[MS-ASCAL]:
ActiveSync Calendar Class Protocol Specification

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Revision Summary

Date	Revision History	Revision Class	Comments
12/03/2008	1.0.0	Major	Initial Release.
04/10/2009	2.0.0	Major	Updated technical content and applicable product releases.
07/15/2009	3.0.0	Major	Revised and edited for technical content.
11/04/2009	4.0.0	Major	Updated and revised the technical content.
02/10/2010	5.0.0	Major	Updated and revised the technical content.
05/05/2010	6.0.0	Major	Updated and revised the technical content.
08/04/2010	7.0	Major	Significantly changed the technical content.
11/03/2010	8.0	Major	Significantly changed the technical content.
03/18/2011	8.1	Minor	Clarified the meaning of the technical content.
08/05/2011	9.0	Major	Significantly changed the technical content.

Table of Contents

1   Introduction

The ActiveSync Calendar Class Protocol enables the communication of calendar data between a mobile device and the server in the ActiveSync protocol.

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]:

resource
XML

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

ghosted
Globally Routable User Agent URI (GRUU)
meeting
meeting request
recipient
recurrence pattern
recurring series
reminder
Uniform Resource Locator (URL)
user agent client (UAC)
Wireless Application Protocol (WAP) Binary XML (WBXML)
XML element
XML namespace
XML schema
XML schema definition (XSD)

The following terms are specific to this document:

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

1.2   References

1.2.1   Normative References

We conduct frequent surveys of the normative references to assure their continued availability. If you have any issue with finding a normative reference, please contact dochelp@microsoft.com. We will assist you in finding the relevant information. Please check the archive site, http://msdn2.microsoft.com/en-us/library/E4BD6494-06AD-4aed-9823-445E921C9624, as an additional source.

[MS-ASAIRS] Microsoft Corporation, "ActiveSync AirSyncBase Namespace Protocol Specification".

[MS-ASCMD] Microsoft Corporation, "ActiveSync Command Reference Protocol Specification".

[MS-ASDTYPE] Microsoft Corporation, "ActiveSync Data Types".

[MS-ASWBXML] Microsoft Corporation, "ActiveSync WAP Binary XML (WBXML) Protocol Specification".

[MS-OXOCAL] Microsoft Corporation, "Appointment and Meeting Object Protocol Specification".

[MS-SIPRE] Microsoft Corporation, "Session Initiation Protocol (SIP) Routing Extensions".

[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

[XML] World Wide Web Consortium, "Extensible Markup Language (XML) 1.0 (Fourth Edition)", W3C Recommendation, August 2006, http://www.w3.org/TR/2006/REC-xml-20060816/

[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/

1.2.2   Informative References

[MS-ASHTTP] Microsoft Corporation, "ActiveSync HTTP Protocol Specification".

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

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

1.3   Overview

This protocol specifies an **XML** representation of calendar data that is used for client and server communication as described in [MS-ASCMD]. The calendar data is included in protocol command requests when calendar data is sent from the client to the server, and is included in protocol command responses when calendar data is returned from the server to the client.

1.4   Relationship to Other Protocols

This protocol specifies an XML representation of calendar data that is used by the command requests and command responses that are described in [MS-ASCMD]. The protocol that controls the transmission of these commands between client and server is described in [MS-ASHTTP]. The **Wireless Application Protocol (WAP) Binary XML (WBXML)**, as described in [MS-ASWBXML], is used to transmit the XML markup that constitutes the request body and the response body.

Some elements in the **Calendar** class support being **ghosted**. The use of ghosted properties is described in [MS-ASCMD] section 2.2.3.154.

All data types in this document conform to the data type definitions that are described in [MS-ASDTYPE]. Common **XML schema** elements that are used by other classes are defined in [MS-ASAIRS].

1.5   Prerequisites/Preconditions

None.

1.6 Applicability Statement

This protocol describes a set of **XML elements** that are used to communicate calendar data when using the commands described in [MS-ASCMD]. This set of elements is applicable when communicating calendar and **meeting request** information between a mobile device and a server. These elements are not applicable when communicating other types of information that are supported by the ActiveSync protocol.

1.7 Versioning and Capability Negotiation

None.

1.8 Vendor-Extensible Fields

None.

1.9 Standards Assignments

None.

2   Messages

2.1   Transport

This protocol consists of a series of XML elements that are embedded inside of a command request or command response, as specified in [MS-ASCMD].

The XML markup that constitutes the request body or the response body that is transmitted between the client and the server uses Wireless Application Protocol (WAP) Binary XML (WBXML), as specified in [MS-ASWBXML].

2.2   Message Syntax

The markup that is used by this protocol MUST be well-formed XML, as specified in [XML].

This protocol defines XML schema elements for the **Calendar** class, which represents a calendar item.

The XML schema for the **Calendar** class is defined as follows, in accordance with the rules specified in [XMLNS] and [XMLSCHEMA1]. Except where otherwise specified, elements in this class are defined in the **Calendar** namespace.

```
<?xml version="1.0" ?>
<xs:schema xmlns:tns="Calendar:" attributeFormDefault="unqualified"
elementFormDefault="qualified"
targetNamespace="Calendar:" xmlns:xs="http://www.w3.org/2001/XMLSchema"
xmlns:xs=http://www.w3.org/2001/XMLSchema xmlns:airsyncbase="AirSyncBase:">
     <xs:import namespace="AirSyncBase:" schemaLocation="AirSyncBase.xsd"/>
     <xs:element name="Timezone" type="xs:timezone" />
     <xs:element name="AllDayEvent" type="xs:unsignedByte" />

     <xs:element name="BusyStatus" type="xs:unsignedByte">
         <xs:simpleType>
             <xs:restriction base="xs:unsignedByte">
                 <xs:minInclusive value="0"/>
                 <xs:maxInclusive value="5"/>
             </xs:restriction>
         </xs:simpleType>
     </xs:element>
     <xs:element name="OrganizerName" type="xs:string" />
     <xs:element name="OrganizerEmail" type="xs:string" />
     <xs:element name="DtStamp" type="xs:dateTime" />
     <xs:element name="EndTime" type="xs:dateTime" />
     <xs:element name="Location" type="xs:string" />
     <xs:element name="Reminder" type="xs:unsignedInt" />
     <xs:element name="Sensitivity" type="xs:unsignedByte">
         <xs:simpleType>
             <xs:restriction base="xs:unsignedByte">
                 <xs:minInclusive value="0"/>
                 <xs:maxInclusive value="3"/>
             </xs:restriction>
         </xs:simpleType>
     </xs:element>
     <xs:element name="Subject" type="xs:string" />
     <xs:element name="StartTime" type="xs:dateTime" />
     <xs:element name="UID" type="xs:string">
         <xs:simpleType>
```

```xml
                <xs:restriction base="xs:string">
                        <xs:maxLength value="300"/>
                </xs:restriction>
        </xs:simpleType>
</xs:element>
<xs:element minOccurs="0" name="MeetingStatus">
        <xs:simpleType>
                <xs:restriction base="xs:unsignedByte">
                        <xs:enumeration value="1"/>
                        <xs:enumeration value="0"/>
                        <xs:enumeration value="3"/>
                        <xs:enumeration value="5"/>
                        <xs:enumeration value="7"/>
                        <xs:enumeration value="9"/>
                        <xs:enumeration value="11"/>
                        <xs:enumeration value="13"/>
                        <xs:enumeration value="15"/>
                </xs:restriction>
        </xs:simpleType>
</xs:element>
<xs:element name="Attendees">
        <xs:complexType>
                <xs:sequence minOccurs="0">
                        <xs:element name="Attendee" maxOccurs="unbounded">
                                <xs:complexType>
                                        <xs:all>
                                                <xs:element name="Email" type="xs:string" />
                                                <xs:element name="Name" type="xs:string" />
                                                <xs:element name="AttendeeStatus"
  minOccurs="0">
                                                        <xs:simpleType>
                                                        <xs:restriction
  base="xs:unsignedByte">
                                                        <xs:enumeration value="0"/>
                                                        <xs:enumeration value="2"/>
                                                        <xs:enumeration value="3"/>
                                                        <xs:enumeration value="4"/>
                                                        <xs:enumeration value="5"/>
                                                        </xs:restriction>
                                                        </xs:simpleType>
                                                </xs:element>
                                                <xs:element name="AttendeeType" type="xs:unsignedByte">
                                                        <xs:simpleType>
                                                        <xs:restriction
  base="xs:unsignedByte">
                                                        <xs:enumeration value="1"/>
                                                        <xs:enumeration value="2"/>
                                                        <xs:enumeration value="3"/>
                                                        </xs:restriction>
                                                        </xs:simpleType>
                                                </xs:element>
                                        </xs:all>
                                </xs:complexType>
                        </xs:element>
                </xs:sequence>
        </xs:complexType>
</xs:element>
<xs:element name="Categories">
        <xs:complexType>
```

```
                    <xs:sequence minOccurs="0">
                          <xs:element maxOccurs="300" name="Category" type="xs:string" />
                    </xs:sequence>
              </xs:complexType>
        </xs:element>
        <xs:element name="Recurrence">
              <xs:complexType>
                    <xs:all minOccurs="0">
                          <xs:sequence>
                                <xs:element name="Type">
                                      <xs:simpleType>
                                            <xs:restriction base="xs:unsignedByte">
                                                  <xs:minInclusive value="0"/>
                                                  <xs:maxInclusive value="6"/>
                                             </xs:restriction>
                                      </xs:simpleType>
                                </xs:element>
                                <xs:element minOccurs="0" name="Occurrences"
   type="xs:unsignedShort" />
                                <xs:element name="Interval">
                                      <xs:simpleType>
                                            <xs:restriction base="xs:unsignedShort">
                                                  <xs:minInclusive value="0"/>
                                                  <xs:maxInclusive value="999"/>
                                            </xs:restriction>
                                      </xs:simpleType>
                                </xs:element>
                                <xs:element name="WeekOfMonth">
                                      <xs:simpleType>
                                            <xs:restriction base="xs:unsignedByte">
                                                  <xs:minInclusive value="1"/>
                                                  <xs:maxInclusive value="5"/>
                                            </xs:restriction>
                                      </xs:simpleType>
                                </xs:element>
                                <xs:element minOccurs="0" name="DayOfWeek">
                                      <xs:simpleType>
                                            <xs:restriction base="xs:unsignedShort">
                                                  <xs:minInclusive value="0"/>
                                                  <xs:maxInclusive value="127"/>
                                            </xs:restriction>
                                      </xs:simpleType>
                                </xs:element>
                                <xs:element minOccurs="0" name="MonthOfYear">
                                      <xs:simpleType>
                                            <xs:restriction base="xs:unsignedByte">
                                                  <xs:minInclusive value="1"/>
                                                  <xs:maxInclusive value="12"/>
                                            </xs:restriction>
                                      </xs:simpleType>
                                </xs:element>
                                <xs:element minOccurs="0" name="Until"
   type="xs:dateTime" />
                                <xs:element minOccurs="0" name="DayOfMonth">
                                      <xs:simpleType>
                                            <xs:restriction base="xs:unsignedByte">
                                                  <xs:minInclusive value="1"/>
                                                  <xs:maxInclusive value="127"/>
                                            </xs:restriction>
```

```
                                        </xs:simpleType>
                                </xs:element>
                                <xs:element minOccurs="0" name="CalendarType">
                                        <xs:simpleType>
                                                <xs:restriction base="xs:unsignedByte">
                                                        <xs:minInclusive value="0"/>
                                                        <xs:maxInclusive value="23"/>
                                                </xs:restriction>
                                        </xs:simpleType>
                                </xs:element>
                                <xs:element minOccurs="0" name="IsLeapMonth">
                                        <xs:simpleType>
                                                <xs:restriction base="xs:unsignedByte">
                                                        <xs:minInclusive value="0"/>
                                                        <xs:maxInclusive value="1"/>
                                                </xs:restriction>
                                        </xs:simpleType>
                                </xs:element>
                                <xs:element minOccurs="0" name="FirstDayOfWeek">
                                        <xs:simpleType>
                                                <xs:restriction base="xs:unsignedByte">
                                                        <xs:minInclusive value="0"/>
                                                        <xs:maxInclusive value="6"/>
                                                </xs:restriction>
                                         </xs:simpleType>
                                 </xs:element>
                        </xs:sequence>
                </xs:all>
        </xs:complexType>
    </xs:element>
    <xs:element name="Exceptions">
        <xs:complexType>
                <xs:sequence minOccurs="0">
                        <xs:element name="Exception" maxOccurs="1000">

                                <xs:all>
                                        <xs:element minOccurs="0" name="Deleted"
type="xs:unsignedByte" />
                                        <xs:element name="ExceptionStartTime"
type="xs:dateTime" />
                                        <xs:element minOccurs="0" name="Subject"
type="xs:string" />
                                        <xs:element minOccurs="0" name="StartTime"
type="xs:dateTime" />
                                        <xs:element minOccurs="0" name="EndTime"
type="xs:dateTime" />
                                        <xs:element name="Body" type="airsyncbase:Body" />
                                        <xs:element minOccurs="0" name="Location"
type="xs:string" />
                                        <xs:element minOccurs="0" name="Categories">
                                                <xs:complexType>
                                                        <xs:sequence>
                                                                <xs:element maxOccurs="300" name="Category"
type="xs:string" />
                                                        </xs:sequence>
                                                </xs:complexType>
                                        </xs:element>
                                        <xs:element minOccurs="0" name="Sensitivity">
                                                <xs:simpleType>
```

```
                                               <xs:restriction base="xs:unsignedByte">
                                                       <xs:minInclusive value="0"/>
                                                       <xs:maxInclusive value="3"/>
                                               </xs:restriction>
                                       </xs:simpleType>
                               </xs:element>
                               <xs:element minOccurs="0" name="BusyStatus">
                                       <xs:simpleType>
                                               <xs:restriction base="xs:unsignedByte">
                                                       <xs:minInclusive value="0"/>
                                                       <xs:maxInclusive value="5"/>
                                               </xs:restriction>
                                       </xs:simpleType>
                               </xs:element>
                               <xs:element minOccurs="0"
 name="AllDayEvent" type="xs:unsignedByte" />
                               <xs:element minOccurs="0" name="Reminder"
 type="xs:unsignedInt" />
                               <xs:element minOccurs="0" name="DtStamp"
 type="xs:dateTime" />
                               <xs:element minOccurs="0" name="MeetingStatus">
                                       <xs:simpleType>
                                               <xs:restriction
 base="xs:unsignedByte">
                                                       <xs:enumeration value="1"/>
                                                       <xs:enumeration value="0"/>
                                                       <xs:enumeration value="3"/>
                                                       <xs:enumeration value="5"/>
                                                       <xs:enumeration value="7"/>
                                                       <xs:enumeration value="9"/>
                                                       <xs:enumeration value="11"/>
                                                       <xs:enumeration value="13"/>
                                                       <xs:enumeration value="15"/>
                                               </xs:restriction>
                                       </xs:simpleType>
                               </xs:element>
                               <xs:element minOccurs="0"
 name="AppointmentReplyTime" type="xs:dateTime" />
                               <xs:element minOccurs="0" name="ResponseType"
 type="xs:unsignedInt" />
                       </xs:all>
               </xs:element>
           </xs:sequence>
       </xs:complexType>
   </xs:element>
   <xs:element name="ResponseRequested" type="xs:boolean" />
   <xs:element name="AppointmentReplyTime" type="xs:dateTime" />
   <xs:element name="ResponseType" type="xs:unsignedInt" />
   <xs:element name="DisallowNewTimeProposal" type="xs:boolean" />
   <xs:element name="OnlineMeetingConfLink" type="xs:string" />
   <xs:element name="OnlineMeetingExternalLink" type="xs:string" />
</xs:schema>
```

