType Complex Type complex type](#) 11
[t:AttendeeType Complex Type complex type](#) 11
[t:CalendarFolderType Complex Type complex type](#) 12
[t:CalendarItemCreateOrDeleteOperationType Simple Type simple type](#) 36
[t:CalendarItemType Complex Type complex type](#) 12
[t:CalendarItemTypeType Simple Type simple type](#) 37
[t:CalendarItemUpdateOperationType Simple Type simple type](#) 37
[t:CalendarPermissionLevelType Simple Type simple type](#) 38
[t:CalendarPermissionReadAccessType Simple Type simple type](#) 40
[t:CalendarPermissionSetType Complex Type complex type](#) 19
[t:CalendarPermissionType Complex Type complex type](#) 20
[t:CalendarViewType Complex Type complex type](#) 21
[t:CancelCalendarItemType Complex Type complex type](#) 21
[t:DeclineItemType Complex Type complex type](#) 22

- [t:MeetingCancellationMessageType Complex Type complex type](#) 22
- [t:MeetingMessageType Complex Type complex type](#) 22
- [t:MeetingRequestMessageType Complex Type complex type](#) 24
- [t:MeetingRequestType Simple Type simple type](#) 40
- [t:MeetingResponseMessageType Complex Type complex type](#) 30
- [t:NonEmptyArrayOfAttendeesType Complex Type complex type](#) 30
- [t:NonEmptyArrayOfDeletedOccurrencesType Complex Type complex type](#) 31
- [t:NonEmptyArrayOfOccurrenceInfoType Complex Type complex type](#) 31
- [t:OccurrenceInfoType Complex Type complex type](#) 32
- [t:RecurrenceType Complex Type complex type](#) 32
- [t:RemoveItemComplexType Complex Type complex type](#) 33
- [t:ResponseType Simple Type simple type](#) 41
- [t:TentativelyAcceptItemComplexType Complex Type complex type](#) 33
- [t:TimeChangeType Complex Type complex type](#) 33
- [t:TimeZoneType Complex Type complex type](#) 34
- [transport](#) 9

N

- [Namespaces](#) 9
- [Normative references](#) 6

O

Operations

- [CopyItem Operation](#) 44
- [CreateItem Operation](#) 45
- [DeleteItem Operation](#) 46
- [GetItem Operation](#) 47
- [MoveItem Operation](#) 48
- [UpdateItem Operation](#) 49
- [Overview \(synopsis\)](#) 7

P

- [Parameters - security index](#) 58
- [Preconditions](#) 7
- [Prerequisites](#) 7
- [Product behavior](#) 72

R

- [References](#) 6
 - [informative](#) 6
 - [normative](#) 6
- [Relationship to other protocols](#) 7

S

- Security

- [implementer considerations](#) 58
- [parameter index](#) 58

Sequencing rules

- [server](#) 43

Server

- [abstract data model](#) 43
- [CopyItem Operation operation](#) 44
- [CreateItem Operation operation](#) 45
- [DeleteItem Operation operation](#) 46
- [GetItem Operation operation](#) 47
- [initialization](#) 43
- [local events](#) 50
- [message processing](#) 43
- [MoveItem Operation operation](#) 48
- [sequencing rules](#) 43
- [timer events](#) 50
- [timers](#) 43
- [UpdateItem Operation operation](#) 49
- [Simple types](#) 35
 - [t:CalendarItemCreateOrDeleteOperationType Simple Type](#) 36
 - [t:CalendarItemType Simple Type](#) 37
 - [t:CalendarItemUpdateOperationType Simple Type](#) 37
 - [t:CalendarPermissionLevelType Simple Type](#) 38
 - [t:CalendarPermissionReadAccessType Simple Type](#) 40
 - [t:MeetingRequestType Simple Type](#) 40
 - [t:ResponseType Simple Type](#) 41

- [Standards assignments](#) 8

Syntax

- [messages - overview](#) 9

T

- [t:AcceptItemComplexType Complex Type complex type](#) 11
- [t:AttendeeComplexType Complex Type complex type](#) 11
- [t:CalendarFolderComplexType Complex Type complex type](#) 12
- [t:CalendarItemCreateOrDeleteOperationType Simple Type simple type](#) 36
- [t:CalendarItemType Complex Type complex type](#) 12
- [t:CalendarItemType Simple Type simple type](#) 37
- [t:CalendarItemUpdateOperationType Simple Type simple type](#) 37
- [t:CalendarPermissionLevelType Simple Type simple type](#) 38
- [t:CalendarPermissionReadAccessType Simple Type simple type](#) 40
- [t:CalendarPermissionSetComplexType Complex Type complex type](#) 19
- [t:CalendarPermissionType Complex Type complex type](#) 20
- [t:CalendarViewComplexType Complex Type complex type](#) 21
- [t:CancelCalendarItemComplexType Complex Type complex type](#) 21
- [t:DeclineItemComplexType Complex Type complex type](#) 22
- [t:MeetingCancellationMessageType Complex Type complex type](#) 22
- [t:MeetingMessageType Complex Type complex type](#) 22

[t:MeetingRequestMessageType Complex Type complex type](#) 24
[t:MeetingRequestTypeType Simple Type simple type](#) 40
[t:MeetingResponseMessageType Complex Type complex type](#) 30
[t:NonEmptyArrayOfAttendeesType Complex Type complex type](#) 30
[t:NonEmptyArrayOfDeletedOccurrencesType Complex Type complex type](#) 31
[t:NonEmptyArrayOfOccurrenceInfoType Complex Type complex type](#) 31
[t:OccurrenceInfoType Complex Type complex type](#) 32
[t:RecurrenceType Complex Type complex type](#) 32
[t:RemoveItemType Complex Type complex type](#) 33
[t:ResponseTypeType Simple Type simple type](#) 41
[t:TentativelyAcceptItemType Complex Type complex type](#) 33
[t:TimeChangeType Complex Type complex type](#) 33
[t:TimeZoneType Complex Type complex type](#) 34
Timer events
[server](#) 50
Timers
[server](#) 43
[Tracking changes](#) 73
[Transport](#) 9
Types
[complex](#) 10
[simple](#) 35

V

[Vendor-extensible fields](#) 8
[Versioning](#) 8

W

[WSDL](#) 59