[MS-ASTASK]:

Exchange ActiveSync: Tasks Class Protocol

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Revision Summary

Date	Revision History	Revision Class	Comments
12/3/2008	1.0.0	Major	Initial Release.
4/10/2009	2.0.0	Major	Updated technical content and applicable product releases.
7/15/2009	3.0.0	Major	Revised and edited for technical content.
11/4/2009	4.0.0	Major	Updated and revised the technical content.
2/10/2010	5.0.0	Major	Updated and revised the technical content.
5/5/2010	6.0.0	Major	Updated and revised the technical content.
8/4/2010	7.0	Major	Significantly changed the technical content.
11/3/2010	7.1	Minor	Clarified the meaning of the technical content.
3/18/2011	7.2	Minor	Clarified the meaning of the technical content.
8/5/2011	8.0	Major	Significantly changed the technical content.
10/7/2011	9.0	Major	Significantly changed the technical content.
1/20/2012	10.0	Major	Significantly changed the technical content.
4/27/2012	10.0	No Change	No changes to the meaning, language, or formatting of the technical content.
7/16/2012	10.1	Minor	Clarified the meaning of the technical content.
10/8/2012	10.2	Minor	Clarified the meaning of the technical content.
2/11/2013	10.2	No Change	No changes to the meaning, language, or formatting of the technical content.
7/26/2013	11.0	Major	Significantly changed the technical content.
11/18/2013	11.0	No Change	No changes to the meaning, language, or formatting of the technical content.
2/10/2014	11.0	No Change	No changes to the meaning, language, or formatting of the technical content.
4/30/2014	12.0	Major	Significantly changed the technical content.
7/31/2014	12.1	Minor	Clarified the meaning of the technical content.
10/30/2014	12.2	Minor	Clarified the meaning of the technical content.
5/26/2015	13.0	Major	Significantly changed the technical content.
6/30/2015	13.0	No Change	No changes to the meaning, language, or formatting of the technical content.

Table of Contents

1 Introduction

The Exchange ActiveSync: Tasks Class Protocol enables the communication of task data between a mobile device and the server in the ActiveSync protocol.

Sections 1.8, 2, and 3 of this specification are normative and can contain the terms MAY, SHOULD, MUST, MUST NOT, and SHOULD NOT as defined in [RFC2119]. Sections 1.5 and 1.9 are also normative but do not contain those terms. All other sections and examples in this specification are informative.

1.1 Glossary

The following terms are specific to this document:

Coordinated Universal Time (UTC): A high-precision atomic time standard that approximately tracks Universal Time (UT). It is the basis for legal, civil time all over the Earth. Time zones around the world are expressed as positive and negative offsets from UTC. In this role, it is also referred to as Zulu time (Z) and Greenwich Mean Time (GMT). In these specifications, all references to UTC refer to the time at UTC-0 (or GMT).

message store: A unit of containment for a single hierarchy of Folder objects, such as a mailbox or public folders.

recurrence pattern: Information for a repeating event, such as the start and end time, the number of occurrences, and how occurrences are spaced, such as daily, weekly, or monthly.

recurring task: A series of Task objects that are described by a recurrence pattern.

reminder: A generally user-visible notification that a specified time has been reached. A reminder is most commonly related to the beginning of a meeting or the due time of a task but it can be applied to any object type.

Wireless Application Protocol (WAP) Binary XML (WBXML): A compact binary representation of **XML** that is designed to reduce the transmission size of XML documents over narrowband communication channels.

XML: The Extensible Markup Language, as described in [XML1.0].

XML element: An **XML** structure that typically consists of a start tag, an end tag, and the information between those tags. Elements can have attributes (1) and can contain other elements.

XML namespace: A collection of names that is used to identify elements, types, and attributes in XML documents identified in a URI reference [RFC3986]. A combination of XML namespace and local name allows XML documents to use elements, types, and attributes that have the same names but come from different sources. For more information, see [XMLNS-2ED].

XML schema: A description of a type of XML document that is typically expressed in terms of constraints on the structure and content of documents of that type, in addition to the basic syntax constraints that are imposed by **XML** itself. An XML schema provides a view of a document type at a relatively high level of abstraction.

XML schema definition (XSD): The World Wide Web Consortium (W3C) standard language that is used in defining XML schemas. Schemas are useful for enforcing structure and constraining the types of data that can be used validly within other XML documents. XML schema definition refers to the fully specified and currently recommended standard for use in authoring **XML schemas**.

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

1.2 References

Links to a document in the Microsoft Open Specifications library point to the correct section in the most recently published version of the referenced document. However, because individual documents in the library are not updated at the same time, the section numbers in the documents may not match. You can confirm the correct section numbering by checking the Errata.

1.2.1 Normative References

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

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

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

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

[MS-ASEMAIL] Microsoft Corporation, "Exchange ActiveSync: Email Class Protocol".

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

[MS-ASWBXML] Microsoft Corporation, "Exchange ActiveSync: WAP Binary XML (WBXML) Algorithm".

[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

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

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

[XMLSCHEMA2/2] Biron, P., and Malhotra, A., Eds., "XML Schema Part 2: Datatypes Second Edition", W3C Recommendation, October 2004, http://www.w3.org/TR/2004/REC-xmlschema-2-20041028/

[XML] World Wide Web Consortium, "Extensible Markup Language (XML) 1.0 (Fourth Edition)", W3C Recommendation 16 August 2006, edited in place 29 September 2006, http://www.w3.org/TR/2006/REC-xml-20060816/

1.2.2 Informative References

[MS-OXPROTO] Microsoft Corporation, "Exchange Server Protocols System Overview".

1.3 Overview

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

1.4   Relationship to Other Protocols

This protocol describes the XML representation of tasks that are used by the command requests and responses that are described in [MS-ASCMD]. The protocol governing the transmission of these commands between the client and the server is described in [MS-ASCMD]. 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.

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

For conceptual background information and overviews of the relationships and interactions between this and other protocols, see [MS-OXPROTO].

1.5   Prerequisites/Preconditions

None.

1.6   Applicability Statement

This protocol describes a set of **XML elements** that are used to communicate task data when using the commands described in [MS-ASCMD]. This set of elements is applicable when communicating task data such as the task name, start and due dates, and recurrence options and exceptions between a mobile device and a server. These elements are not applicable when communicating calendar, note, contact, or document data between a mobile device and a server.

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 XML schema for the **Tasks** namespace is described in section 6.

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

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 is not significant for interoperability.

Prefix	Namespace URI	Reference
airsyncbase	**AirSyncBase**	[MS-ASAIRS]
tasks	**Tasks**	
airsync	**AirSync**	[MS-ASCMD] section 2.2.2.20
email	**Email**	[MS-ASEMAIL]
itemoperations	**ItemOperations**	[MS-ASCMD] section 2.2.2.9
search	**Search**	[MS-ASCMD] section 2.2.2.15
xs	**http://www.w3.org/2001/XMLSchema**	[XMLSCHEMA1]

2.2.2 Elements

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

The elements are defined in the **Tasks** namespace, except where indicated by the presence of a namespace prefix, as defined in section 2.2.1. A prefix is used for an element in the **Tasks** namespace only where necessary to disambiguate the element from another one of the same name.

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

- **airsyncbase:Body** (section 2.2.2.1.1)

- **tasks:Body** (section 2.2.2.1.2)

- **BodySize** (section 2.2.2.2)

- **BodyTruncated** (section 2.2.2.3)

- **Categories** (section 2.2.2.5)

- **Complete** (section 2.2.2.7)

- **DateCompleted** (section 2.2.2.8)

- **DueDate** (section 2.2.2.12)

- **Importance** (section 2.2.2.14)

- **Recurrence** (section 2.2.2.20)

- **ReminderSet** (section 2.2.2.22)

- **ReminderTime** (section 2.2.2.23)

- **Sensitivity** (section 2.2.2.24)

- **StartDate** (section 2.2.2.26)

- **Subject** (section 2.2.2.27)

- **UtcDueDate** (section 2.2.2.31)

- **UtcStartDate** (section 2.2.2.32)

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

- As an optional child element of the **itemoperations:Schema** element ([MS-ASCMD] section 2.2.3.149) in **ItemOperations** command requests ([MS-ASCMD] section 2.2.2.9)

- As an optional child element of the **itemoperations:Properties** element ([MS-ASCMD] section 2.2.3.132.1) in **ItemOperations** command responses ([MS-ASCMD] section 2.2.2.9)

- As an optional child element of the **search:Properties** element ([MS-ASCMD] section 2.2.3.132.2) in **Search** command responses ([MS-ASCMD] section 2.2.2.15)

- As an optional child element of the **airsync:ApplicationData** element ([MS-ASCMD] section 2.2.3.11) in **Sync** command requests ([MS-ASCMD] section 2.2.2.20)

- As an optional child element of the **airsync:ApplicationData** element ([MS-ASCMD] section 2.2.3.11) in **Sync** command responses ([MS-ASCMD] section 2.2.2.20)

The following table summarizes the set of common XML schema element definitions defined in or used by this specification. XML schema element definitions that are specific to one or more particular operations 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
airsyncbase:Body	Specifies details about the body of a task item.
Body	Contains the body of a task item that is retrieved from the server.
BodySize	Specifies the full size, in characters, of the task item body.
BodyTruncated	Indicates whether the body of the task item was truncated when sent from the server.