The portion of the **AirSyncBase** namespace that is used by the **Calendar** class is defined as follows. For details about the complete **AirSyncBase XSD**, see [MS-ASAIRS] section 2.2.

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

```
<xs:schema xmlns:airsyncbase="AirSyncBase:" xmlns:xs="http://www.w3.org/2001/XMLSchema"
xmlns="AirSyncBase:" targetNamespace="AirSyncBase:" elementFormDefault="qualified"
attributeFormDefault="unqualified">
  <xs:element name="Body"/>
  <xs:element name="NativeBodyType" type="xs:unsignedByte"/>
</xs:schema>
```

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
(none)	**Calendar**	
airsyncbase	**AirSyncBase**	[MS-ASAIRS]
airsync	**AirSync**	[MS-ASCMD] section 2.2.2.19
itemoperations	**ItemOperations**	[MS-ASCMD] section 2.2.2.8
search	**Search**	[MS-ASCMD] section 2.2.2.14
xs	**http://www.w3.org/2001/XMLSchema**	[XMLSCHEMA1]

2.2.2 Elements

Elements of the **Calendar** class are defined in two namespaces: **Calendar** and **AirSyncBase**. All **Calendar** class elements are specified in this document. However, elements defined in the **AirSyncBase** namespace are further specified in [MS-ASAIRS].

The following elements are top-level elements of the **Calendar** class:

- **Timezone** (section 2.2.2.42)

- **AllDayEvent** (section 2.2.2.1)

- **airsyncbase:Body** (section 2.2.2.7)

- **BusyStatus** (section 2.2.2.8)

- **OrganizerName** (section 2.2.2.34)

- **OrganizerEmail** (section 2.2.2.33)

- **DtStamp** (section 2.2.2.16)

- **EndTime** (section 2.2.2.18)

- **Location** (section 2.2.2.25)

- **Reminder** (section 2.2.2.36)

- **Sensitivity** (section 2.2.2.39)

- **Subject** (section 2.2.2.41)

- **StartTime** (section 2.2.2.40)

- **UID** (section 2.2.2.44)

- **MeetingStatus** (section 2.2.2.26)

- **Attendees** (section 2.2.2.4)

- **Categories** (section 2.2.2.10)

- **Recurrence** (section 2.2.2.35)

- **Exceptions** (section 2.2.2.20)

- **ResponseRequested** (section 2.2.2.37)

- **AppointmentReplyTime** (section 2.2.2.2)

- **ResponseType** (section 2.2.2.38)

- **DisallowNewTimeProposal** (section 2.2.2.15)

- **airsyncbase:NativeBodyType** (section 2.2.2.29)

- **OnlineMeetingConfLink** (section 2.2.2.31)

- **OnlineMeetingExternalLink** (section 2.2.2.32)

Except where otherwise specified in the following sections, each top-level element of the **Calendar** class is used in ActiveSync command requests and responses as follows:

- As an optional child element of the **itemoperations:Schema** element ([MS-ASCMD] section 2.2.3.135) in **ItemOperations** command requests ([MS-ASCMD] section 2.2.2.8.2)

- As an optional child element of the **itemoperations:Properties** element ([MS-ASCMD] section 2.2.3.118.1) in **ItemOperations** command responses ([MS-ASCMD] section 2.2.2.8.3)

- As an optional child element of the **search:Properties** element ([MS-ASCMD] section 2.2.3.118.2) in **Search** command responses ([MS-ASCMD] section 2.2.2.14.2)

- As an optional child element of the **airsync:ApplicationData** element ([MS-ASCMD] section 2.2.3.10) in **Sync** command requests ([MS-ASCMD] section 2.2.2.19.1)

- As an optional child element of the **airsync:ApplicationData** element ([MS-ASCMD] section 2.2.3.10) in **Sync** command responses ([MS-ASCMD] section 2.2.2.19.2)

The following table summarizes the set of common XML schema elements that are defined or used by this specification. XML schema elements that are specific to a particular operation are specified further in sections 3.1.5.1, 3.1.5.2, 3.1.5.3, 3.2.5.1, 3.2.5.2, and 3.2.5.3.

Element name	Description
Timezone (section 2.2.2.42)	The time zone of the calendar item.
AllDayEvent (section 2.2.2.1)	Specifies whether the event represented by the calendar item or exception item runs for the entire day.

Element name	Description
airsyncbase:Body (section 2.2.2.7)	The body text of the calendar item.
BusyStatus (section 2.2.2.8)	Specifies whether the **recipient (1)** is busy at the specified time.
OrganizerName (section 2.2.2.34)	The name of the user who created the calendar item.
OrganizerEmail (section 2.2.2.33)	The e-mail address of the user who created the calendar item.
DtStamp (section 2.2.2.16)	The date and time at which the calendar item was created or modified, or the date and time at which the exception item was created.
EndTime (section 2.2.2.18)	The end time of the calendar item or exception item.
Location (section 2.2.2.25)	The place where the event specified by the calendar item or exception item occurs.
Reminder (section 2.2.2.36)	The number of minutes before the calendar item's start time to display a **reminder** notice.
Sensitivity (section 2.2.2.39)	The recommended privacy policy for this calendar item or exception item.
Subject (section 2.2.2.41)	The subject of the calendar item or exception item.
StartTime (section 2.2.2.40)	The start time of the calendar item or exception item.
UID (section 2.2.2.44)	A unique, 300 digit hexadecimal ID generated by the client when the calendar item is created.
MeetingStatus (section 2.2.2.26)	The status of the **meeting**.
Attendees (section 2.2.2.4)	The collection of attendees for the calendar item.
Attendee (section 2.2.2.3)	An attendee who is invited to the event.
Email (section 2.2.2.17)	The e-mail address of the attendee.
Name (section 2.2.2.28)	The name of the attendee.
AttendeeStatus (section 2.2.2.5)	The attendee's acceptance status.
AttendeeType (section 2.2.2.6)	Specifies whether the attendee is required, optional, or a **resource**.
Categories (section 2.2.2.10)	The collection of categories for the calendar item or exception item.
Category (section 2.2.2.11)	A category that is assigned to the calendar item or exception item.
Recurrence (section 2.2.2.35)	The recurrence information for the calendar item.
Type (section 2.2.2.43)	The type of the recurrence.
Occurrences (section 2.2.2.30)	The number of recurrences.
Interval (section 2.2.2.23)	The interval between recurrences.

Element name	Description
WeekOfMonth (section 2.2.2.46)	The week of the month for the recurrence.
DayOfWeek (section 2.2.2.13)	The day of the week for the recurrence.
MonthOfYear (section 2.2.2.27)	The month of the year for the recurrence.
Until (section 2.2.2.45)	The end date and time of the recurrence.
DayOfMonth (section 2.2.2.12)	The day of the month of the recurrence.
CalendarType (section 2.2.2.9)	The calendar system used by the recurrence.
IsLeapMonth (section 2.2.2.24)	Specifies whether the recurrence of the appointment is to take place on the embolismic (leap) month.
FirstDayOfWeek (section 2.2.2.22)	Specifies which day is considered the first day of the calendar week for the recurrence.
Exceptions (section 2.2.2.20)	A collection of exceptions to the **recurrence pattern** of the calendar item.
Exception (section 2.2.2.19)	An exception to the calendar item's recurrence pattern.
Deleted (section 2.2.2.14)	Specifies whether the exception has been deleted.
ExceptionStartTime (section 2.2.2.21)	The start time of the original recurring meeting.
ResponseRequested (section 2.2.2.37)	Specifies whether a response to the meeting request is required.
AppointmentReplyTime (section 2.2.2.2)	The date and time that the user responded to the meeting request or to the meeting exception request.
ResponseType (section 2.2.2.38)	The type of response made by the user to a meeting request.
DisallowNewTimeProposal (section 2.2.2.15)	Specifies whether recipients of the meeting request can propose a new time for the meeting.
airsyncbase:NativeBodyType (section 2.2.2.29)	Specifies how the body text of the calendar item is stored on the server.
OnlineMeetingConfLink (section 2.2.2.31)	A **Globally Routable User Agent URI (GRUU)** ([MS-SIPRE]) for an online meeting.
OnlineMeetingExternalLink (section 2.2.2.32)	A **Uniform Resource Locator (URL)** for an online meeting.

2.2.2.1   AllDayEvent

As a top-level element of the **Calendar** class, the **AllDayEvent** element is an optional element that specifies whether the event represented by the calendar item runs for the entire day. It is used in ActiveSync command requests and responses as specified in section 2.2.2.

As an optional child element of the **Exception** element (section 2.2.2.19), the **AllDayEvent** element specifies whether the event represented by the exception runs for the entire day. A command request or response has a maximum of one **AllDayEvent** child element per **Exception** element. If the **AllDayEvent** element is not specified as a child element of an **Exception** element,

the value of the **AllDayEvent** element is assumed to be the same as the value of the top-level **AllDayEvent** element.

The **AllDayEvent** element is defined as an element in the **Calendar** namespace. The value of this element is an **unsignedbyte** data type, as specified in [MS-ASDTYPE] section 2.7.The value of the **AllDayEvent** element MUST be one of the values listed in the following table.

Value	Meaning
0	Is not an all day event.
1	Is an all day event.

An item marked as an all day event is understood to begin on midnight of the current day and to end on midnight of the next day.

2.2.2.2 AppointmentReplyTime

As a top-level element of the **Calendar** class, the **AppointmentReplyTime**<1> element is an optional element that specifies the date and time that the current user responded to the meeting request.

As an optional child element of the **Exception** element (section 2.2.2.19), the **AppointmentReplyTime** element specifies the date and time that the user responded to the meeting request exception.

The **AppointmentReplyTime** element is defined as an element in the **Calendar** namespace. The value of this element is a **dateTime** data type, as specified in [MS-ASDTYPE] section 2.3.

A command request MUST NOT include the **AppointmentReplyTime** element, either as a top-level element or as a child element of the **Exception** element.

A command response has a maximum of one top-level **AppointmentReplyTime** element per response, and a maximum of one **AppointmentReplyTime** child element per **Exception** element.

If no action has been taken on a meeting request, the server MUST NOT include the **AppointmentReplyTime** element as a top-level element in a response. If a meeting request exception has been neither accepted nor tentatively accepted, the server MUST NOT include the **AppointmentReplyTime** element as a child element of the **Exception** element in a response.

The top-level **AppointmentReplyTime** element can be ghosted. For details about the use of ghosted properties, see [MS-ASCMD] section 2.2.3.154.

2.2.2.3 Attendee

The **Attendee** element is an optional **container** ([MS-ASDTYPE] section 2.2) element that specifies an attendee who is invited to the event. It is a child element of the **Attendees** element (section 2.2.2.4) and is defined as an element in the **Calendar** namespace.