Element name	Description
Subject	The subject of the task item.
Importance	The importance or priority of the task item.
UtcStartDate	The **Coordinated Universal Time (UTC)** start date of the task item.
StartDate	The local start date of the task item.
UtcDueDate	The UTC due date of the task item.
DueDate	The local due date of the task item.
Categories	A collection of user-selected labels assigned to the task.
Category (section 2.2.2.6)	One of the user-selected labels that has been applied to the task item.
Recurrence	When and how often this task recurs.
Type (section 2.2.2.29)	The recurrence type.
Start (section 2.2.2.25)	The start time of a series of recurrence items.
Until (section 2.2.2.30)	The end time of a series of recurrence items.
Occurrences (section 2.2.2.18)	The number of occurrences before the series ends.
Interval (section 2.2.2.15)	The interval between recurrences.
DayOfWeek (section 2.2.2.10)	The day of the week for the recurrence.
DayOfMonth (section 2.2.2.9)	The day of the month for the recurrence.
WeekOfMonth (section 2.2.2.33)	The week of the month for the recurrence.
MonthOfYear (section 2.2.2.17)	The month of the year for the recurrence.
Regenerate (section 2.2.2.21)	Whether the task item regenerates after each task instance is complete.
DeadOccur (section 2.2.2.11)	Whether the task is a recurring instance.
CalendarType (section 2.2.2.4)	The calendar system used by this recurrence.
IsLeapMonth (section 2.2.2.16)	Whether this recurrence takes place during a leap month.
FirstDayOfWeek (section 2.2.2.13)	Specifies which day is considered the first day of the calendar week for this recurrence.
Complete	Whether the task has been completed.
DateCompleted	The date on which the task item was completed.
Sensitivity	The sensitivity of the task item.
ReminderTime	The time and date at which the **reminder** for the task item will appear.
ReminderSet	Whether a reminder for the task item has been set to appear.
OrdinalDate (section 2.2.2.19)	The time at which the client set the flag.
SubOrdinalDate (section 2.2.2.28)	A value that can be used for sorting.

2.2.2.1 Body

The **Body** element is defined in the **Tasks** namespace, as specified in section 2.2.2.1.2, for use by protocol version 2.5. It is defined in the **AirSyncBase** namespace, as specified in section 2.2.2.1.1, for use by protocol versions 12.0, 12.1, 14.0, 14.1, and 16.0.

2.2.2.1.1 Body (AirSyncBase Namespace)

The **airsyncbase:Body** element is a **container** ([MS-ASDTYPE] section 2.2) element that specifies details about the body of a task item. It is defined as an element in the **AirSyncBase** namespace and is used in ActiveSync command requests and responses as specified in section 2.2.2.

For more details about the **airsyncbase:Body** element, see [MS-ASAIRS] section 2.2.2.9.

Protocol Versions

The following table specifies the protocol versions that support this element. The client indicates the protocol version being used by setting either the MS-ASProtocolVersion header, as specified in [MS-ASHTTP] section 2.2.1.1.2.4, or the **Protocol version** field, as specified in [MS-ASHTTP] section 2.2.1.1.1.1, in the request.

Protocol version	Element support
2.5	
12.0	X
12.1	X
14.0	X
14.1	X
16.0	X

The **tasks:Body** element (section 2.2.2.1.2) is used instead of the **airsyncbase:Body** element with protocol version 2.5.

2.2.2.1.2 Body (Tasks Namespace)

The **Body** element is an optional element that contains the body of a task item that is retrieved from the server. This element is defined in the **Tasks** namespace as a child of the **airsync:ApplicationData** element ([MS-ASCMD] section 2.2.3.11) in **Sync** command requests and responses ([MS-ASCMD] section 2.2.2.20).

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

A client can use the **airsync:Truncation** element, as specified in [MS-ASCMD] section 2.2.3.175, to request truncation of a task item body. This conserves space and reduces data traffic when synchronizing task items. The server sets the **BodyTruncated** element (section 2.2.2.3) in the **Sync** response to indicate whether the body of the task item has actually been truncated. The untruncated size of the task item body is specified by the **BodySize** element (section 2.2.2.2).

When the client requests truncation, only the first part (or none) of each task item body is included in a synchronization. A complete task item body cannot be retrieved after a task item has been synchronized with a truncated task item body.

Protocol Versions

The following table specifies the protocol versions that support this element. The client indicates the protocol version being used by setting either the MS-ASProtocolVersion header, as specified in [MS-ASHTTP] section 2.2.1.1.2.4, or the **Protocol version** field, as specified in [MS-ASHTTP] section 2.2.1.1.1.1, in the request.

Protocol version	Element support
2.5	X
12.0	
12.1	
14.0	
14.1	
16.0	

The **airsyncbase:Body** element (section 2.2.2.1.1) is used instead of the **tasks:Body** element with protocol versions 12.0, 12.1, 14.0, 14.1, and 16.0.

2.2.2.2 BodySize

The **BodySize** element is an optional element that specifies the full size, in characters, of the task item body. This element is defined in the **Tasks** namespace as a child of the **airsync:ApplicationData** element ([MS-ASCMD] section 2.2.3.11) in **Sync** command responses ([MS-ASCMD] section 2.2.2.20).

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

This element is present only when the **BodyTruncated** element (section 2.2.2.3) is set to 1. When the task item body is truncated, the **BodySize** element is included to specify the original size of the body prior to truncation.

Protocol Versions

The following table specifies the protocol versions that support this element. The client indicates the protocol version being used by setting either the MS-ASProtocolVersion header, as specified in [MS-ASHTTP] section 2.2.1.1.2.4, or the **Protocol version** field, as specified in [MS-ASHTTP] section 2.2.1.1.1.1, in the request.

Protocol version	Element support
2.5	X
12.0	
12.1	
14.0	
14.1	
16.0	

2.2.2.3 BodyTruncated

The **BodyTruncated** element is an optional element that indicates whether the body of the task item was truncated when sent from the server. This element is defined in the **Tasks** namespace as a child of the **airsync:ApplicationData** element ([MS-ASCMD] section 2.2.3.11) in **Sync** command responses ([MS-ASCMD] section 2.2.2.20).

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

A value of 1 indicates that the task item body has been truncated by the server; a value of 0 (zero) indicates that the task item body has not been truncated.

Protocol Versions

The following table specifies the protocol versions that support this element. The client indicates the protocol version being used by setting either the MS-ASProtocolVersion header, as specified in [MS-ASHTTP] section 2.2.1.1.2.4, or the **Protocol version** field, as specified in [MS-ASHTTP] section 2.2.1.1.1.1, in the request.

Protocol version	Element support
2.5	X
12.0	
12.1	
14.0	
14.1	
16.0	

2.2.2.4 CalendarType

The **CalendarType** element is a child element of the **Recurrence** element (section 2.2.2.20) that specifies the calendar system used by the task recurrence. It is defined as an element in the **Tasks** namespace.

The value of this element is an **unsignedbyte** data type, as specified in [MS-ASDTYPE] section 2.8.

A command request has a maximum of one **CalendarType** child element per **Recurrence** element when the **Type** element (section 2.2.2.29) is set to a value of 2, 3, 5, or 6. If the **CalendarType** element is included in other instances, the server responds with a status 6 error (conversion error).

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

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

Value	Meaning
0	Default

Value	Meaning
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)
14	Japanese Lunar
15	Chinese Lunar
16	Saka Era – This value is not supported; MUST not be used.
17	Chinese Lunar (Eto) – This value is not supported; MUST not be used.
18	Korean Lunar (Eto) – This value is not supported; MUST not be used.
19	Japanese Rokuyou Lunar – This value is not supported; MUST not be used.
20	Korean Lunar
23	Um al-Qura – This value is not supported; MUST not be used.

Protocol Versions

The following table specifies the protocol versions that support this element. The client indicates the protocol version being used by setting either the MS-ASProtocolVersion header, as specified in [MS-ASHTTP] section 2.2.1.1.2.4, or the **Protocol version** field, as specified in [MS-ASHTTP] section 2.2.1.1.1.1, in the request.

Protocol version	Element support
2.5	
12.0	
12.1	
14.0	X
14.1	X

Protocol version	Element support
16.0	X

2.2.2.5 Categories

The **Categories** element is a **container** ([MS-ASDTYPE] section 2.2) element that specifies a collection of user-managed labels assigned to the task. It is defined as an element in the **Tasks** namespace and is used in ActiveSync command requests and responses as specified in section 2.2.2.

A command request or response has a maximum of one **Categories** element per command.

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

Category (section 2.2.2.6): This element is optional.

If a **Categories** element contains no **Category** child elements in a request or response, then the categories for the specified task will be removed.

Protocol Versions

The following table specifies the protocol versions that support this element. The client indicates the protocol version being used by setting either the MS-ASProtocolVersion header, as specified in [MS-ASHTTP] section 2.2.1.1.2.4, or the **Protocol version** field, as specified in [MS-ASHTTP] section 2.2.1.1.1.1, in the request.

Protocol version	Element support
2.5	X
12.0	X
12.1	X
14.0	X
14.1	X
16.0	X

2.2.2.6 Category

The **Category** element is an optional child element of the **Categories** element (section 2.2.2.5) that specifies a category that is assigned to the task item, such as Business, Holiday, Personal, or Waiting. It is defined as an element in the **Tasks** namespace.

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

A **Categories** element SHOULD contain no more than 300 **Category** child elements.

Protocol Versions

The following table specifies the protocol versions that support this element. The client indicates the protocol version being used by setting either the MS-ASProtocolVersion header, as specified in [MS-

ASHTTP] section 2.2.1.1.2.4, or the **Protocol version** field, as specified in [MS-ASHTTP] section 2.2.1.1.1.1, in the request.

Protocol version	Element support
2.5	X
12.0	X
12.1	X
14.0	X
14.1	X
16.0	X

2.2.2.7 Complete

The **Complete** element is a required element that specifies whether the task has been completed. It is defined as an element in the **Tasks** namespace.

The value of this element is an **unsignedbyte** data type, as specified in [MS-ASDTYPE] section 2.8.

The value of the **Complete** element MUST be one of the following values.

Value	Meaning
0	False (not completed)
1	True (completed)

Protocol Versions

The following table specifies the protocol versions that support this element. The client indicates the protocol version being used by setting either the MS-ASProtocolVersion header, as specified in [MS-ASHTTP] section 2.2.1.1.2.4, or the **Protocol version** field, as specified in [MS-ASHTTP] section 2.2.1.1.1.1, in the request.

Protocol version	Element support
2.5	X
12.0	X
12.1	X
14.0	X
14.1	X
16.0	X

2.2.2.8 DateCompleted

The **DateCompleted** element specifies the date and time at which the task was completed. It is defined as an element in the **Tasks** namespace and is used in ActiveSync command requests and responses as specified in section 2.2.2.

The **DateCompleted** element MUST be included in the response if the **Complete** element (section 2.2.2.7) value is 1.

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

Protocol Versions

The following table specifies the protocol versions that support this element. The client indicates the protocol version being used by setting either the MS-ASProtocolVersion header, as specified in [MS-ASHTTP] section 2.2.1.1.2.4, or the **Protocol version** field, as specified in [MS-ASHTTP] section 2.2.1.1.1.1, in the request.

Protocol version	Element support
2.5	X
12.0	X
12.1	X
14.0	X
14.1	X
16.0	X

2.2.2.9 DayOfMonth

The **DayOfMonth** element is an optional child element of the **Recurrence** element (section 2.2.2.20) that specifies the day of the month for the task recurrence. It is defined as an element in the **Tasks** namespace.

The value of this element is an **unsignedbyte** data type, as specified in [MS-ASDTYPE] section 2.8.

The value of the **DayOfMonth** element MUST be between 1 and 31.

A command request or response has a minimum of one **DayOfMonth** element per **Recurrence** element if the value of the **Type** element (section 2.2.2.29) is either 2 or 5.

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

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

Protocol Versions

The following table specifies the protocol versions that support this element. The client indicates the protocol version being used by setting either the MS-ASProtocolVersion header, as specified in [MS-ASHTTP] section 2.2.1.1.2.4, or the **Protocol version** field, as specified in [MS-ASHTTP] section 2.2.1.1.1.1, in the request.

Protocol version	Element support
2.5	X
12.0	X
12.1	X
14.0	X
14.1	X
16.0	X

2.2.2.10   DayOfWeek

The **DayOfWeek** element is an optional child element of the **Recurrence** element (section 2.2.2.11) that specifies the day of the week for the task recurrence. It is defined as an element in the **Tasks** namespace.

A command request or response has a minimum of one **DayOfWeek** element per **Recurrence** element when the **Type** element value is 1, 3, or 6.

If a request is issued with the **DayOfWeek** element when the **Type** element value is 2 or 5, the server responds with a status 6 error (conversion error). If the **Type** element value is 0 (zero), the **DayOfWeek** element is not a required child element of the **Recurrence** element.<1>

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

The value of this element is an **unsignedbyte** data type, as specified in [MS-ASDTYPE] section 2.8.

The value of the **DayOfWeek** element MUST be either one of the following values, or the sum of more than one of the following values (in which case this task recurs on more than one day).

Value	Meaning
1	Sunday
2	Monday
4	Tuesday
8	Wednesday
16	Thursday
32	Friday
64	Saturday
127	Specifies the last day of the month when the value of the **WeekOfMonth** element (section 2.2.2.33) is 5.

Protocol Versions

The following table specifies the protocol versions that support this element. The client indicates the protocol version being used by setting either the MS-ASProtocolVersion header, as specified in [MS-ASHTTP] section 2.2.1.1.2.4, or the **Protocol version** field, as specified in [MS-ASHTTP] section 2.2.1.1.1.1, in the request.

Protocol version	Element support
2.5	X
12.0	X
12.1	X
14.0	X
14.1	X
16.0	X

2.2.2.11   DeadOccur

The **DeadOccur** element is an optional child element of the **Recurrence** element (section 2.2.2.20) that specifies whether the task is an instance of a **recurring task**. It is defined as an element in the **Tasks** namespace.

The value of this element is an **unsignedbyte** data type, as specified in [MS-ASDTYPE] section 2.8.

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

Clients set this value to any non-zero value (up to 255) to mark a task as a recurring task. When clients make command requests, the value MUST be set to a non-zero value (up to 255) when marking a task as complete.

The default value of the **DeadOccur** element is 0 (zero).

Protocol Versions

The following table specifies the protocol versions that support this element. The client indicates the protocol version being used by setting either the MS-ASProtocolVersion header, as specified in [MS-ASHTTP] section 2.2.1.1.2.4, or the **Protocol version** field, as specified in [MS-ASHTTP] section 2.2.1.1.1.1, in the request.

Protocol version	Element support
2.5	X
12.0	X
12.1	X
14.0	X
14.1	X
16.0	X

2.2.2.12 DueDate

The **DueDate** element specifies the local due date of the task item. It is defined as an element in the **Tasks** namespace and is used in ActiveSync command requests and responses as specified in section 2.2.2.

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

Protocol Versions

The following table specifies the protocol versions that support this element. The client indicates the protocol version being used by setting either the MS-ASProtocolVersion header, as specified in [MS-ASHTTP] section 2.2.1.1.2.4, or the **Protocol version** field, as specified in [MS-ASHTTP] section 2.2.1.1.1.1, in the request.

Protocol version	Element support
2.5	X
12.0	X
12.1	X
14.0	X
14.1	X
16.0	X

2.2.2.13 FirstDayOfWeek

The **FirstDayOfWeek** element is a child element of the **Recurrence** element (section 2.2.2.20) that specifies which day is considered the first day of the calendar week for this recurrence. It is defined as an element in the **Tasks** namespace.

The value of this element is an **unsignedbyte** data type, as specified in [MS-ASDTYPE] section 2.8.

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 2.2.2.29) 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's request, then the server SHOULD identify the first day of the week for this recurrence according to the preconfigured options of the user when creating the task item.