The **Attendee** element can have the following child elements:

- **Email** (section 2.2.2.17): One instance of this element is required.

- **Name** (section 2.2.2.28): One instance of this element is required.

- **AttendeeStatus** (section 2.2.2.5): This element is optional.

▪ **AttendeeType** (section 2.2.2.6): This element is optional.

2.2.2.4   Attendees

As a top-level element of the **Calendar** class, the **Attendees** element is an optional **container** ([MS-ASDTYPE] section 2.2) element that specifies the collection of attendees for the calendar item. It is used in ActiveSync command requests and responses as specified in section 2.2.2.

As an optional child element of the **Exception** element (section 2.2.2.19), the **Attendees** element specifies the collection of attendees for the calendar item exception. A command request or response has a maximum of one **Attendees** child element per **Exception** element. If the **Attendees** element is not specified as a child element of the **Exception** element, the attendees for the calendar item exception are assumed to be the same as the value of the top-level **Attendees** element.

The **Attendees** element is defined as an element in the **Calendar** namespace.

The **Attendees** element can have the following child element:

▪ **Attendee** (section 2.2.2.3): This element is optional.

The top-level **Attendees** element can be ghosted. For details about the use of ghosted properties, see [MS-ASCMD] section 2.2.3.154.

2.2.2.5   AttendeeStatus

The **AttendeeStatus** element is an optional child element of the **Attendee** element (section 2.2.2.3) that specifies the attendee's acceptance status. It is defined as an element in the **Calendar** namespace.

A command request has a maximum of one **AttendeeStatus** element per **Attendee** element.

A command response has a maximum of one **AttendeeStatus** element per **Attendee** element.

The value of this element is an **unsignedbyte** data type, as specified in [MS-ASDTYPE] section 2.7.

The value of the **AttendeeStatus** element MUST be one of the values listed in the following table.

Value	Meaning
0	Response unknown
2	Tentative
3	Accept
4	Decline
5	Not responded

2.2.2.6   AttendeeType

The **AttendeeType** element is an optional child element of the **Attendee** element (section 2.2.2.3) that specifies whether the attendee is required, optional, or a resource. It is defined as an element in the **Calendar** namespace.

A command response has a maximum of one **AttendeeType** element per **Attendee** element.

The value of this element is an **unsignedbyte** data type, as specified in [MS-ASDTYPE] section 2.7.

The value of the **AttendeeType** element MUST be one of the values specified in the following table.

Value	Meaning
1	Required
2	Optional
3	Resource

2.2.2.7 Body

As a top-level element of the **Calendar** class, the **airsyncbase:Body** element is an optional **container** ([MS-ASDTYPE] section 2.2) element that specifies the body text of the calendar item. It is used in ActiveSync command requests and responses as specified in section 2.2.2.

As an optional child element of the **Exception** element (section 2.2.2.19), the **airsyncbase:Body** element is a **container** ([MS-ASDTYPE] section 2.2) element that specifies the body text of the calendar item exception. A command request or response has a maximum of one **airsyncbase:Body** child element per **Exception** element.

The top-level **airsyncbase:Body** element can be ghosted. For details about the use of ghosted properties, see [MS-ASCMD] section 2.2.3.154.

The **airsyncbase:Body** element is defined as an element in the **AirSyncBase** namespace and is further specified in [MS-ASAIRS] section 2.2.2.4.

2.2.2.8 BusyStatus

As a top-level element of the **Calendar** class, the **BusyStatus** element is an optional element that specifies whether the recipient is busy at the time of the meeting. It is used in ActiveSync command requests and responses as specified in section 2.2.2.

As an optional child element of the **Exception** element (section 2.2.2.19), the **BusyStatus** element specifies the busy status of the meeting organizer. A command request or response has a maximum of one **BusyStatus** child element per **Exception** element. If the **BusyStatus** element is not specified as a child element of an **Exception** element, the value of the **BusyStatus** element is assumed to be the same as the value of the top-level **BusyStatus** element.

The **BusyStatus** element is defined as an element in the **Calendar** namespace. The value of this element is an **unsignedbyte** data type, as specified in [MS-ASDTYPE] section 2.7.

The value of the **BusyStatus** element MUST be one of the values listed in the following table.

Value	Meaning
0	Free
1	Tentative
2	Busy
3	Out of Office

2.2.2.9 CalendarType

The **CalendarType** element<2> is a child element of the **Recurrence** element (section 2.2.2.35) that specifies the calendar system used by the recurrence. It is defined as an element in the **Calendar** namespace.

A command request has a maximum of one **CalendarType** child element per **Recurrence** element when the **Type** element (section 2.2.2.43) value is 2, 3, 5, or 6. Otherwise, the server responds with a status error 6 (conversion error).

A command response has a minimum of one **CalendarType** child element per **Recurrence** element when the **Type** element value is 2, 3, 5, or 6. Otherwise, this element is optional in command responses.

The value of this element is an **unsignedbyte** data type, as specified in [MS-ASDTYPE] section 2.7.

The value of the **CalendarType** element MUST be one of the values listed in the following table.

Value	Meaning
0	Default
1	Gregorian
2	Gregorian (United States)
3	Japanese Emperor Era
4	Taiwan
5	Korean Tangun Era
6	Hijri (Arabic Lunar)
7	Thai
8	Hebrew Lunar
9	Gregorian (Middle East French)
10	Gregorian (Arabic)
11	Gregorian (Transliterated English)
12	Gregorian (Transliterated French)
13	Reserved. MUST NOT be used. Status value 6 is returned by the server in a **Sync** response ([MS-ASCMD] section 2.2.2.19) when this value is used.
14	Japanese Lunar
15	Chinese Lunar
16	Saka Era. Reserved. MUST NOT be used. Status value 6 is returned by the server in a **Sync** response ([MS-ASCMD] section 2.2.2.19) when this value is used.
17	Chinese Lunar (Eto). Reserved. MUST NOT be used. Status value 6 is returned by the server in a **Sync** response ([MS-ASCMD] section 2.2.2.19) when this value is used.
18	Korean Lunar (Eto). Reserved. MUST NOT be used. Status value 6 is returned by the server in a

Value	Meaning
	Sync response ([MS-ASCMD] section 2.2.2.19) when this value is used.
19	Japanese Rokuyou Lunar. Reserved. MUST NOT be used. Status value 6 is returned by the server in a **Sync** response ([MS-ASCMD] section 2.2.2.19) when this value is used.
20	Korean Lunar
21	Reserved. MUST NOT be used. Status value 6 is returned by the server in a **Sync** response ([MS-ASCMD] section 2.2.2.19) when this value is used.
22	Reserved. MUST NOT be used. Status value 6 is returned by the server in a **Sync** response ([MS-ASCMD] section 2.2.2.19) when this value is used.
23	Um al-Qura. Reserved. MUST NOT be used. Status value 6 is returned by the server in a **Sync** response ([MS-ASCMD] section 2.2.2.19) when this value is used.

The server MAY return a value of 0 (Default) when a client specifies a value of 1 (Gregorian).

2.2.2.10   Categories

As a top-level element of the **Calendar** class, the **Categories** element is an optional **container** ([MS-ASDTYPE] section 2.2) element that specifies a collection of categories assigned to the calendar item. It is used in ActiveSync command requests and responses as specified in section 2.2.2.

As a child element of the **Exception** element (section 2.2.2.19), the **Categories** element is an optional **container** ([MS-ASDTYPE] section 2.2) element that specifies the categories for the exception item. A command request or response has a maximum of one **Categories** child element per **Exception** element.

The **Categories** element is defined as an element in the **Calendar** namespace.

The **Categories** element can have the following child element:

- **Category** (section 2.2.2.11)

2.2.2.11   Category

The **Category** element is an optional child element of the **Categories** element (section 2.2.2.10) that specifies a category that is assigned to the calendar item or exception item. It is defined as an element in the **Calendar** namespace.

The value of this element is a **string** data type, as specified in [MS-ASDTYPE] section 2.6.

A command request SHOULD include no more than 300 **Category** child elements per **Categories** element.

A command response SHOULD include no more than 300 **Category** child elements per **Categories** element.

2.2.2.12   DayOfMonth

The **DayOfMonth** element is a child element of the **Recurrence** element (section 2.2.2.35) that specifies the day of the month for the recurrence. It is defined as an element in the **Calendar** namespace.

A command request or response has a minimum of one **DayOfMonth** child element per **Recurrence** element when the value of the **Type** element (section 2.2.2.43) is either 2 or 5.

A command request or response has a maximum of one **DayOfMonth** child element per **Recurrence** element.

The value of the **DayOfMonth** element is an **unsignedbyte** data type, as specified in [MS-ASDTYPE] section 2.7. The value of this element MUST be between 1 and 31.

The **DayOfMonth** element MUST only be included in requests or responses when the **Type** element value is either 2 or 5. When a client request is issued containing the **DayOfMonth** element in other instances, the server responds with a status error 6 (conversion error).

2.2.2.13   DayOfWeek

The **DayOfWeek** element is a child element of the **Recurrence** element (section 2.2.2.35) that specifies the day of the week for the recurrence. It is defined as an element in the **Calendar** namespace.

A command request or response has a maximum of one **DayOfWeek** child element per **Recurrence** element.

The value of this element is an **unsignedbyte** data type, as specified in [MS-ASDTYPE] section 2.7.

The value of the **DayOfWeek** element MUST be either one of the values listed in the following table, or the sum of more than one of the values listed in the following table (in which case this task recurs on more than one day). The value of the **DayOfWeek** element MUST NOT be greater than 127.

Value	Meaning
1	Sunday
2	Monday
4	Tuesday
8	Wednesday
16	Thursday
32	Friday
64	Saturday
127	The last day of the month. Used as a special value in monthly or yearly recurrences.

The **DayOfWeek** element MUST only be included in requests or responses when the **Type** element (section 2.2.2.43) value is 0 (zero), 1, 3, or 6. When a client request is issued containing the **DayOfWeek** element in other instances, the server responds with a status error 6 (conversion error).

2.2.2.14   Deleted

The **Deleted** element is an optional child element of the **Exception** element (section 2.2.2.19) that specifies whether the exception to the calendar item has been deleted. It is defined as an element in the **Calendar** namespace.

A command request or response has a maximum of one **Deleted** child element per **Exception** element.

The value of this element is an **unsignedbyte** data type, as specified in [MS-ASDTYPE] section 2.7.

An exception will be deleted when the **Deleted** element is included as a child element of the **Exception** element with a value of 1.

2.2.2.15 DisallowNewTimeProposal

The **DisallowNewTimeProposal**<3> element is an optional element that specifies whether a meeting request recipient can propose a new time for the scheduled meeting. It is defined as an element in the **Calendar** namespace.

A command request is not required to include the **DisallowNewTimeProposal** element. If this element is not included in a command request, then the default value for this element is 0 (FALSE).

A command response contains one **DisallowNewTimeProposal** element per response.

The value of the **DisallowNewTimeProposal** element is a **boolean** data type, as specified in [MS-ASDTYPE] section 2.1.

The **DisallowNewTimeProposal** element can be ghosted. For details about the use of ghosted properties, see [MS-ASCMD] section 2.2.3.154.

2.2.2.16 DtStamp

As a top-level element of the **Calendar** class, the **DtStamp** element is an optional element that specifies the date and time that the calendar item was created or modified. It is used in ActiveSync command requests and responses as specified in section 2.2.2.

As an optional child element of the **Exception** element (section 2.2.2.19), the **DtStamp** element specifies the date and time that this exception was created. A command request or response has a maximum of one **DtStamp** child element per **Exception** element. If the **DtStamp** element is not specified as a child element of an **Exception** element, the value of the **DtStamp** element is assumed to be the same as the value of the top-level **DtStamp** element (section 2.2.2.16).

The **DtStamp** element is defined as an element in the **Calendar** namespace. The value of this element is a **dateTime** data type, as specified in [MS-ASDTYPE] section 2.3.

2.2.2.17 Email

The **Email** element is a required child element of the **Attendee** element (section 2.2.2.3) that specifies the e-mail address of an attendee. It is defined as an element in the **Calendar** namespace.

The value of this element is a **string** data type, as specified in [MS-ASDTYPE] section 2.6.

A command request or response has a minimum of one **Email** child element per **Attendee** element.

A command request or response has a maximum of one **Email** child element per **Attendee** element.

The value of the **Email** element MAY be any arbitrary string. It is recommended that the string format adhere to the format specified in [MS-ASDTYPE] section 2.6.2. A server MUST recognize when this value is not formatted as specified in [MS-ASDTYPE] section 2.6.2, and MUST replace it with suitable placeholder text.

2.2.2.18 EndTime

As a top-level element of the **Calendar** class, the **EndTime** element is an optional element that specifies the end time of the calendar item. The client SHOULD include the **EndTime** element in a **Sync** command request ([MS-ASCMD] section 2.2.2.19.1). The **EndTime** element MUST be present in the response as a top-level element, even if the value of the **AllDayEvent** element (section 2.2.2.1) is 1.

As an optional child element of the **Exception** element (section 2.2.2.19), the **EndTime** element specifies the end time of the calendar item exception. A command request or response has a maximum of one **EndTime** child element per **Exception** element. If the **EndTime** element is not specified as a child element of the **Exception** element, the value of the **EndTime** element for the calendar item exception is assumed to be the same as the value of the top-level **EndTime** element.

The **EndTime** element is defined as an element in the **Calendar** namespace. The value of this element is a **dateTime** data type, as specified in [MS-ASDTYPE] section 2.3.

2.2.2.19 Exception

The **Exception** element is an optional **container** ([MS-ASDTYPE] section 2.2) element that specifies an exception to the calendar item's recurrence pattern. It is a child element of the **Exceptions** element (section 2.2.2.20) and is defined as an element in the **Calendar** namespace.

A command request or response has zero or more **Exception** child elements per **Exceptions** element.

The **Exception** element can have the following child elements:

- **Attendees** (section 2.2.2.4): This element is optional.

- **Deleted** (section 2.2.2.14): This element is optional.

- **ExceptionStartTime** (section 2.2.2.21): One instance of this element is required.

- **EndTime** (section 2.2.2.18): This element is optional.

- **airsyncbase:Body** (section 2.2.2.7): This element is optional.

- **Location** (section 2.2.2.25): This element is optional.

- **Categories** (section 2.2.2.10): This element is optional.

- **Sensitivity** (section 2.2.2.39): This element is optional.

- **BusyStatus** (section 2.2.2.8): This element is optional.

- **AllDayEvent** (section 2.2.2.1): This element is optional.

- **Reminder** (section 2.2.2.36): This element is optional.

- **DtStamp** (section 2.2.2.16): This element is optional.

- **MeetingStatus** (section 2.2.2.26): This element is optional.

- **AppointmentReplyTime** (section 2.2.2.2): This element is optional in command responses. It is not included in command requests.

- **ResponseType** (section 2.2.2.38): This element is optional in command responses. It is not included in command requests.

2.2.2.20   Exceptions

The **Exceptions** element is an optional **container** ([MS-ASDTYPE] section 2.2) element that specifies a collection of exceptions to the recurrence pattern of the calendar item. It is defined as an element in the **Calendar** namespace and is used in ActiveSync command requests and responses as specified in section 2.2.2.

The **Exceptions** element can have the following child element:

- **Exception** (section 2.2.2.19): This element is optional.

2.2.2.21   ExceptionStartTime

The **ExceptionStartTime** element is a required child element of the **Exception** element (section 2.2.2.19) that specifies the start time of the original recurring meeting. It is defined as an element in the **Calendar** namespace.

A command request or response has a minimum of one **ExceptionStartTime** child element per **Exception** element.

A command request or response has a maximum of one **ExceptionStartTime** child element per **Exception** element.

The value of the **ExceptionStartTime** element is a **dateTime** data type, as specified in [MS-ASDTYPE] section 2.3.

2.2.2.22   FirstDayOfWeek

The **FirstDayOfWeek**<4> element is a child element of the **Recurrence** element (section 2.2.2.35) that specifies which day is considered the first day of the calendar week for the recurrence. It is defined as an element in the **Calendar** namespace.

A command request has a maximum of one **FirstDayOfWeek** child element per **Recurrence** element.

A command response has a maximum of one **FirstDayOfWeek** child element per **Recurrence** element. The server MUST return a **FirstDayOfWeek** element when the value of the **Type** element (section 2.2.2.43) is 1.

This element disambiguates recurrences across localities that define a different starting day for the calendar week. If this element is not included in the client request, the server SHOULD identify the first day of the week for this recurrence according to the preconfigured options of the user creating the calendar item.

The value of this element is an **unsignedbyte** data type, as specified in [MS-ASDTYPE] section 2.7.

The value of the **FirstDayOfWeek** element MUST be one of the values listed in the following table. If the client uses a **Sync** command request to transmit a value that is not included in this table, the server MUST return protocol status error 6. **Sync** command status values are specified in [MS-ASCMD] section 2.2.3.152.16.

Value	Meaning
0	Sunday
1	Monday
2	Tuesday
3	Wednesday
4	Thursday
5	Friday
6	Saturday

2.2.2.23 Interval

The **Interval** element is an optional child element of the **Recurrence** element (section 2.2.2.35) that specifies the interval between recurrences. It is defined as an element in the **Calendar** namespace.

A command request or response has a maximum of one **Interval** child element per **Recurrence** element.

The value of the **Interval** element is an **integer** with a maximum value of 999.

2.2.2.24 IsLeapMonth

The **IsLeapMonth** element<5> is an optional child element of the **Recurrence** element (section 2.2.2.35) that specifies whether the recurrence of the appointment takes place on the embolismic (leap) month. It is defined as an element in the **Calendar** namespace. A command request has a maximum of one **IsLeapMonth** child element per **Recurrence** element.

A command response has a maximum of one **IsLeapMonth** child element per **Recurrence** element.

This element only applies when the **CalendarType** element (section 2.2.2.9) specifies a calendar system that incorporates an embolismic (leap) month. Examples include lunisolar calendar systems such as Hebrew Lunar and Chinese Lunar. This element has no effect when specified in conjunction with the Gregorian calendar.

The value of this element is an **unsignedbyte** data type, as specified in [MS-ASDTYPE] section 2.7.

The value of the **IsLeapMonth** element MUST be one of the values listed in the following table.

Value	Meaning
0	False
1	True

The default value of the **IsLeapMonth** element is 0 (FALSE).

2.2.2.25 Location

As a top-level element of the **Calendar** class, the **Location** element is an optional element that specifies the place where the event specified by the calendar item occurs. It is used in ActiveSync command requests and responses as specified in section 2.2.2.

As an optional child element of the **Exception** element (section 2.2.2.19), the **Location** element specifies the place where the event specified by the calendar item exception occurs. A command request or response has a maximum of one **Location** child element per **Exception** element. If the **Location** element is not specified as a child element of the **Exception** element, the value of the **Location** element for the exception is assumed to be the same as the value of the top-level **Location** element.

The **Location** element is defined as an element in the **Calendar** namespace. The value of this element is a **string** data type, as specified in [MS-ASDTYPE] section 2.6.

The top-level **Location** element can be ghosted. For details about the use of ghosted properties, see [MS-ASCMD] section 2.2.3.154.

2.2.2.26 MeetingStatus

As a top-level element of the **Calendar** class, the **MeetingStatus** element is an optional element that specifies the status of the meeting. It is used in ActiveSync command requests and responses as specified in section 2.2.2.

As an optional child element of the **Exception** element, the **MeetingStatus** element<6> specifies the status of the calendar item exception. If the **MeetingStatus** element is not specified as a child element of an **Exception** element, the value of the **MeetingStatus** element for the exception is assumed to be the same as the value of the top-level **MeetingStatus** element.

The **MeetingStatus** element is defined as an element in the **Calendar** namespace. The value of this element is an **unsignedbyte** data type, as specified in [MS-ASDTYPE] section 2.7.

The value of the **MeetingStatus** element MUST be one of the values listed in the following table.

Value	Meaning
0	Is not a meeting.
1	Is a meeting.
3	Meeting received.
5	Meeting is canceled.
7	Meeting is canceled and received.
9	Same as 1.
11	Same as 3.
13	Same as 5.
15	Same as 7.

The top-level **MeetingStatus** element can be ghosted. For details about the use of ghosted properties, see [MS-ASCMD] section 2.2.3.154.

2.2.2.27 MonthOfYear

The **MonthOfYear** element is a child element of the **Recurrence** element (section 2.2.2.35) that specifies the month of the year for the recurrence. It is defined as an element in the **Calendar** namespace.

A command request or response has a minimum of one **MonthOfYear** child element per **Recurrence** element if the value of the **Type** element (section 2.2.2.43) is either 5 or 6.

A command request or response has a maximum of one **MonthOfYear** child element per **Recurrence** element.

The value of this element is an **unsignedbyte** data type, as specified in [MS-ASDTYPE] section 2.7.

The value of the **MonthOfYear** element MUST be between 1 and 12.

The **MonthOfYear** element MUST only be included in requests or responses when the **Type** element value is either 5 or 6. When a client request is issued containing the **MonthOfYear** element in other instances, the server responds with a status error 6 (conversion error).

2.2.2.28 Name

The **Name** element is a required child element of the **Attendee** element (section 2.2.2.3) that specifies the name of an attendee. It is defined as an element in the **Calendar** namespace.

The value of this element is a **string** data type, as specified in [MS-ASDTYPE] section 2.6.

A command request or response has a minimum of one **Name** child element per **Attendee** element.

A command request or response has a maximum of one **Name** child element per **Attendee** element.

2.2.2.29 NativeBodyType

The **airsyncbase:NativeBodyType** element is an optional element that specifies how the body text of the calendar item is stored on the server. It is defined as an element in the **AirSyncBase** namespace and used in ActiveSync command requests and responses as specified in section 2.2.2.

The value of this element is an **unsignedbyte** data type, as specified in [MS-ASDTYPE] section 2.7.

For details about the **airsyncbase:NativeBodyType** element, see [MS-ASAIRS] section 2.2.2.7.

2.2.2.30 Occurrences

The **Occurrences** element is an optional child element of the **Recurrence** element (section 2.2.2.35) that specifies the number of occurrences before the series ends. It is defined as an element in the **Calendar** namespace.

A command request or response has a maximum of one **Occurrences** child element per **Recurrence** element.

The **Occurrences** element and the **Until** element (section 2.2.2.45) are mutually exclusive. It is recommended that only one of these elements be included as a child element of a **Recurrence** element (section 2.2.2.35) in a **Sync** command request. If both elements are included, then the server MUST respect the value of the **Occurrences** element and ignore the value of the **Until** element.

The value of the **Occurrences** element is an **integer**. The maximum value is 999.

2.2.2.31 OnlineMeetingConfLink

The **OnlineMeetingConfLink** element is an optional element that contains a GRUU for an online meeting. It is defined as an element in the **Calendar** namespace. The GRUU can be used by a **user agent client (UAC)** to connect to an online conference.

A command request MUST NOT contain the **OnlineMeetingConfLink** element.

A command response contains, at most, one **OnlineMeetingConfLink** element per response.

The value of the **OnlineMeetingConfLink** element SHOULD be a GRUU as specified in [MS-SIPRE].

The **OnlineMeetingConfLink** element can be ghosted. For details about the use of ghosted properties, see [MS-ASCMD] section 2.2.3.154.

2.2.2.32 OnlineMeetingExternalLink

The **OnlineMeetingExternalLink** element is an optional element that contains a URL for an online meeting. It is defined as an element in the **Calendar** namespace.

A command request MUST NOT contain the **OnlineMeetingExternalLink** element.

A command response contains, at most, one **OnlineMeetingExternalLink** element per response.

The value of this element is a **string** data type, as specified in [MS-ASDTYPE] section 2.6.

The value of the **OnlineMeetingExternalLink** element SHOULD be a valid URL.

The **OnlineMeetingExternalLink** element can be ghosted. For details about the use of ghosted properties, see [MS-ASCMD] section 2.2.3.154.

2.2.2.33 OrganizerEmail

The **OrganizerEmail** element is an optional element that specifies the e-mail address of the user who created the calendar item. It is defined as an element in the **Calendar** namespace and is used in ActiveSync command requests and responses as specified in section 2.2.2.

The value of the **OrganizerEmail** element is a **string** ([MS-ASDTYPE] section 2.6) in valid e-mail address format, as specified in [MS-ASDTYPE] section 2.6.2.

The **OrganizerEmail** element can be ghosted. For details about the use of ghosted properties, see [MS-ASCMD] section 2.2.3.154.

2.2.2.34 OrganizerName

The **OrganizerName** element is an optional element that specifies the name of the user who created the calendar item. It is defined as an element in the **Calendar** namespace and is used in ActiveSync command requests and responses as specified in section 2.2.2.

The value of this element is a **string** data type, as specified in [MS-ASDTYPE] section 2.6.

The **OrganizerName** element can be ghosted. For details about the use of ghosted properties, see [MS-ASCMD] section 2.2.3.154.

2.2.2.35 Recurrence

The **Recurrence** element is an optional **container** ([MS-ASDTYPE] section 2.2) element that specifies the recurrence information for the calendar item. It is defined as an element in the **Calendar** namespace and is used in ActiveSync command requests and responses as specified in section 2.2.2.

The **Recurrence** element can have the following child elements:

- **Type** (section 2.2.2.43): One instance of this element is required.

- **Occurrences** (section 2.2.2.30): This element is optional.

- **Interval** (section 2.2.2.23): This element is optional.

- **WeekOfMonth** (section 2.2.2.46): This element is optional.

- **DayOfWeek** (section 2.2.2.13): This element is optional.

- **MonthOfYear** (section 2.2.2.27): This element is optional.

- **Until** (section 2.2.2.45): This element is optional.

- **DayOfMonth** (section 2.2.2.12): This element is optional.

- **CalendarType** (section 2.2.2.9): This element is optional in daily and yearly recurrences.

- **IsLeapMonth** (section 2.2.2.24): This element is optional.

- **FirstDayOfWeek** (section 2.2.2.22): This element is optional.

The following limitations apply to the **Recurrence** element:

- Multiple **Recurrence** elements MUST NOT start on the same day.