The value of the **FirstDayOfWeek** element MUST be one of the values defined in the following table. If the client uses the **Sync** command request ([MS-ASCMD] section 2.2.2.20) to transmit a value not included in this table, then the server MUST return protocol status error 6. **Sync** command status values are specified in [MS-ASCMD] section 2.2.3.167.16.

Value	Meaning
0	Sunday

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

Protocol Versions

The following table specifies the protocol versions that support this element. The client indicates the protocol version being used by setting either the MS-ASProtocolVersion header, as specified in [MS-ASHTTP] section 2.2.1.1.2.4, or the **Protocol version** field, as specified in [MS-ASHTTP] section 2.2.1.1.1.1, in the request.

Protocol version	Element support
2.5	
12.0	
12.1	
14.0	
14.1	X
16.0	X

2.2.2.14 Importance

The **Importance** element specifies the importance or priority of the task item. It is defined as an element in the **Tasks** namespace and is 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 2.8.

The value of the **Importance** element SHOULD be one of the following:

Value	Meaning
0	Low
1	Normal (Default)
2	High

If the **Importance** element is set to a value other than 0 (zero), 1, or 2 in a command request, the server will process the request successfully (that is, will not return an error code in the response) and return the same value that is set in the request.

Protocol Versions

The following table specifies the protocol versions that support this element. The client indicates the protocol version being used by setting either the MS-ASProtocolVersion header, as specified in [MS-ASHTTP] section 2.2.1.1.2.4, or the **Protocol version** field, as specified in [MS-ASHTTP] section 2.2.1.1.1.1, in the request.

Protocol version	Element support
2.5	X
12.0	X
12.1	X
14.0	X
14.1	X
16.0	X

2.2.2.15 Interval

The **Interval** element is an optional child element of the **Recurrence** element (section 2.2.2.20) that specifies the interval between task recurrences. It is defined as an element in the **Tasks** namespace.

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

The value of the **Interval** element is an **unsignedShort**, as specified in [XMLSCHEMA2/2] section 3.3.23. The maximum value of this element is 999.

Protocol Versions

The following table specifies the protocol versions that support this element. The client indicates the protocol version being used by setting either the MS-ASProtocolVersion header, as specified in [MS-ASHTTP] section 2.2.1.1.2.4, or the **Protocol version** field, as specified in [MS-ASHTTP] section 2.2.1.1.1.1, in the request.

Protocol version	Element support
2.5	X
12.0	X
12.1	X
14.0	X
14.1	X
16.0	X

2.2.2.16 IsLeapMonth

The **IsLeapMonth** element is an optional child element of the **Recurrence** element (section 2.2.2.20) that specifies whether the **recurrence patterns** occur within the leap month of the current year. It is defined as an element in the **Tasks** namespace.

The value of this element is an **unsignedbyte** data type, as specified in [MS-ASDTYPE] section 2.8.

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 is applied when the **CalendarType** element (section 2.2.2.4) 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 the **IsLeapMonth** element MUST be one of the following values.

Value	Meaning
0	False
1	True

The default value of the **IsLeapMonth** element is 0.

Protocol Versions

The following table specifies the protocol versions that support this element. The client indicates the protocol version being used by setting either the MS-ASProtocolVersion header, as specified in [MS-ASHTTP] section 2.2.1.1.2.4, or the **Protocol version** field, as specified in [MS-ASHTTP] section 2.2.1.1.1.1, in the request.

Protocol version	Element support
2.5	
12.0	
12.1	
14.0	X
14.1	X
16.0	X

2.2.2.17 MonthOfYear

The **MonthofYear** element is an optional child element of the **Recurrence** element (section 2.2.2.20) that specifies the month of the year for the task recurrence. It is defined as an element in the **Tasks** namespace.

The value of this element is an **unsignedbyte** data type, as specified in [MS-ASDTYPE] section 2.8.

A command request or response has a minimum of one **MonthofYear** child element per **Recurrence** element if the value of the **Type** element (section 2.2.2.29) is either 5 or 6.

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

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

Protocol Versions

The following table specifies the protocol versions that support this element. The client indicates the protocol version being used by setting either the MS-ASProtocolVersion header, as specified in [MS-ASHTTP] section 2.2.1.1.2.4, or the **Protocol version** field, as specified in [MS-ASHTTP] section 2.2.1.1.1.1, in the request.

Protocol version	Element support
2.5	X
12.0	X
12.1	X
14.0	X
14.1	X
16.0	X

2.2.2.18   Occurrences

The **Occurrences** element is an optional child element of the **Recurrence** element (section 2.2.2.20) that specifies the number of occurrences before the series ends. It is defined as an element in the **Tasks** namespace.

The value of this element is an **unsignedbyte** data type, as specified in [MS-ASDTYPE] section 2.8.

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

The **Occurrences** element and the **Until** element (section 2.2.2.30) are mutually exclusive. It is recommended that only one of these elements be included as a child element of the **Recurrence** element in a **Sync** command request ([MS-ASCMD] section 2.2.2.20). For more details about the **Occurrences** element, see section 3.2.5.3.4.

Protocol Versions

The following table specifies the protocol versions that support this element. The client indicates the protocol version being used by setting either the MS-ASProtocolVersion header, as specified in [MS-ASHTTP] section 2.2.1.1.2.4, or the **Protocol version** field, as specified in [MS-ASHTTP] section 2.2.1.1.1.1, in the request.

Protocol version	Element support
2.5	X
12.0	X
12.1	X
14.0	X

Protocol version	Element support
14.1	X
16.0	X

2.2.2.19   OrdinalDate

The **OrdinalDate** element is a child element of the **email:Flag** element, as defined in [MS-ASEMAIL] section 2.2.2.34, that specifies the time at which the client set the flag. It is defined as an element in the **Tasks** namespace.

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

Protocol Versions

The following table specifies the protocol versions that support this element. The client indicates the protocol version being used by setting either the MS-ASProtocolVersion header, as specified in [MS-ASHTTP] section 2.2.1.1.2.4, or the **Protocol version** field, as specified in [MS-ASHTTP] section 2.2.1.1.1.1, in the request.

Protocol version	Element support
2.5	
12.0	X
12.1	X
14.0	X
14.1	X
16.0	X

2.2.2.20   Recurrence

The **Recurrence** element is a **container** ([MS-ASDTYPE] section 2.2) element that specifies when and how often the task recurs. It is defined as an element in the **Tasks** namespace and is used in ActiveSync command requests and responses as specified in section 2.2.2.

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

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

- **Type** (section 2.2.2.29): This element is required.

- **Start** (section 2.2.2.25): This element is required.

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

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

- **Interval** (section 2.2.2.15): This element is optional.

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

- **DayOfMonth** (section 2.2.2.9): This element is optional.

- **WeekOfMonth** (section 2.2.2.33): This element is optional.

- **MonthOfYear** (section 2.2.2.17): This element is optional.

- **Regenerate** (section 2.2.2.21): This element is optional.

- **DeadOccur** (section 2.2.2.11): This element is optional.

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

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

- **FirstDayOfWeek** (section 2.2.2.13): This element is required in server's responses for weekly recurrences.

Protocol Versions

The following table specifies the protocol versions that support this element. The client indicates the protocol version being used by setting either the MS-ASProtocolVersion header, as specified in [MS-ASHTTP] section 2.2.1.1.2.4, or the **Protocol version** field, as specified in [MS-ASHTTP] section 2.2.1.1.1.1, in the request.

Protocol version	Element support
2.5	X
12.0	X
12.1	X
14.0	X
14.1	X
16.0	X

2.2.2.21   Regenerate

The **Regenerate** element is an optional child element of the **Recurrence** element (section 2.2.2.20) that specifies whether this task item regenerates after it is completed. It is defined as an element in the **Tasks** namespace.

The value of this element is an **unsignedbyte** data type, as specified in [MS-ASDTYPE] section 2.8.

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

Valid patterns include Daily, Weekly, Monthly, and Yearly patterns.

If the **Regenerate** element is not included in a response, then the client MUST assume that the default value is 0 (zero) (do not regenerate).

Protocol Versions

The following table specifies the protocol versions that support this element. The client indicates the protocol version being used by setting either the MS-ASProtocolVersion header, as specified in [MS-

Protocol version	Element support
2.5	X
12.0	X
12.1	X
14.0	X
14.1	X
16.0	X

2.2.2.22   ReminderSet

The **ReminderSet** element specifies whether a reminder for the task item has been set to appear. It is defined as an element in the **Tasks** namespace and is 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 2.8.

The value of the **ReminderSet** element MUST be one of the following values.

Value	Meaning
0	False (no reminder is set) (Default)
1	True (a reminder is set)

If the **ReminderSet** element contains a value other than 0 (zero) or 1 in a command request, the server responds with a status value of 6 in the command response.