- Multiple occurrences of the **Recurrence** element MUST NOT overlap. An exception that modifies the start date of an instance in the **recurring series** MUST occur on a date that is sometime after the end of the prior instance and before the start of the next instance in the recurring series. The same is true if the prior or next instance in the recurring series is defined as an exception by using the **Exceptions** element.

For more details about recurrence patterns, see [MS-OXOCAL] section 2.2.1.44.

2.2.2.36 Reminder

As a top-level element of the **Calendar** class, the **Reminder** element is an optional element that specifies the number of minutes before the calendar item's start time to display a reminder notice. It is used in ActiveSync command requests and responses as specified in section 2.2.2.

As an optional child element of the **Exception** element (section 2.2.2.19), the **Reminder** element specifies the number of minutes before a calendar item exception's start time to display a reminder notice. A command request or response has a maximum of one **Reminder** child element per **Exception** element. If the **Reminder** element is not specified as a child element of an **Exception** element, the value of the **Reminder** element for the exception is assumed to be the same as the value of the top-level **Reminder** element.

The **Reminder** element is defined as an element in the **Calendar** namespace.

2.2.2.37   ResponseRequested

The **ResponseRequested**<7> element is an optional element that specifies whether a response to the meeting request is required. It is defined as an element in the **Calendar** namespace and is used in ActiveSync command requests and responses as specified in section 2.2.2.

The value of the **ResponseRequested** element is a **boolean** data type, as specified in [MS-ASDTYPE] section 2.1.

The **ResponseRequested** element can be ghosted. For details about the use of ghosted properties, see [MS-ASCMD] section 2.2.3.154.

2.2.2.38   ResponseType

As a top-level element of the **Calendar** class, the **ResponseType**<8> element is an optional element that specifies the type of response made by the user to a meeting request.

As an optional child element of the **Exception** element (section 2.2.2.19), the **ResponseType**<9> element specifies the type of response made by the user to a recurring meeting exception. If the **ResponseType** element is not specified as a child element of an **Exception** element, the value of the **ResponseType** element for the exception is assumed to be the same as the value of the top-level **ResponseType** element.

A command request MUST NOT include the **ResponseType** element, either as a top-level element or as a child element of the **Exception** element.

A command response has a maximum of one top-level **ResponseType** element per response, and a maximum of one **ResponseType** child element per **Exception** element.

The **ResponseType** element is defined as an element in the **Calendar** namespace.

The value of the **ResponseType** element MUST be one of the values listed in the following table.

Value	Meaning
0	None. The user's response to the meeting has not yet been received.
1	Organizer. The current user is the organizer of the meeting and, therefore, no reply is required.
2	Tentative. The user is unsure whether he or she will attend.
3	Accepted. The user has accepted the meeting request.
4	Declined. The user has declined the meeting request.
5	Not Responded. The user has not yet responded to the meeting request.

The top-level **ResponseType** element can be ghosted. For details about the use of ghosted properties, see [MS-ASCMD] section 2.2.3.154.

2.2.2.39   Sensitivity

As a top-level element of the **Calendar** class, the **Sensitivity** element is an optional child element that specifies the recommended privacy policy for the calendar item. It is used in ActiveSync command requests and responses as specified in section 2.2.2.

As an optional child element of the **Exception** element (section 2.2.2.19), the **Sensitivity** element specifies the recommended privacy policy for the calendar item exception. A command request or response has a maximum of one **Sensitivity** child element per **Exception** element. If the **Sensitivity** element is not specified as a child element of an **Exception** element, the **Sensitivity** element for the exception is assumed to have the same value as the value of the top-level **Sensitivity** element.

The **Sensitivity** element is defined as an element in the **Calendar** namespace. The value of this element is an **unsignedbyte** data type, as specified in [MS-ASDTYPE] section 2.7.

The value of the **Sensitivity** element MUST be one of the values listed in the following table.

Value	Meaning
0	Normal
1	Personal
2	Private
3	Confidential

2.2.2.40 StartTime

As a top-level element of the **Calendar** class, the **StartTime** element is an optional element that specifies the start time of the calendar item. The client SHOULD include the **StartTime** element in a **Sync** command request ([MS-ASCMD] section 2.2.2.19.1).

A **Sync** command request MUST contain one instance of the **StartTime** element if the **EndTime** element (section 2.2.2.18) is included in the command request. If this element is not included in a **Sync** command request when an **EndTime** element is included in the request, then the server MUST return a protocol status error 6. **Sync** command status errors are defined in [MS-ASCMD] section 2.2.3.152.16.

A **Sync** command response MUST contain one instance of the **StartTime** element.

As an optional child element of the **Exception** element (section 2.2.2.19), the **StartTime** element specifies the start time of the calendar item exception. If the **StartTime** element is not specified as a child element of an **Exception** element, the value of the **StartTime** element for the exception is assumed to be the same as the value of the top-level **StartTime** element.

The **StartTime** element is defined as an element in the **Calendar** namespace. The value of this element is a **dateTime** data type, as specified in [MS-ASDTYPE] section 2.3.

2.2.2.41 Subject

As a top-level element of the **Calendar** class, the **Subject** element is a required element that specifies the subject of the calendar item. It is used in ActiveSync command requests and responses as specified in section 2.2.2.

As an optional child element of the **Exception** element (section 2.2.2.19), the **Subject** element specifies the subject of the calendar item exception. If the **Subject** element is not specified as a child element of an **Exception** element, the value of this element is assumed to be the same as the value of the top-level **Subject** element.

The **Subject** element is defined as an element in the **Calendar** namespace. The value of this element is a **string** data type, as specified in [MS-ASDTYPE] section 2.6.

2.2.2.42   Timezone

The **Timezone** element is an optional element that specifies the time zone of the calendar item. It is defined as an element in the **Calendar** namespace and is used in ActiveSync command requests and responses as specified in section 2.2.2.

The value of the **Timezone** element is a **TimeZone** data type, as specified in [MS-ASDTYPE] section 2.6.4.

2.2.2.43   Type

The **Type** element is a required child element of the **Recurrence** element (section 2.2.2.35) that specifies the type of the recurrence. It is defined as an element in the **Calendar** namespace.

A command request or response has a minimum of one **Type** child element per **Recurrence** element.

A command request or response has a maximum of one **Type** child element per **Recurrence** element.

The value of this element is an **unsignedbyte** data type, as specified in [MS-ASDTYPE] section 2.7.

The value of the **Type** element MUST be one of the values listed in the following table.

Value	Meaning
0	Recurs daily.
1	Recurs weekly.
2	Recurs monthly.
3	Recurs monthly on the nth day.
5	Recurs yearly.
6	Recurs yearly on the nth day.

2.2.2.44   UID

The **UID** element is an optional element that specifies a random hexadecimal ID generated by the client when the calendar item is created. It is defined as an element in the **Calendar** namespace and is used in ActiveSync command requests and responses as specified in section 2.2.2.

The value of the **UID** element is a **string** data type, as specified in [MS-ASDTYPE] section 2.6. The maximum length of this element is 300 characters.

2.2.2.45   Until

The **Until** element is an optional child element of the **Recurrence** element (section 2.2.2.35) that specifies the end date and time of the recurrence. It is defined as an element in the **Calendar** namespace.

A command request or response has a maximum of one **Until** child element per **Recurrence** element.

The **Until** element and the **Occurrences** element (section 2.2.2.30) are mutually exclusive. It is recommended that only one of these elements be included as a child element of a **Recurrence** element in a **Sync** command request. If both elements are included, then the server MUST respect the value of the **Occurrences** element and ignore the value of the **Until** element.

The value of the **Until** element is a **dateTime** data type, as specified in [MS-ASDTYPE] section 2.3.

2.2.2.46   WeekOfMonth

The **WeekOfMonth** element is a child element of the **Recurrence** element (section 2.2.2.35) that specifies the week of the month for the recurrence. It is defined as an element in the **Calendar** namespace.

A command request or response has a minimum of one **WeekOfMonth** child element per **Recurrence** element when the value of the **Type** element (section 2.2.2.43) is either 3 or 6.

A command request or response has a maximum of one **WeekOfMonth** child element per **Recurrence** element.

The value of this element is an **unsignedbyte** data type, as specified in [MS-ASDTYPE] section 2.7.

The value of the **WeekOfMonth** element MUST be between 1 and 5. The value of 5 specifies the last week of the month.

The **WeekOfMonth** element MUST only be included in requests or responses when the **Type** element (section 2.2.2.43) value is either 3 or 6. When a client request is issued containing the **WeekOfMonth** element in other instances, the server responds with a status error 6 (conversion error).

3   Protocol Details

3.1   Client Details

3.1.1   Abstract Data Model

This section describes a conceptual model of possible data organization that an implementation maintains to participate in this protocol. The described organization is provided to facilitate the explanation of how the protocol behaves. This document does not mandate that implementations adhere to this model as long as their external behavior is consistent with that described in this document.

Calendar class: A structured XML text block that adheres to the XML schema definition specified in section 2.2. It is returned by the server to the client as part of a full XML response to the client command requests that are specified in section 3.1.5. **Calendar** class data is included in command requests sent to the server when calendar items need to be retrieved, searched, or synchronized.

Command request: A WBXML-formatted message that adheres to the command schemas specified in [MS-ASCMD].

3.1.2   Timers

None.

3.1.3   Initialization

None.

3.1.4   Higher-Layer Triggered Events

3.1.4.1   Synchronizing Calendar Data Between Client and Server

A client initiates synchronization of **Calendar** class data with the server by sending a **Sync** command request ([MS-ASCMD] section 2.2.2.19.1) to the server.

3.1.4.2   Searching a Server for Calendar Data

A client searches for **Calendar** class data on the server by sending a **Search** command request ([MS-ASCMD] section 2.2.2.14.1) to the server.

3.1.4.3   Requesting Details for One or More Calendar Items

A client requests **Calendar** class data for one or more individual calendar items by sending an **ItemOperations** command request ([MS-ASCMD] section 2.2.2.8.2) to the server that contains one or more **itemoperations:Fetch** elements ([MS-ASCMD] section 2.2.3.60.1).

3.1.4.4   Creating a New Meeting Request

When a user creates a meeting on the client, the client creates a meeting request within the user's calendar, and sends e-mail with the properly formatted meeting requests to the specified attendees. As the server receives the attendee responses, the organizer receives updates to the meeting request within the **Sync** command response ([MS-ASCMD] section 2.2.2.19.2). [MS-ASCMD] section 4.15.3 specifies an example that demonstrates a meeting request included in a **Sync** command response.

3.1.5 Message Processing Events and Sequencing Rules

The following sections specify how elements of the **Calendar** class are used in the context of specific ActiveSync commands. Command details are specified in [MS-ASCMD].

3.1.5.1 ItemOperations Command Request

A client uses an **ItemOperations** command request ([MS-ASCMD] section 2.2.2.8.2) that contains one or more **itemoperations:Fetch** elements ([MS-ASCMD] section 2.2.3.60.1) to retrieve data from the server for one or more specific calendar items.

Any of the elements that belong to the **Calendar** class, as specified in section 2.2.2, can be included in an **ItemOperations** command request.

Top-level **Calendar** class elements, as specified in section 2.2.2, MUST be transmitted as child elements of the **itemoperations:Schema** element ([MS-ASCMD] section 2.2.3.135).

For more details about the **ItemOperations** command, see [MS-ASCMD] section 2.2.2.8.

3.1.5.2 Search Command Request

A client uses the **Search** command request ([MS-ASCMD] section 2.2.2.14.1) to retrieve **Calendar** class items from the server that match the criteria specified by the client.

Elements that belong to the **Calendar** class, as specified in section 2.2.2, MUST NOT be included in a **Search** command request.

For more details about the **Search** command, see [MS-ASCMD] section 2.2.2.14.

3.1.5.3 Sync Command Request

A client uses the **Sync** command request ([MS-ASCMD] section 2.2.2.19.1) to synchronize its **Calendar** class items for a specified user with the calendar items that are currently stored by the server.

Any of the elements that belong to the **Calendar** class, as specified in section 2.2.2, can be included in a **Sync** command request.

Top-level **Calendar** class elements, as specified in section 2.2.2, can be transmitted as child elements of the **airsync:ApplicationData** element ([MS-ASCMD] section 2.2.3.10) within either an **airsync:Add** element ([MS-ASCMD] section 2.2.3.7.2) or an **airsync:Change** element ([MS-ASCMD] section 2.2.3.23).

Top-level **Calendar** class elements can be transmitted as child elements of the **airsync:Supported** element ([MS-ASCMD] section 2.2.3.154) in order to support ghosted elements. A specific subset of the **Calendar** class elements is required in this instance. The full list is specified in [MS-ASCMD] section 2.2.3.154.

For more details about the **Sync** command, see [MS-ASCMD] section 2.2.2.19.

3.1.5.3.1 Indicating Deleted Elements in Exceptions

If an element in a recurring calendar item has been deleted in an **Exception** element (section 2.2.2.19), the client sends an empty tag for this element to remove the inherited value from the server. For example, if the **Location** element (section 2.2.2.25) has been deleted for an exception, the client sends an empty **Location** element in a **Sync** command request.

A client cannot remove an inherited element value from an exception if that property is ghosted.

3.1.5.3.2 Omitting Ghosted Properties from a Sync Change Request

When the client sends a **Sync** command request ([MS-ASCMD] section 2.2.2.19.1) to the server that contains a nonzero **airsync:SyncKey** element ([MS-ASCMD] section 2.2.3.156.4) value, the client uses the **airsync:Supported** element ([MS-ASCMD] section 2.2.3.154) within the **Sync** command request to specify which properties are not ghosted. In subsequent **Sync** command requests, the client includes only the set of **airsync:Supported** elements in the **Sync** command request's **airsync:Change** element ([MS-ASCMD] section 2.2.3.23).

For more details about ghosted properties, see [MS-ASCMD] section 2.2.3.154.

3.1.6 Timer Events

None.

3.1.7 Other Local Events

None.

3.2 Server Details

3.2.1 Abstract Data Model

This section describes a conceptual model of possible data organization that an implementation maintains to participate in this protocol. The described organization is provided to facilitate the explanation of how the protocol behaves. This document does not mandate that implementations adhere to this model as long as their external behavior is consistent with that described in this document.

Calendar class: a structured XML text block that adheres to the XML schema definition specified in section 2.2. It is returned by the server to the client as part of a full XML response to the client command requests that are specified in section 3.1.5. **Calendar** class data is included in command requests sent to the server when calendar items need to be retrieved, searched, or synchronized.

Command response: A WBXML-formatted message that adheres to the command schemas specified in [MS-ASCMD].

3.2.2 Timers

None.

3.2.3 Initialization

None.

3.2.4 Higher-Layer Triggered Events

3.2.4.1 Synchronizing Calendar Data Between Client and Server

Synchronization of **Calendar** class data between client and server is initiated by the client, as specified in section 3.1.4.1. The server responds with a **Sync** command response ([MS-ASCMD] section 2.2.2.19.2).

3.2.4.2   Searching for Calendar Data

Searching for **Calendar** class data is initiated by the client, as specified in section 3.1.4.2. The server responds with a **Search** command response ([MS-ASCMD] section 2.2.2.14.2).

3.2.4.3   Retrieving Details for One or More Calendar Items

Retrieval of **Calendar** class data for one or more individual calendar items is initiated by the client, as specified in section 3.1.4.3. The server responds with an **ItemOperations** command response ([MS-ASCMD] section 2.2.2.8.3).

3.2.5   Message Processing Events and Sequencing Rules

The following sections specify how elements of the **Calendar** class are used in the context of specific ActiveSync commands. Command details are specified in [MS-ASCMD].

3.2.5.1   ItemOperations Command Response

When a client uses an **ItemOperations** command request ([MS-ASCMD] section 2.2.2.8.2), as specified in section 3.1.5.1, to retrieve data from the server for one or more specific calendar items, the server responds with an **ItemOperations** command response ([MS-ASCMD] section 2.2.2.8.3).

Any of the elements that belong to the **Calendar** class, as specified in section 2.2.2, can be included in an **ItemOperations** command response. If an **airsync:Schema** element ([MS-ASCMD] section 2.2.3.135) is included in the **ItemOperations** command request, the elements returned in the **ItemOperations** command response MUST be restricted to the elements that were included as child elements of the **airsync:Schema** element in the command request.

Top-level **Calendar** class elements, as specified in section 2.2.2, MUST be returned as child elements of the **itemoperations:Properties** element ([MS-ASCMD] section 2.2.3.118) in the **ItemOperations** command response.

For more details about the **ItemOperations** command, see [MS-ASCMD] section 2.2.2.8.

3.2.5.2   Search Command Response

When a client uses the **Search** command request ([MS-ASCMD] section 2.2.2.14.1), as specified in section 3.1.5.2, to retrieve **Calendar** class items from the server that match the criteria specified by the client, the server responds with a **Search** command response ([MS-ASCMD] section 2.2.2.14.2).

Any of the elements that belong to the **Calendar** class, as specified in section 2.2.2, can be included in a **Search** command response.

Top-level **Calendar** class elements MUST be returned as child elements of the **search:Properties** element ([MS-ASCMD] section 2.2.3.118) in the **Search** command response.

For more details about the **Search** command, see [MS-ASCMD] section 2.2.2.14.

3.2.5.3   Sync Command Response

When a client uses the **Sync** command request ([MS-ASCMD] section 2.2.2.19.1), as specified in section 3.1.5.3, to synchronize its **Calendar** class items for a specified user with the calendar items that are currently stored by the server, the server responds with a **Sync** command response ([MS-ASCMD] section 2.2.2.19.2).

Top-level **Calendar** class elements, as specified in section 2.2.2, can be included in a **Sync** command response as child elements of the **airsync:ApplicationData** element ([MS-ASCMD] section 2.2.3.10) within either an **airsync:Add** element ([MS-ASCMD] section 2.2.3.7.2) or an **airsync:Change** element ([MS-ASCMD] section 2.2.3.23) in the **Sync** command response.

If one or more properties of an exception for recurring calendar item (that is, any child elements of the **Exception** element (section 2.2.2.19)) have been deleted, the server MUST transmit an empty element in the **Sync** command response to indicate that this property is not inherited from the recurrence.

For more details about the **Sync** command, see [MS-ASCMD] section 2.2.2.19.

3.2.5.3.1 Removing Exceptions

If an **Exceptions** element (section 2.2.2.20) is not specified in a **Sync** command response ([MS-ASCMD] section 2.2.2.19.2), then any exceptions previously defined are unchanged. If a particular **Exception** element (section 2.2.2.19) is excluded from a **Sync** command response, then that particular exception remains unchanged.

3.2.5.3.2 Indicating Deleted Elements in Exceptions

If an element of a recurring calendar item has been deleted in an **Exception** element (section 2.2.2.19), the server MUST send an empty tag for this element in the **Sync** command response ([MS-ASCMD] section 2.2.2.19.2). For example, if the **Location** element (section 2.2.2.25) has been deleted for an exception, the server MUST send an empty **Location** element in the **Sync** command response.

3.2.5.3.3 Omitting Ghosted Properties from a Sync Change Request

When the client sends a **Sync** command request ([MS-ASCMD] section 2.2.2.19.1) to the server that contains a nonzero **airsync:SyncKey** element ([MS-ASCMD] section 2.2.3.156.4) value, the client uses the **airsync:Supported** element within the **Sync** command request to specify which properties are not ghosted. In subsequent **Sync** command requests, the client includes only these elements in the **Sync** command request's **airsync:Change** element ([MS-ASCMD] section 2.2.3.23). Ghosted elements are not sent to the server. Instead of deleting these excluded properties, the server preserves their previous value.

For more details about ghosted properties, see [MS-ASCMD] section 2.2.3.154.

3.2.6 Timer Events

None.

3.2.7 Other Local Events

None.

4 Protocol Examples

4.1 Synchronizing Calendar Data

The following example demonstrates a client request to synchronize calendar data with the server, and the server response. Elements of the **Calendar** class are child elements of the **airsync:ApplicationData** element ([MS-ASCMD] section 2.2.3.10) under the **airsync:Add** element ([MS-ASCMD] section 2.2.3.7.2) and the **airsync:Change** element ([MS-ASCMD] section 2.2.3.23) in the server response.

Request:

```
<?xml version="1.0" encoding="utf-8"?>
<Sync xmlns="AirSync:">
  <Collections>
    <Collection>
      <SyncKey>850479756</SyncKey>
      <CollectionId>1</CollectionId>
      <DeletesAsMoves/>
      <GetChanges/>
    </Collection>
  </Collections>
</Sync>
```

Response:

```
<?xml version="1.0" encoding="utf-8"?>
<Sync xmlns="AirSync:" xmlns:calendar="Calendar:" xmlns:airsyncbase="AirSyncBase:">
  <Collections>
    <Collection>
      <SyncKey>664578668</SyncKey>
      <CollectionId>1</CollectionId>
      <Status>1</Status>
      <Commands>
        <Change>
          <ServerId>1:12</ServerId>
          <ApplicationData>

<calendar:Timezone>4AEAAFAAYQBjAGkAZgBpAGMAIABTAHQAYQBuAGQAYQByAGQAIABUAGkAbQBlAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAsAAAABAAIAAAAAAAAAAAAAAAFAAYQBjAGkAZgBpAGMAIABEAG
EAeQBsAGkAZwBoAHQAIABUAGkAbQBlAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAMAAAACAAIAAAA
AAAAxP///w==</calendar:Timezone>
          <calendar:DtStamp>20081002T231357Z</calendar:DtStamp>
          <calendar:StartTime>20081010T190000Z</calendar:StartTime>
          <calendar:Subject>Lunch meeting</calendar:Subject>

<calendar:UID>040000008200E00074C5B7101A82E008000000001027EAEDA124C901000000000000000001000000
0C58EA426C0CFF24AB3125200707153B1</calendar:UID>
          <calendar:OrganizerName>Anat Kerry</calendar:OrganizerName>
          <calendar:OrganizerEmail>anat@contoso.com</calendar:OrganizerEmail>
          <calendar:Location>Cafeteria A</calendar:Location>
          <calendar:EndTime>20081010T203000Z</calendar:EndTime>
          <airsyncbase:Body>
            <airsyncbase:Type>3</airsyncbase:Type>
            <airsyncbase:EstimatedDataSize>5669</airsyncbase:EstimatedDataSize>
            <airsyncbase:Truncated>1</airsyncbase:Truncated>
```

```
            </airsyncbase:Body>
            <calendar:Sensitivity>0</calendar:Sensitivity>
            <calendar:BusyStatus>3</calendar:BusyStatus>
            <calendar:AllDayEvent>0</calendar:AllDayEvent>
            <calendar:Reminder>15</calendar:Reminder>
            <calendar:MeetingStatus>0</calendar:MeetingStatus>
            <airsyncbase:NativeBodyType>3</airsyncbase:NativeBodyType>
          </ApplicationData>
        </Change>
        <Add>
          <ServerId>1:13</ServerId>
          <ApplicationData>

<calendar:Timezone>4AEAAFAAYQBjAGkAZgBpAGMAIABTAHQAYQBuAGQAYQByAGQAIABUAGkAbQBlAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAsAAAABAAIAAAAAAAAAAAAAAAAFAAYQBjAGkAZgBpAGMAIABEAGEAeQBsAGkAZwBoAHQAIABUAGkAb
AbQBlAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAMAAAACAAIAAAAAAAAAxP///w==</calendar:Timezone>
            <calendar:DtStamp>20081002T231335Z</calendar:DtStamp>
            <calendar:StartTime>20081013T170000Z</calendar:StartTime>
            <calendar:Subject>Dry Run of TechEd Presentation</calendar:Subject>

<calendar:UID>040000008200E00074C5B7101A82E008000000009003C9E1A924C901000000000000000000000001000000
0B3635D1E1A2FF54FA575AB96797F532F</calendar:UID>
            <calendar:OrganizerName>Anat Kerry</calendar:OrganizerName>
            <calendar:OrganizerEmail>anatcontoso.com</calendar:OrganizerEmail>
            <calendar:Location>Conf Room 33-A/1298</calendar:Location>
            <calendar:EndTime>20081013T180000Z</calendar:EndTime>
            <airsyncbase:Body>
              <airsyncbase:Type>3</airsyncbase:Type>
              <airsyncbase:EstimatedDataSize>5669</airsyncbase:EstimatedDataSize>
              <airsyncbase:Truncated>1</airsyncbase:Truncated>
            </airsyncbase:Body>
            <calendar:Sensitivity>0</calendar:Sensitivity>
            <calendar:BusyStatus>2</calendar:BusyStatus>
            <calendar:AllDayEvent>0</calendar:AllDayEvent>
            <calendar:Reminder>15</calendar:Reminder>
            <calendar:MeetingStatus>0</calendar:MeetingStatus>
            <airsyncbase:NativeBodyType>3</airsyncbase:NativeBodyType>
          </ApplicationData>
        </Add>
        <Add>
          <ServerId>1:14</ServerId>
          <ApplicationData>

<calendar:Timezone>4AEAAFAAYQBjAGkAZgBpAGMAIABTAHQAYQBuAGQAYQByAGQAIABUAGkAbQBlAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAsAAAABAAIAAAAAAAAAAAAAAAAFAAYQBjAGkAZgBpAGMAIABEAGEAeQBsAGkAZwBoAHQAIABUAGkAb
AbQBlAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAMAAAACAAIAAAAAAAAAxP///w==</calendar:Timezone>
            <calendar:DtStamp>20081002T231639Z</calendar:DtStamp>
            <calendar:StartTime>20081013T190000Z</calendar:StartTime>
            <calendar:Subject>Team Meeting</calendar:Subject>

<calendar:UID>040000008200E00074C5B7101A82E0080000000060043DFCA924C901000000000000000000000001000000
097F14EF755AC454BA30EFA7B1B315E43</calendar:UID>
            <calendar:OrganizerName>Anat Kerry</calendar:OrganizerName>
            <calendar:OrganizerEmail>anat@contoso.com</calendar:OrganizerEmail>
            <calendar:Location>My office</calendar:Location>
            <calendar:EndTime>20081013T193000Z</calendar:EndTime>
            <calendar:Recurrence>
              <calendar:Type>3</calendar:Type>
              <calendar:Interval>1</calendar:Interval>
              <calendar:Until>20090713T190000Z</calendar:Until>
```

```
                <calendar:WeekOfMonth>2</calendar:WeekOfMonth>
                <calendar:DayOfWeek>2</calendar:DayOfWeek>
              </calendar:Recurrence>
              <airsyncbase:Body>
                <airsyncbase:Type>3</airsyncbase:Type>
                <airsyncbase:EstimatedDataSize>5769</airsyncbase:EstimatedDataSize>
                <airsyncbase:Truncated>1</airsyncbase:Truncated>
              </airsyncbase:Body>
              <calendar:Sensitivity>0</calendar:Sensitivity>
              <calendar:BusyStatus>2</calendar:BusyStatus>
              <calendar:AllDayEvent>0</calendar:AllDayEvent>
              <calendar:Reminder>15</calendar:Reminder>
              <calendar:MeetingStatus>0</calendar:MeetingStatus>
              <airsyncbase:NativeBodyType>3</airsyncbase:NativeBodyType>
            </ApplicationData>
          </Add>
        </Commands>
      </Collection>
    </Collections>
  </Sync>
```

4.2 Synchronizing Recurring Appointments with Exceptions

The following example demonstrates a client request to synchronize calendar data with the server,
and the server response. In this example, the server response contains a weekly recurring
appointment with a single exception.