Protocol Versions

The following table specifies the protocol versions that support this element. The client indicates the protocol version being used by setting either the MS-ASProtocolVersion header, as specified in [MS-ASHTTP] section 2.2.1.1.2.4, or the **Protocol version** field, as specified in [MS-ASHTTP] section 2.2.1.1.1.1, in the request.

Protocol version	Element support
2.5	X
12.0	X
12.1	X
14.0	X
14.1	X
16.0	X

2.2.2.23 ReminderTime

The **ReminderTime** element specifies the time and date at which the reminder for the task item will appear. It is defined as an element in the **Tasks** namespace and is used in ActiveSync command requests and responses as specified in section 2.2.2.

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

Protocol Versions

The following table specifies the protocol versions that support this element. The client indicates the protocol version being used by setting either the MS-ASProtocolVersion header, as specified in [MS-ASHTTP] section 2.2.1.1.2.4, or the **Protocol version** field, as specified in [MS-ASHTTP] section 2.2.1.1.1.1, in the request.

Protocol version	Element support
2.5	X
12.0	X
12.1	X
14.0	X
14.1	X
16.0	X

2.2.2.24 Sensitivity

The **Sensitivity** element specifies the sensitivity level of the task. It is defined as an element in the **Tasks** namespace and is 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 2.8.

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

Value	Meaning
0	Normal
1	Personal
2	Private
3	Confidential

The default value of the **Sensitivity** element is 0 (zero) (normal).

Protocol Versions

The following table specifies the protocol versions that support this element. The client indicates the protocol version being used by setting either the MS-ASProtocolVersion header, as specified in [MS-ASHTTP] section 2.2.1.1.2.4, or the **Protocol version** field, as specified in [MS-ASHTTP] section 2.2.1.1.1.1, in the request.

Protocol version	Element support
2.5	X
12.0	X
12.1	X
14.0	X
14.1	X
16.0	X

2.2.2.25 Start

The **Start** element is a required child element of the **Recurrence** element (section 2.2.2.20) that specifies the local start date for the recurrence.<2> It is defined as an element in the **Tasks** namespace.

A command request or response has a minimum of one **Start** child element per **Recurrence** element. For details about status errors returned when this requirement is not met, see section 3.2.5.3.3.

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

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

Protocol Versions

The following table specifies the protocol versions that support this element. The client indicates the protocol version being used by setting either the MS-ASProtocolVersion header, as specified in [MS-ASHTTP] section 2.2.1.1.2.4, or the **Protocol version** field, as specified in [MS-ASHTTP] section 2.2.1.1.1.1, in the request.

Protocol version	Element support
2.5	X
12.0	X
12.1	X
14.0	X
14.1	X
16.0	X

2.2.2.26 StartDate

The **StartDate** element specifies the local start date of the task item. It is defined as an element in the **Tasks** namespace and is used in ActiveSync command requests and responses as specified in section 2.2.2.

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

Protocol Versions

The following table specifies the protocol versions that support this element. The client indicates the protocol version being used by setting either the MS-ASProtocolVersion header, as specified in [MS-ASHTTP] section 2.2.1.1.2.4, or the **Protocol version** field, as specified in [MS-ASHTTP] section 2.2.1.1.1.1, in the request.

Protocol version	Element support
2.5	X
12.0	X
12.1	X
14.0	X
14.1	X
16.0	X

2.2.2.27   Subject

The **Subject** element is an element that specifies the subject of the task item. It is defined as an element in the **Tasks** namespace.

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

The **Subject** element is an optional element in a **Sync** command request ([MS-ASCMD] section 2.2.2.20).

The **Subject** element is an optional element in a **Sync** command response ([MS-ASCMD] section 2.2.2.20).

Protocol Versions

The following table specifies the protocol versions that support this element. The client indicates the protocol version being used by setting either the MS-ASProtocolVersion header, as specified in [MS-ASHTTP] section 2.2.1.1.2.4, or the **Protocol version** field, as specified in [MS-ASHTTP] section 2.2.1.1.1.1, in the request.

Protocol version	Element support
2.5	X
12.0	X
12.1	X
14.0	X
14.1	X
16.0	X

2.2.2.28 SubOrdinalDate

The **SubOrdinalDate** element is an optional child element of the **email:Flag** element, as defined in [MS-ASEMAIL] section 2.2.2.34, that specifies a value that can be used for sorting. It is defined as an element in the **Tasks** namespace.

The value of this element is a **string** data type, as specified in [MS-ASDTYPE] section 2.7. It can contain any **string** value and can be used for sorting if there are duplicate **OrdinalDate** element values. For details about the **OrdinalDate** element, see section 2.2.2.19.

Protocol Versions

The following table specifies the protocol versions that support this element. The client indicates the protocol version being used by setting either the MS-ASProtocolVersion header, as specified in [MS-ASHTTP] section 2.2.1.1.2.4, or the **Protocol version** field, as specified in [MS-ASHTTP] section 2.2.1.1.1.1, in the request.

Protocol version	Element support
2.5	
12.0	X
12.1	X
14.0	X
14.1	X
16.0	X

2.2.2.29 Type

The **Type** element is a required child element of the **Recurrence** element (section 2.2.2.20) that specifies the type of the recurrence item. It is defined as an element in the **Tasks** 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.

If a client does not include this element in a **Sync** command request ([MS-ASCMD] section 2.2.2.20) whenever a **Recurrence** element is present, then the server MUST respond with status error 6. Status errors for the **Sync** command are specified in [MS-ASCMD] section 2.2.3.167.16.

The value of this element is an **unsignedbyte** data type, as specified in [MS-ASDTYPE] section 2.8.

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

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

Value	Meaning
6	Recurs yearly on the nth day.

Protocol Versions

The following table specifies the protocol versions that support this element. The client indicates the protocol version being used by setting either the MS-ASProtocolVersion header, as specified in [MS-ASHTTP] section 2.2.1.1.2.4, or the **Protocol version** field, as specified in [MS-ASHTTP] section 2.2.1.1.1.1, in the request.

Protocol version	Element support
2.5	X
12.0	X
12.1	X
14.0	X
14.1	X
16.0	X

2.2.2.30 Until

The **Until** element is an optional child element of the **Recurrence** element (section 2.2.2.20) that specifies the end time of a series of recurrence items. It is defined as an element in the **Tasks** namespace.

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

The **Occurrences** element (section 2.2.2.18) and the **Until** element are mutually exclusive. It is recommended that only one of these elements be included as a child element of the **Recurrence** element (section 2.2.2.20) in a **Sync** command request ([MS-ASCMD] section 2.2.2.20). For more details about the **Until** element, see section 3.2.5.3.4.

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

Protocol Versions

The following table specifies the protocol versions that support this element. The client indicates the protocol version being used by setting either the MS-ASProtocolVersion header, as specified in [MS-ASHTTP] section 2.2.1.1.2.4, or the **Protocol version** field, as specified in [MS-ASHTTP] section 2.2.1.1.1.1, in the request.

Protocol version	Element support
2.5	X
12.0	X
12.1	X
14.0	X

Protocol version	Element support
14.1	X
16.0	X

2.2.2.31 UtcDueDate

The **UtcDueDate** element specifies the UTC due date of the task item. It is defined as an element in the **Tasks** namespace and is used in ActiveSync command requests and responses as specified in section 2.2.2.

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

Protocol Versions

The following table specifies the protocol versions that support this element. The client indicates the protocol version being used by setting either the MS-ASProtocolVersion header, as specified in [MS-ASHTTP] section 2.2.1.1.2.4, or the **Protocol version** field, as specified in [MS-ASHTTP] section 2.2.1.1.1.1, in the request.

Protocol version	Element support
2.5	X
12.0	X
12.1	X
14.0	X
14.1	X
16.0	X

2.2.2.32 UtcStartDate

The **UtcStartDate** element specifies the UTC start date of the task item. It is defined as an element in the **Tasks** namespace and is used in ActiveSync command requests and responses as specified in section 2.2.2.

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

Protocol Versions

The following table specifies the protocol versions that support this element. The client indicates the protocol version being used by setting either the MS-ASProtocolVersion header, as specified in [MS-ASHTTP] section 2.2.1.1.2.4, or the **Protocol version** field, as specified in [MS-ASHTTP] section 2.2.1.1.1.1, in the request.

Protocol version	Element support
2.5	X
12.0	X

Protocol version	Element support
12.1	X
14.0	X
14.1	X
16.0	X

2.2.2.33 WeekOfMonth

The **WeekOfMonth** element is an optional child element of the **Recurrence** element (section 2.2.2.20) that specifies the week of the month for the task recurrence. It is defined as an element in the **Tasks** namespace.

The value of this element is an **unsignedbyte** data type, as specified in [MS-ASDTYPE] section 2.8.

A command request or response has a minimum of one **WeekOfMonth** child element per **Recurrence** element when the value of the **Type** element (section 2.2.2.29) is either 3 or 6.

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

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

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

Protocol Versions

The following table specifies the protocol versions that support this element. The client indicates the protocol version being used by setting either the MS-ASProtocolVersion header, as specified in [MS-ASHTTP] section 2.2.1.1.2.4, or the **Protocol version** field, as specified in [MS-ASHTTP] section 2.2.1.1.1.1, in the request.

Protocol version	Element support
2.5	X
12.0	X
12.1	X
14.0	X
14.1	X
16.0	X

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.

Task class: A structured XML text block that adheres to the **XSD** specified in section 2.2. It is returned by the server to the client as part of a full XML response to the client's command requests that are specified in section 3.1.5.

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 Task Data Between Client and Server

A client initiates synchronization of **Task** class data with the server by sending a **Sync** command request ([MS-ASCMD] section 2.2.2.20) to the server.

3.1.4.2 Searching a Server for Task Data

A client searches for **Task** class data on the server by sending a **Search** command request ([MS-ASCMD] section 2.2.2.15) to the server.

3.1.4.3 Requesting Details for Specific Tasks

A client requests **Task** class data for one or more individual task items by sending an **ItemOperations** command request ([MS-ASCMD] section 2.2.2.9) to the server that contains one or more **itemoperations:Fetch** elements ([MS-ASCMD] section 2.2.3.63.1).

3.1.5 Message Processing Events and Sequencing Rules

The following sections specify how various elements of the **Task** 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 2.2.2.9) that contains one or more **itemoperations:Fetch** elements ([MS-ASCMD] section 2.2.3.63.1) to retrieve data from the server for one or more specific **Task** items.

The client can restrict the elements returned in the **ItemOperations** command response ([MS-ASCMD] section 2.2.2.9) by including the **airsyncbase:Attachments** element ([MS-ASAIRS] section 2.2.2.8) and the **airsyncbase:Body** element ([MS-ASAIRS] section 2.2.2.9) as child elements of the **itemoperations:Schema** element ([MS-ASCMD] section 2.2.3.149) in the **ItemOperations** command request.

For more details about the **ItemOperations** command, see [MS-ASCMD] section 2.2.2.9.

3.1.5.2 Search Command Request

A client uses the **Search** command request ([MS-ASCMD] section 2.2.2.15) to retrieve **Task** class items that match the criteria specified by the client.

Elements that belong to the **Task** class, as specified in section 2.2, MUST NOT be included in a **Search** command request.

For more details about the **Search** command, see [MS-ASCMD] section 2.2.2.15.

3.1.5.3 Sync Command Request

A client uses the **Sync** command request ([MS-ASCMD] section 2.2.2.20) to synchronize its **Task** class items for a specified user with the tasks currently stored by the server.

Any of the elements that belong to the **Task** class, as specified in section 2.2, can be included in a **Sync** command request.

Top-level **Task** class elements, as specified in section 2.2, MUST be transmitted as child elements of the **airsync:ApplicationData** element ([MS-ASCMD] section 2.2.3.11) within either an **airsync:Add** element ([MS-ASCMD] section 2.2.3.7.2) or an **airsync:Change** element ([MS-ASCMD] section 2.2.3.24).

For more details about the **Sync** command, see [MS-ASCMD] section 2.2.2.20.

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.

Task class: A structured XML text block that adheres to the XSD specified in section 2.2. It is returned by the server to the client as part of a full XML response to the client's command requests specified in section 3.1.5.

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 Task Data Between Client and Server

Synchronization of **Task** 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 2.2.2.20).

3.2.4.2 Searching for Task Data

Searching for **Task** 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 2.2.2.15).

3.2.4.3 Requesting Details for Specific Tasks

Retrieval of **Task** class data for one or more individual task 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 2.2.2.9).

3.2.5 Message Processing Events and Sequencing Rules

The following sections specify how various elements of the **Task** 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 2.2.2.9) to retrieve data from the server for one or more specific **Task** items, as specified in section 3.1.5.1, the server responds with an **ItemOperations** command response ([MS-ASCMD] section 2.2.2.9).

Any of the elements that belong to the **Task** class, as specified in section 2.2, can be included in an **ItemOperations** command response. If an **itemoperations:Schema** element ([MS-ASCMD] section 2.2.3.149) is included in the **ItemOperations** command request, then the elements returned in the **ItemOperations** command response MUST be restricted to the elements that were included as child elements of the **itemoperations:Schema** element in the command request.

Top-level **Task** class elements, as specified in section 2.2, MUST be returned as child elements of the **itemoperations:Properties** element ([MS-ASCMD] section 2.2.3.132) in the **ItemOperations** command response.

For more information about the **ItemOperations** command, see [MS-ASCMD] section 2.2.2.9.

3.2.5.2 Search Command Response

When a client uses the **Search** command request ([MS-ASCMD] section 2.2.2.15) to retrieve **Task** class items from the server that match the criteria specified by the client, as specified in section 3.1.5.2, the server responds with a **Search** command response ([MS-ASCMD] section 2.2.2.15).

Any of the elements that belong to the **Task** class, as specified in section 2.2, can be included in a **Search** command response.

Top-level **Task** class elements, as specified in section 2.2, are returned as child elements of the **search:Properties** element ([MS-ASCMD] section 2.2.3.132) in the **Search** command response.

If elements that belong to the **Task** class are included in a **Search** command request, the server MUST return a **Status** value of 2 in the **Store** element, as specified in [MS-ASCMD] section 2.2.3.167.12.

For more details about the **Search** command, see [MS-ASCMD] section 2.2.2.15.

3.2.5.3 Sync Command Response

When a client uses the **Sync** command request ([MS-ASCMD] section 2.2.2.20) to synchronize its **Task** class items for a specified user with the tasks currently stored by the server, as specified in section 3.1.5.3, the server responds with a **Sync** command response ([MS-ASCMD] section 2.2.2.20).

Any of the elements that belong to the **Task** class, as specified in section 2.2, can be included in a **Sync** command response.

Top-level **Task** class elements, as specified in section 2.2, are returned as child elements of the **airsync:ApplicationData** element ([MS-ASCMD] section 2.2.3.11) within either an **airsync:Add** element ([MS-ASCMD] section 2.2.3.7.2) or an **airsync:Change** element ([MS-ASCMD] section 2.2.3.24) in the **Sync** command response.

3.2.5.3.1 Importance Element

If the **Importance** element (section 2.2.2.5) is not included as a child element of the **airsync:Change** element in a **Sync** command request, the server MUST NOT delete the element from its **message store**, but rather keep its value unchanged.

3.2.5.3.2 ReminderSet Element

If the **ReminderSet** element (section 2.2.2.16) was previously set on a task but is not included as a child element of the **airsync:Change** element in a **Sync** command request, the server MUST NOT delete the element from its message store but rather keep its value unchanged.

3.2.5.3.3 Start Element

If a client does not include the **Start** element, as specified in section 2.2.2.25, in a **Sync** command request ([MS-ASCMD] section 2.2.2.20) whenever a **Recurrence** element is present, then the server MUST respond with status error 6. Status errors for the **Sync** command are specified in [MS-ASCMD] section 2.2.3.167.16.

3.2.5.3.4 Occurrences and Until Elements

If both the **Occurrences** element, as specified in section 2.2.2.18, and the **Until** element, as specified in section 2.2.2.30, are included in a **Sync** command request ([MS-ASCMD] section 2.2.2.20), the server MUST respect the value of the **Occurrences** element and ignore the **Until** element.

3.2.6   Timer Events

None.

3.2.7   Other Local Events

None.

4 Protocol Examples

4.1 Synchronizing Tasks Between Client and Server

The following example demonstrates a client's request to create a new task on the server, and the server's response. In this example, the client sends a **Sync** command request ([MS-ASCMD] section 2.2.2.20) to the server that contains information for a task that was created on the client, and the server responds with a **Sync** command response ([MS-ASCMD] section 2.2.2.20).