Request:

```
<?xml version="1.0" encoding="utf-8"?>
<Sync xmlns:calendar="Calendar:" xmlns:airsyncbase="AirSyncBase:" xmlns="AirSync:">
  <Collections>
    <Collection>
      <SyncKey>1958804782</SyncKey>
      <CollectionId>1</CollectionId>
      <DeletesAsMoves>1</DeletesAsMoves>
      <GetChanges>1</GetChanges>
      <WindowSize>512</WindowSize>
    </Collection>
  </Collections>
</Sync>
```

Response:

```
<?xml version="1.0" encoding="utf-8"?>
<Sync xmlns:calendar="Calendar:" xmlns:airsyncbase="AirSyncBase:" xmlns="AirSync:">
  <Collections>
    <Collection>
      <SyncKey>573512161</SyncKey>
      <CollectionId>1</CollectionId>
      <Status>1</Status>
      <Commands>
        <Add>
          <ServerId>1:1</ServerId>
          <ApplicationData>
```

```
<calendar:TimeZone>4AEAACgARwBNAFQALQAwADgAOgAwADAAKQAgAFAAYQBjAGkAZgBpAGMAIABUAGkA
bQBlACAAKABVAFMAIAAmACAAQwAAAAsAAAABAAIAAAAAAAAAAAAACgARwBNAFQALQAwADgAOgAwAA
DAAKQAgAFAAYQBjAGkAZgBpAGMAIABUAGkAbQBlACAAKABVAFMAIAAmACAAQwAAAAMAAAACAAIAAA
AAAAAAxP///w==</calendar:TimeZone>
             <calendar:DtStamp>20090415T165811Z</calendar:DtStamp>
             <calendar:StartTime>20090417T170000Z</calendar:StartTime>
             <calendar:Subject>Recurring appointment test</calendar:Subject>

<calendar:UID>040000008200E00074C5B7101A82E00800000000B0CD1F52EBBDC9010000000000000
00010000000B05E442FCB2CA443BF3D99B51A729FE6</calendar:UID>
             <calendar:OrganizerName>Anat Kerry</calendar:OrganizerName>
             <calendar:OrganizerEmail>anat@contoso.com </calendar:OrganizerEmail>
             <calendar:Location>My office</calendar:Location>
             <calendar:EndTime>20090417T180000Z</calendar:EndTime>
             <calendar:Recurrence>
               <calendar:Type>1</calendar:Type>
               <calendar:Interval>1</calendar:Interval>
               <calendar:Occurrences>3</calendar:Occurrences>
               <calendar:DayOfWeek>32</calendar:DayOfWeek>
             </calendar:Recurrence>
             <airsyncbase:Body>
               <airsyncbase:Type>3</airsyncbase:Type>
               <airsyncbase:EstimatedDataSize>238</airsyncbase:EstimatedDataSize>
               <airsyncbase:Truncated>1</airsyncbase:Truncated>
             </airsyncbase:Body>
             <calendar:Sensitivity>0</calendar:Sensitivity>
             <calendar:BusyStatus>2</calendar:BusyStatus>
             <calendar:AllDayEvent>0</calendar:AllDayEvent>
             <calendar:Reminder>15</calendar:Reminder>
             <calendar:Exceptions>
               <calendar:Exception>
                 <calendar:Deleted>1</calendar:Deleted>
                 <calendar:ExceptionStartTime>20090424T170000Z</calendar:ExceptionStartTime>
               </calendar:Exception>
             </calendar:Exceptions>
             <calendar:MeetingStatus>0</calendar:MeetingStatus>
             <airsyncbase:NativeBodyType>3</airsyncbase:NativeBodyType>
             <calendar:ResponseRequested>1</calendar:ResponseRequested>
             <calendar:ResponseType>1</calendar:ResponseType>
           </ApplicationData>
         </Add>
       </Commands>
     </Collection>
   </Collections>
 </Sync>
```

4.3 Setting Attendee Status from the Server

The following example demonstrates a **Sync** command response ([MS-ASCMD] section 2.2.2.19.2) from the server that contains a new meeting, and a **Sync** command response from the server that shows changes to the calendar item that reflect an attendee has accepted the meeting invitation.

In the following **Sync** command response, the new meeting has one attendee. The organizer is not included in the attendee list; rather, the organizer's information is specified by the **calendar:OrganizerEmail** element (section 2.2.2.33) and the **calendar:OrganizerName** (section 2.2.2.34) element.

```xml
<?xml version="1.0" encoding="utf-8"?>
<Sync xmlns="AirSync:" xmlns:calendar="Calendar:"
xmlns:airsyncbase="AirSyncBase:">
  <Collections>
    <Collection>
      <Class>Calendar</Class>
      <SyncKey>3</SyncKey>
      <CollectionId>1</CollectionId>
      <Status>1</Status>
      <Commands>
        <Add>
          <ServerId>1:2</ServerId>
          <ApplicationData>
            <calendar:Timezone>4AEAAFAAYQBjAGkAZgBpAGMAIAB
            TAHQAYQBuAGQAYQByAGQAIABUAGkAbQBlAAAAAAAAAAA
            AAAAAAAAAAAAAAAAAAAAAoAAAAFAAIAAAAAAAAAA
            AAAFAAYQBjAGkAZgBpAGMAIABEAGEAeQBsAGkAZwBoAHQA
            IABUAGkAbQBlAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
            QAAAABAAIAAAAAAAAAxP///w==</calendar:Timezone>
            <calendar:DtStamp>20051103T010509Z</calendar:DtStamp>
            <calendar:StartTime>20051103T230000Z</calendar:StartTime>
            <calendar:Subject>test meeting</calendar:Subject>
            <calendar:UID>040000008200E00074C5B7101A82E0080000000
            0B0FD68A212E0C501000000000000000100000008C46B9A4960AF
            340871367CEC57B4543</calendar:UID>
            <calendar:Attendees>
              <calendar:Attendee>
                <calendar:Email>chris@fourthcoffee.com
                </calendar:Email>
                <calendar:Name>Chris Gray</calendar:Name>
                <calendar:AttendeeStatus>0</calendar:AttendeeStatus>
                <calendar:AteendeeType>1</calendar:AttendeeType>
              </calendar:Attendee>
            </calendar:Attendees>
            <calendar:OrganizerName>Anat Kerry
            </calendar:OrganizerName>
            <calendar:OrganizerEmail>anat@contoso.com</calendar:OrganizerEmail>
            <calendar:Location>34/1123</calendar:Location>
            <calendar:EndTime>20051104T000000Z</calendar:EndTime>
            <airsyncbase:Body>
              <airsyncbase:Type>1</airsyncbase:Type>
              <airsyncbase:NonTruncatedSize>28
              </airsyncbase:NonTruncatedSize>
            </airsyncbase:Body>
            <calendar:Sensitivity>0</calendar:Sensitivity>
            <calendar:BusyStatus>2</calendar:BusyStatus>
            <calendar:AllDayEvent>0</calendar:AllDayEvent>
            <calendar:Reminder>15</calendar:Reminder>
            <calendar:MeetingStatus>1</calendar:MeetingStatus>
          </ApplicationData>
        </Add>
      </Commands>
    </Collection>
  </Collections>
</Sync>
```

The following **Sync** command response contains a change to the calendar item that reflects that an attendee has accepted the meeting invitation. In this example, the value of the

calendar:AttendeeStatus element (section 2.2.2.5) is 3, indicating that the attendee has accepted the meeting invitation.

```
<?xml version="1.0" encoding="utf-8"?>
<Sync xmlns="AirSync:" xmlns:calendar="Calendar:"
xmlns:airsyncbase="AirSyncBase:">
  <Collections>
    <Collection>
      <Class>Calendar</Class>
      <SyncKey>4</SyncKey>
      <CollectionId>1</CollectionId>
      <Status>1</Status>
      <Commands>
        <Change>
          <ServerId>1:2</ServerId>
          <ApplicationData>
            <calendar:Timezone>4AEAAFAAYQBjAGkAZgBpAGMAIABTAHQAY
            QBuAGQAYQByAGQAIABUAGkAbQBlAAAAAAAAAAAAAAAAAAAAAAAA
            AAAAAAAAoAAAAFAAIAAAAAAAAAAAAAAFAAYQBjAGkAZgBpAGMAIA
            BEAGEAeQBsAGkAZwBoAHQAIABUAGkAbQBlAAAAAAAAAAAAAAAAA
            AAAAAAAAAAAAAAAAQAAAABAAIAAAAAAAAxP///w==
            </calendar:Timezone>
            <calendar:DtStamp>20051103T013759Z</calendar:DtStamp>
            <calendar:StartTime>20051103T230000Z</calendar:StartTime>
            <calendar:Subject>test meeting</calendar:Subject>
            <calendar:UID>040000008200E00074C5B7101A82E00800000000B
            0FD68A212E0C5010000000000000000100000008C46B9A4960AF
            340871367CEC57B4543</calendar:UID>
            <calendar:Attendees>
              <calendar:Attendee>
                <calendar:Email>chris@fourthcoffee.com
                </calendar:Email>
                <calendar:Name>Chris Gray</calendar:Name>
                <calendar:AttendeeStatus>3</calendar:AttendeeStatus>
                <calendar:AttendeeType>1</calendar:AttendeeType>
              </calendar:Attendee>
            </calendar:Attendees>
            <calendar:OrganizerName>Anat Kerry
            </calendar:OrganizerName>
            <calendar:OrganizerEmail>anat@contoso.com</calendar:OrganizerEmail>
            <calendar:Location>34/1123</calendar:Location>
            <calendar:EndTime>20051104T000000Z</calendar:EndTime>
            <airsyncbase:Body>
              <airsyncbase:Type>1</airsyncbase:Type>
              <airsyncbase:NonTruncatedSize>28
              </airsyncbase:NonTruncatedSize>
            </airsyncbase:Body>
            <calendar:Sensitivity>0</calendar:Sensitivity>
            <calendar:BusyStatus>2</calendar:BusyStatus>
            <calendar:AllDayEvent>0</calendar:AllDayEvent>
            <calendar:Reminder>15</calendar:Reminder>
            <calendar:MeetingStatus>1</calendar:MeetingStatus>
          </ApplicationData>
        </Change>
      </Commands>
    </Collection>
  </Collections>
</Sync>
```

5   Security

5.1   Security Considerations for Implementers

None.

5.2   Index of Security Parameters

None.

6 Appendix A: 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 Service Pack 1 (SP1)

- Microsoft® Exchange Server 2010

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

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

<1> Section 2.2.2.2: The **AppointmentReplyTime** element is not supported when the value of the MS-ASProtocolVersion header is set to 12.1.

<2> Section 2.2.2.9: The **CalendarType** element is not supported when the MS-ASProtocolVersion header is set to 12.1 or 14.0.

<3> Section 2.2.2.15: The **DisallowNewTimeProposal** element is not supported when the value of the MS-ASProtocolVersion header is set to 12.1.

<4> Section 2.2.2.22: The **FirstDayOfWeek** element is not supported when the MS-ASProtocolVersion header is set to 12.1 or 14.0.

<5> Section 2.2.2.24: The **IsLeapMonth** element is not supported when the MS-ASProtocolVersion header is set to 12.1.

<6> Section 2.2.2.26: The **MeetingStatus** element is not supported when the value of the MS-ASProtocolVersion header is set to 12.1 or 14.0.

<7> Section 2.2.2.37: The **ResponseRequested** element is not supported when the value of the MS-ASProtocolVersion header is set to 12.1.

<8> Section 2.2.2.38: The **ResponseType** element is not supported when the value of the MS-ASProtocolVersion header is set to 12.1.

<9> Section 2.2.2.38: The **ResponseType** element is not supported when the value of the MS-ASProtocolVersion header is set to 12.1.