Request:

```xml
<?xml version="1.0" encoding="utf-8"?>
<Sync xmlns:tasks="Tasks:" xmlns:airsyncbase="AirSyncBase:" xmlns="AirSync:">
  <Collections>
    <Collection>
      <SyncKey>301865454</SyncKey>
      <CollectionId>11</CollectionId>
      <DeletesAsMoves>1</DeletesAsMoves>
      <GetChanges>1</GetChanges>
      <WindowSize>100</WindowSize>
      <Commands>
        <Add>
          <ClientId>4717a10e-492d-45af-9fe3-227f74385b13</ClientId>
          <ApplicationData>
            <airsyncbase:Body>
              <airsyncbase:Type>2</airsyncbase:Type>
              <airsyncbase:Data>&lt;strong&gt;Must&lt;/strong&gt; complete TPS reports using
the new cover sheet.</airsyncbase:Data>
            </airsyncbase:Body>
            <tasks:Subject>TPS Reports for August 2009</tasks:Subject>
            <tasks:Importance>2</tasks:Importance>
            <tasks:Categories>
              <tasks:Category>Business</tasks:Category>
              <tasks:Category>Reports</tasks:Category>
            </tasks:Categories>
            <tasks:Complete>0</tasks:Complete>
            <tasks:DueDate>2009-09-03T13:00:00.000Z</tasks:DueDate>
            <tasks:UtcDueDate>2009-09-03T20:00:00.000Z</tasks:UtcDueDate>
            <tasks:ReminderSet>1</tasks:ReminderSet>
            <tasks:ReminderTime>2009-09-02T09:00:00.000Z</tasks:ReminderTime>
            <tasks:Sensitivity>1</tasks:Sensitivity>
            <tasks:StartDate>2009-09-03T09:00:00.000Z</tasks:StartDate>
            <tasks:UtcStartDate>2009-09-03T16:00:00.000Z</tasks:UtcStartDate>
          </ApplicationData>
        </Add>
      </Commands>
    </Collection>
  </Collections>
</Sync>
```

Response:

```xml
<?xml version="1.0" encoding="utf-8"?>
<Sync xmlns="AirSync:">
  <Collections>
    <Collection>
      <SyncKey>1010751843</SyncKey>
      <CollectionId>11</CollectionId>
      <Status>1</Status>
      <Responses>
        <Add>
          <ClientId>4717a10e-492d-45af-9fe3-227f74385b13</ClientId>
          <ServerId>11:1</ServerId>
```

```
              <Status>1</Status>
            </Add>
          </Responses>
        </Collection>
      </Collections>
    </Sync>
```

4.2   Synchronizing Tasks on the Client

The following example demonstrates a client's request to synchronize its task data with the server, and the server's response. In this example, the client does not submit any changes in the **Sync** command request ([MS-ASCMD] section 2.2.2.20), and the server responds with a **Sync** command response ([MS-ASCMD] section 2.2.2.20) that includes three changes: a new task, a changed task, and a deleted task. Elements of the **Task** class are included in the **Sync** command response as child elements of the **airsync:ApplicationData** element ([MS-ASCMD] section 2.2.3.11) under an **airsync:Add** element ([MS-ASCMD] section 2.2.3.7.2), an **airsync:Change** element ([MS-ASCMD] section 2.2.3.24), and an **airsync:Delete** element ([MS-ASCMD] section 2.2.3.42.2).

Request:

```
<?xml version="1.0" encoding="utf-8"?>
<Sync xmlns="AirSync:">
  <Collections>
    <Collection>
      <SyncKey>761975125</SyncKey>
      <CollectionId>19</CollectionId>
      <DeletesAsMoves>1</DeletesAsMoves>
      <GetChanges>1</GetChanges>
      <WindowSize>100</WindowSize>
      <GetChanges/>
    </Collection>
  </Collections>
</Sync>
```

Response:

```
<?xml version="1.0" encoding="utf-8"?>
<Sync xmlns="AirSync:" xmlns:airsyncbase="AirSyncBase:" xmlns:tasks="Tasks:">
  <Collections>
    <Collection>
      <SyncKey>457669362</SyncKey>
      <CollectionId>19</CollectionId>
      <Status>1</Status>
      <Commands>
        <Change>
          <ServerId>19:1</ServerId>
          <ApplicationData>
            <airsyncbase:Body>
              <airsyncbase:Type>3</airsyncbase:Type>
              <airsyncbase:EstimatedDataSize>5731</airsyncbase:EstimatedDataSize>
              <airsyncbase:Truncated>1</airsyncbase:Truncated>
            </airsyncbase:Body>
            <tasks:Subject>Finish Q4 sales roll-up</tasks:Subject>
            <tasks:Importance>1</tasks:Importance>
            <tasks:UtcStartDate>2008-10-02T07:00:00.000Z</tasks:UtcStartDate>
            <tasks:StartDate>2008-10-02T00:00:00.000Z</tasks:StartDate>
            <tasks:UtcDueDate>2008-10-10T07:00:00.000Z</tasks:UtcDueDate>
            <tasks:DueDate>2008-10-10T00:00:00.000Z</tasks:DueDate>
            <tasks:Complete>0</tasks:Complete>
            <tasks:Sensitivity>0</tasks:Sensitivity>
            <tasks:ReminderTime>2008-10-10T19:30:00.000Z</tasks:ReminderTime>
            <tasks:ReminderSet>1</tasks:ReminderSet>
```

```
            </ApplicationData>
          </Change>
          <Add>
            <ServerId>19:3</ServerId>
            <ApplicationData>
              <airsyncbase:Body>
                <airsyncbase:Type>1</airsyncbase:Type>
                <airsyncbase:EstimatedDataSize>0</airsyncbase:EstimatedDataSize>
                <airsyncbase:Truncated>1</airsyncbase:Truncated>
              </airsyncbase:Body>
              <tasks:Subject>Email management team about next round of
quarterlies</tasks:Subject>
              <tasks:Importance>1</tasks:Importance>
              <tasks:UtcStartDate>2008-10-02T07:00:00.000Z</tasks:UtcStartDate>
              <tasks:StartDate>2008-10-02T00:00:00.000Z</tasks:StartDate>
              <tasks:UtcDueDate>2008-10-02T07:00:00.000Z</tasks:UtcDueDate>
              <tasks:DueDate>2008-10-02T00:00:00.000Z</tasks:DueDate>
              <tasks:Complete>0</tasks:Complete>
              <tasks:Sensitivity>0</tasks:Sensitivity>
              <tasks:ReminderSet>0</tasks:ReminderSet>
            </ApplicationData>
          </Add>
          <Delete>
            <ServerId>19:2</ServerId>
          </Delete>
        </Commands>
      </Collection>
    </Collections>
  </Sync>
```

4.3   Fetching Task Data with the ItemOperations Command

The following example demonstrates a client's request to retrieve information from the server for a particular task, and the server's response. The client sends an **ItemOperations** command request ([MS-ASCMD] section 2.2.2.9) to the server, and the server responds with an **ItemOperations** command response ([MS-ASCMD] section 2.2.2.9). This example assumes that the server has assigned a Collection ID of 11 to the **Tasks** collection.

Request:

```
<?xml version="1.0" encoding="utf-8"?>
<ItemOperations xmlns:airsync="AirSync:"
xmlns:airsyncbase="AirSyncBase:" xmlns="ItemOperations:">
  <Fetch>
    <Store>Mailbox</Store>
    <airsync:CollectionId>11</airsync:CollectionId>
    <airsync:ServerId>11:1</airsync:ServerId>
    <Options>
      <airsyncbase:BodyPreference>
        <airsyncbase:Type>1</airsyncbase:Type>
        <airsyncbase:TruncationSize>256</airsyncbase:TruncationSize>
        <airsyncbase:AllOrNone>0</airsyncbase:AllOrNone>
      </airsyncbase:BodyPreference>
    </Options>
  </Fetch>
</ItemOperations>
```

Response:

```
<?xml version="1.0" encoding="utf-8"?>
<ItemOperations xmlns:airsync="AirSync:" xmlns:tasks="Tasks:"
xmlns:airsyncbase="AirSyncBase:" xmlns="ItemOperations:">
  <Status>1</Status>
```

```
<Response>
  <Fetch>
    <Status>1</Status>
    <airsync:CollectionId>11</airsync:CollectionId>
    <airsync:ServerId>11:1</airsync:ServerId>
    <airsync:Class>Tasks</airsync:Class>
    <Properties>
      <airsyncbase:Body>
        <airsyncbase:Type>1</airsyncbase:Type>
        <airsyncbase:EstimatedDataSize>0</airsyncbase:EstimatedDataSize>
      </airsyncbase:Body>
      <tasks:Subject>Complete This Week's Test Run </tasks:Subject>
      <tasks:Importance>2</tasks:Importance>
      <tasks:UtcStartDate>2009-11-18T08:00:00.000Z</tasks:UtcStartDate>
      <tasks:StartDate>2009-11-18T00:00:00.000Z</tasks:StartDate>
      <tasks:UtcDueDate>2009-11-27T08:00:00.000Z</tasks:UtcDueDate>
      <tasks:DueDate>2009-11-27T00:00:00.000Z</tasks:DueDate>
      <tasks:Complete>0</tasks:Complete>
      <tasks:Sensitivity>2</tasks:Sensitivity>
      <tasks:ReminderTime>2009-11-27T16:00:00.000Z</tasks:ReminderTime>
      <tasks:ReminderSet>1</tasks:ReminderSet>
    </Properties>
  </Fetch>
</Response>
</ItemOperations>
```

4.4   Searching for Tasks

The following example demonstrates a client's request to find all tasks on the server that contain the word "Test", and the server's response. The client sends a **Search** command request ([MS-ASCMD] section 2.2.2.15) to the server, and the server responds with a **Search** command response ([MS-ASCMD] section 2.2.2.15). This example assumes that the server has assigned a Collection ID of 11 to the **Tasks** collection.