7   Change Tracking

This section identifies changes that were made to the [MS-ASCAL] protocol document between the March 2011 and August 2011 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	Added information about which sections of the specification are normative and can contain RFC 2119 language.	Y	Content updated for template compliance.
1 Introduction	Revised the introductory paragraph to state the purpose of the protocol.	N	Content updated.
1.3 Overview	Added reference to [MS-ASCMD] and added information about when calendar data is included in command requests and responses.	N	New content added.
1.4 Relationship to Other Protocols	Added information about this protocol's relationship to [MS-ASWBXML].	N	New content added.
1.6 Applicability Statement	Replaced "set of elements" with "set of XML elements".	N	Content updated.
2.1 Transport	Revised first paragraph to focus on the ActiveSync Calendar Class Protocol instead of the Calendar class.	N	Content updated.
2.1 Transport	Moved information about WBXML from the Message Syntax section.	N	New content added.
2.1 Transport	Moved information about the namespaces in which Calendar class elements are defined to the Elements section.	N	Content removed.

Section	Tracking number (if applicable) and description	Major change (Y or N)	Change type
2.2 Message Syntax	Moved information about WBXML to the Transport section.	N	Content removed.
2.2 Message Syntax	Added information to specify what the protocol defines.	N	New content added.
2.2 Message Syntax	Removed information about ActiveSync commands that is specified in other sections of this specification.	N	Content removed.
2.2 Message Syntax	Updated content to specify that elements in the Calendar class are defined in the Calendar namespace, except where otherwise specified.	N	Content updated.
2.2.1 Namespaces	Changed the value of Prefix for the Calendar Namespace URI from "None" to "(none)".	N	Content updated.
2.2.2 Elements	Revised the subsections within the Elements section to remove the namespace prefix from element names in section titles and reorganize the subsections alphabetically.	N	Content updated.
2.2.2 Elements	Revised the structure of subsections within the Elements section to consolidate information about elements of the same name that are used in multiple contexts.	N	Content updated.
2.2.2 Elements	Moved information about namespaces in which Calendar class elements are defined from the Transport section.	N	New content added.
2.2.2 Elements	Added information to identify top-level Calendar class elements and to specify how top-level Calendar class elements are used in ActiveSync command requests and responses.	Y	New content added.
2.2.2 Elements	Added section references for information about how elements are used by specific commands.	N	Content updated.
2.2.2 Elements	Revised data within the table to consolidate information about elements of the same name that are used in multiple contexts.	N	Content updated.
2.2.2 Elements	Removed the statement about the Calendar class elements not having child elements in the request or response.	N	Content removed.
2.2.2 Elements	Added information about element data type to each subsection within the Elements section (where necessary).	Y	New content added.
2.2.2 Elements	Added information about the namespace in which the element is defined to each	N	Content updated.

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Section	Tracking number (if applicable) and description	Major change (Y or N)	Change type
	subsection within the Elements section (where necessary).		
2.2.2 Elements	Added a reference to [MS-ASCMD] to each subsection within the Elements section where ghosted properties are mentioned.	N	Content updated.
2.2.2.1 AllDayEvent	Removed the statement that specifies the element can be ghosted.	Y	Content updated.
2.2.2.2 AppointmentReplyTime	Updated content to specify that the element can be ghosted.	Y	Content updated.
2.2.2.3 Attendee	Updated content to specify that the Attendee element is optional.	N	Content updated.
2.2.2.3 Attendee	Removed the statement that specifies the element can be ghosted.	Y	Content updated.
2.2.2.4 Attendees	Updated content to specify that the element can be ghosted.	Y	Content updated.
2.2.2.4 Attendees	Updated content to reflect that the Attendees element can also be a child element of the Exception element.	Y	Content updated.
2.2.2.5 AttendeeStatus	Updated content to specify "a command request" instead of "a Sync command request".	N	Content updated.
2.2.2.5 AttendeeStatus	Updated section reference for the Recurrence element.	N	Content updated.
2.2.2.7 Body	Updated content to specify that the element can be ghosted.	Y	Content updated.
2.2.2.8 BusyStatus	Removed the statement that specifies the element can be ghosted.	Y	Content updated.
2.2.2.9 CalendarType	Updated table to include information about the values 13, 21, and 22.	Y	New content added.
2.2.2.10 Categories	Removed the statement that specifies the element can be ghosted.	Y	Content updated.
2.2.2.11 Category	Removed the link to the glossary from the word "category".	N	Content updated.
2.2.2.15 DisallowNewTimeProposal	Updated content to specify that the element can be ghosted.	Y	Content updated.
2.2.2.16 DtStamp	Removed the statement that specifies the element can be ghosted.	Y	Content updated.
2.2.2.18 EndTime	Removed the statement that specifies the element can be ghosted.	Y	Content updated.

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Section	Tracking number (if applicable) and description	Major change (Y or N)	Change type
2.2.2.18 EndTime	Updated content to specify that the element is optional and to specify that it SHOULD be included in a command request.	Y	Content updated.
2.2.2.19 Exception	Updated content to reflect that the Attendees element can also be a child element of the Exception element.	Y	Content updated.
2.2.2.20 Exceptions	Removed the statement that specifies the element can be ghosted.	Y	Content updated.
2.2.2.31 OnlineMeetingConfLink	Updated content to specify that the element can be ghosted.	Y	Content updated.
2.2.2.32 OnlineMeetingExternalLink	Updated content to specify that the element can be ghosted.	Y	Content updated.
2.2.2.35 Recurrence	Removed the statement that specifies the element can be ghosted.	Y	Content updated.
2.2.2.36 Reminder	Removed the statement that specifies the element can be ghosted.	Y	Content updated.
2.2.2.37 ResponseRequested	Updated content to specify that the element can be ghosted.	Y	Content updated.
2.2.2.38 ResponseType	Updated content to specify that the element can be ghosted.	Y	Content updated.
2.2.2.39 Sensitivity	Removed the statement that specifies the element can be ghosted.	Y	Content updated.
2.2.2.40 StartTime	Removed the statement that specifies the element can be ghosted.	Y	Content updated.
2.2.2.40 StartTime	Updated content to specify that the element is optional and to specify that it SHOULD be included in a command request.	Y	Content updated.
2.2.2.41 Subject	Removed the statement that specifies the element can be ghosted.	Y	Content updated.
2.2.2.42 Timezone	Removed the statement that specifies the element can be ghosted.	Y	Content updated.
2.2.2.44 UID	Removed the statement that specifies the element can be ghosted.	Y	Content updated.
3.1.1 Abstract Data Model	Updated the section reference for the client command requests.	N	Content updated.
3.1.1 Abstract Data Model	Removed the reference to the Higher-Layer Triggered Events section.	N	Content updated.
3.1.4 Higher-Layer Triggered	Moved the Omitting Ghosted Properties from a Sync Change Request section to the	N	Content updated.

Section	Tracking number (if applicable) and description	Major change (Y or N)	Change type
Events	Sync Command Request section.		
3.1.4.1 Synchronizing Calendar Data Between Client and Server	Added section reference for the Sync command request.	N	Content updated.
3.1.4.1 Synchronizing Calendar Data Between Client and Server	Changed the title of the section from Synchronizing Calendar Data with a Server to Synchronizing Calendar Data Between Client and Server.	N	Content updated.
3.1.4.2 Searching a Server for Calendar Data	Added section reference for the Search command request.	N	Content updated.
3.1.4.2 Searching a Server for Calendar Data	Changed the title of the section from Searching a Server for a Calendar Item to Searching a Server for Calendar Data.	N	Content updated.
3.1.4.3 Requesting Details for One or More Calendar Items	Revised sentence structure and added specific section references for commands and elements.	N	Content updated.
3.1.4.4 Creating a New Meeting Request	Revised sentence structure and added specific section reference for the Sync command.	N	Content updated.
3.1.5.1 ItemOperations Command Request	Revised sentence structure and added specific section references for commands and elements.	N	Content updated.
3.1.5.1 ItemOperations Command Request	Updated content to specify that "top-level Calendar class elements" are transmitted as child elements of the itemoperations:Schema element.	N	Content updated.
3.1.5.2 Search Command Request	Revised sentence structure and added specific section reference for the Search command request.	N	Content updated.
3.1.5.3 Sync Command Request	Revised sentence structure and added specific section references for commands and elements.	N	Content updated.
3.1.5.3 Sync Command Request	Updated content to specify that "top-level Calendar class elements" can be transmitted as child elements of the airsync:ApplicationData element and the airSyncSupported:element.	N	Content updated.
3.1.5.3 Sync Command Request	Moved the Omitting Ghosted Properties from a Sync Change Request section from the Higher-Layer Triggered Events section.	N	Content updated.
3.1.5.3.2 Omitting Ghosted Properties	Revised sentence structure and added specific section references for commands	N	Content updated.

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Section	Tracking number (if applicable) and description	Major change (Y or N)	Change type
from a Sync Change Request	and elements.		
3.2.1 Abstract Data Model	Updated the section reference for the XML schema and for the client command requests.	N	Content updated.
3.2.1 Abstract Data Model	Removed the reference to the Higher-Layer Triggered Events section from the Calendar class definition and removed information about server behavior from the Command response definition.	N	Content updated.
3.2.4 Higher-Layer Triggered Events	Moved the Omitting Ghosted Properties from a Sync Change Request section to the Sync Command Response section.	N	Content updated.
3.2.4.1 Synchronizing Calendar Data Between Client and Server	Added specific section references for the Sync command request and response.	N	Content updated.
3.2.4.1 Synchronizing Calendar Data Between Client and Server	Changed the title of the section from Synchronizing Calendar Data with a Server to Synchronizing Calendar Data Between Client and Server.	N	Content updated.
3.2.4.1 Synchronizing Calendar Data Between Client and Server	Replaced details about client behavior with a reference to the Synchronizing Calendar Data with a Server section.	N	Content updated.
3.2.4.2 Searching for Calendar Data	Added specific section references for the Search command request and response.	N	Content updated.
3.2.4.2 Searching for Calendar Data	Changed the title of the section from Searching a Server for a Calendar Item to Searching for Calendar Data.	N	Content updated.
3.2.4.2 Searching for Calendar Data	Replaced details about client behavior with a reference to the Searching for Calendar Data section.	N	Content updated.
3.2.4.3 Retrieving Details for One or More Calendar Items	Revised sentence structure and added specific section references for commands and elements.	N	Content updated.
3.2.4.3 Retrieving Details for One or More Calendar Items	Replaced details about client behavior with a reference to the Requesting Details for One or More Calendar Items section.	N	Content updated.
3.2.4.3 Retrieving Details for One or More Calendar Items	Changed the title of the section from Requesting Details for One or More Calendar Items to Retrieving Details for One or More Calendar Items.	N	Content updated.
3.2.5.1 ItemOperations Command Response	Added information about the server response.	N	New content added.

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Section	Tracking number (if applicable) and description	Major change (Y or N)	Change type
3.2.5.1 ItemOperations Command Response	Revised sentence structure and added specific section references for commands and elements.	N	Content updated.
3.2.5.1 ItemOperations Command Response	Updated content to specify that "top-level Calendar class elements" are transmitted as child elements of the itemOperations:Properties element.	N	Content updated.
3.2.5.1 ItemOperations Command Response	Replaced details about client behavior with a reference to the ItemOperations Command Request section.	N	Content updated.
3.2.5.2 Search Command Response	Added information about the server response.	N	New content added.
3.2.5.2 Search Command Response	Revised sentence structure and added specific section references for commands and elements.	N	Content updated.
3.2.5.2 Search Command Response	Updated content to specify that "top-level Calendar class elements" are transmitted as child elements of the search:Properties element.	N	Content updated.
3.2.5.2 Search Command Response	Added a reference to the Search Command Request section for details about the client request.	N	Content updated.
3.2.5.3 Sync Command Response	Added information about the server response.	N	New content added.
3.2.5.3 Sync Command Response	Revised sentence structure and added specific section references for commands and elements.	N	Content updated.
3.2.5.3 Sync Command Response	Updated content to specify that "top-level Calendar class elements" can be transmitted as child elements of the airsync:ApplicationData element.	N	Content updated.
3.2.5.3 Sync Command Response	Specified a namespace prefix for the Add element and the Change element.	N	Content updated.
3.2.5.3 Sync Command Response	Moved the Omitting Ghosted Properties from a Sync Change Request section from the Higher-Layer Triggered Events section.	N	Content updated.
3.2.5.3 Sync Command Response	Added a reference to the Sync Command Request section for details about the client request.	N	Content updated.
3.2.5.3.3 Omitting Ghosted Properties from a Sync Change Request	Revised sentence structure and added specific section references for commands and elements.	N	Content updated.

Section	Tracking number (if applicable) and description	Major change (Y or N)	Change type
3.2.7 Other Local Events	Changed the title of the section from "Other Events" to "Other Local Events".	N	Content updated.
4.1 Synchronizing Calendar Data	Revised the introductory paragraph for clarity and added a section reference for each element mentioned.	N	Content updated.
4.2 Synchronizing Recurring Appointments with Exceptions	Revised the introductory paragraph.	N	Content updated.
4.3 Setting Attendee Status from the Server	Revised the introductory text that precedes each response; added a section reference for each element and command mentioned.	N	Content updated.
4.3 Setting Attendee Status from the Server	Updated the second response to change the <calendar:Status> element to <calendar:AttendeeStatus> and the <calendar:Type> element to <calendar:AttendeeType>.	N	Content updated.
6 Appendix A: Product Behavior	Removed Exchange Server 2010 Service Pack 1 from the list of applicable products.	N	Content removed.

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