Request:

```
<?xml version="1.0" encoding="utf-8"?>
<Search xmlns="Search:" xmlns:airsync="AirSync:"
>
<Store>
  <Name>Mailbox</Name>
    <Query>
      <And>
        <airsync:Class>Tasks</airsync:Class>
        <airsync:CollectionId>11</airsync:CollectionId>
        <FreeText>Test</FreeText>
      </And>
    </Query>
    <Options>
      <RebuildResults />
      <Range>0-4</Range>
    </Options>
  </Store>
</Search>
```

Response:

```
<Search xmlns:A0="AirSync:" xmlns:tasks="Tasks:" xmlns:airsyncbase="AirSyncBase:"
xmlns="Search:">
  <Status>1 Success</Status>
  <Response>
    <Store>
      <Status>1 Success</Status>
```

```
        <Result>
          <A0:Class>Tasks</A0:Class>

<LongId>RgAAAADl9NP3UFJNRpgIYBWT6lSUBwDqXN0OYiDySoYnY1igrbIlAAAAAAAqAADqXN0OYiDySoYnY1igrbIlA
AAAAGHBAAAT</LongId>
          <A0:CollectionId>11</A0:CollectionId>
          <Properties>
            <airsyncbase:Body>
              <airsyncbase:Type>1</airsyncbase:Type>
              <airsyncbase:EstimatedDataSize>0</airsyncbase:EstimatedDataSize>
              <airsyncbase:Truncated>1</airsyncbase:Truncated>
            </airsyncbase:Body>
            <tasks:Subject>Complete This Week's Test Run </tasks:Subject>
            <tasks:Importance>2</tasks:Importance>
            <tasks:UtcStartDate>2009-11-18T08:00:00.000Z</tasks:UtcStartDate>
            <tasks:StartDate>2009-11-18T00:00:00.000Z</tasks:StartDate>
            <tasks:UtcDueDate>2009-11-27T08:00:00.000Z</tasks:UtcDueDate>
            <tasks:DueDate>2009-11-27T00:00:00.000Z</tasks:DueDate>
            <tasks:Complete>0</tasks:Complete>
            <tasks:Sensitivity>2</tasks:Sensitivity>
            <tasks:ReminderTime>2009-11-27T16:00:00.000Z</tasks:ReminderTime>
            <tasks:ReminderSet>1</tasks:ReminderSet>
          </Properties>
        </Result>
        <Range>0-0</Range>
        <Total>1</Total>
      </Store>
    </Response>
  </Search>
```

5 Security

5.1 Security Considerations for Implementers

None.

5.2 Index of Security Parameters

None

6 Appendix A: Full XML Schema

For ease of implementation, the following is the full XML schema for this protocol. This schema is valid only for protocol version 14.1.

```xml
<?xml version="1.0" encoding="UTF-8"?>
<xs:schema xmlns:xs="http://www.w3.org/2001/XMLSchema" xmlns="Tasks"
    targetNamespace="Tasks" elementFormDefault="qualified"
    attributeFormDefault="unqualified">
  <xs:element name="Subject" type="xs:string"/>
  <xs:element name="Importance" type="xs:unsignedByte"/>
  <xs:element name="UtcStartDate" type="xs:dateTime"/>
  <xs:element name="StartDate" type="xs:dateTime"/>
  <xs:element name="UtcDueDate" type="xs:dateTime"/>
  <xs:element name="DueDate" type="xs:dateTime"/>
  <xs:element name="Categories">
    <xs:complexType>
      <xs:sequence minOccurs="0">
        <xs:element name="Category" type="xs:string" maxOccurs="300"/>
      </xs:sequence>
    </xs:complexType>
  </xs:element>
  <xs:element name="Recurrence">
    <xs:complexType>
      <xs:all>
        <xs:element name="Type" type="xs:unsignedByte"/>
        <xs:element name="Start" type="xs:dateTime"/>
        <xs:element name="Until" type="xs:dateTime" minOccurs="0"/>
        <xs:element name="Occurrences" type="xs:unsignedByte" minOccurs="0"/>
        <xs:element name="Interval" type="xs:unsignedShort" minOccurs="0"/>
        <xs:element name="DayOfWeek" type="xs:unsignedByte" minOccurs="0"/>
        <xs:element name="DayOfMonth" type="xs:unsignedByte" minOccurs="0"/>
        <xs:element name="WeekOfMonth" type="xs:unsignedByte" minOccurs="0"/>
        <xs:element name="MonthOfYear" type="xs:unsignedByte" minOccurs="0"/>
        <xs:element name="Regenerate" type="xs:unsignedByte" minOccurs="0"/>
        <xs:element name="DeadOccur" type="xs:unsignedByte" minOccurs="0"/>
        <xs:element name="CalendarType" type="xs:unsignedByte"/>
        <xs:element name="IsLeapMonth" type="xs:unsignedByte" minOccurs="0"/>
        <xs:element name="FirstDayOfWeek" minOccurs="0">
          <xs:simpleType>
            <xs:restriction base="xs:unsignedByte">
              <xs:minInclusive value="0"/>
              <xs:maxInclusive value="6"/>
            </xs:restriction>
          </xs:simpleType>
        </xs:element>
      </xs:all>
    </xs:complexType>
  </xs:element>
  <xs:element name="Complete" type="xs:unsignedByte"/>
  <xs:element name="DateCompleted" type="xs:dateTime"/>
  <xs:element name="Sensitivity" type="xs:unsignedByte"/>
  <xs:element name="ReminderTime" type="xs:dateTime"/>
  <xs:element name="ReminderSet" type="xs:unsignedByte"/>
  <xs:element name="OrdinalDate" type="xs:dateTime"/>
  <xs:element name="SubOrdinalDate" type="xs:string"/>
  <xs:group name="AllProps">
    <xs:sequence>
      <xs:choice maxOccurs="unbounded">
        <xs:element ref="Subject"/>
        <xs:element ref="Importance"/>
        <xs:element ref="UtcStartDate"/>
        <xs:element ref="StartDate"/>
        <xs:element ref="UtcDueDate"/>
        <xs:element ref="DueDate"/>
        <xs:element ref="Categories"/>
        <xs:element ref="Recurrence"/>
```

```
                <xs:element ref="Complete"/>
                <xs:element ref="DateCompleted"/>
                <xs:element ref="Sensitivity"/>
                <xs:element ref="ReminderTime"/>
                <xs:element ref="ReminderSet"/>
                <xs:element ref="OrdinalDate"/>
                <xs:element ref="SubOrdinalDate"/>
            </xs:choice>
        </xs:sequence>
    </xs:group>
</xs:schema>
```

7 Appendix B: Product Behavior

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

- Microsoft Exchange Server 2007 Service Pack 1 (SP1)

- Microsoft Exchange Server 2010

- Microsoft Exchange Server 2016 Preview

- Microsoft Exchange Server 2013

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

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

<1> Section 2.2.2.10: When the **Type** element value is 0, Exchange 2007 SP1 responds with a status 6 if **DayOfWeek** is set in the request.

<2> Section 2.2.2.25: Microsoft Exchange Server 2010 Service Pack 1 (SP1), the initial release version of Exchange 2013, and Exchange 2016 Preview do not return the **Start** element when protocol version is 14.0.

8 Change Tracking

No table of changes is available. The document is either new or has had no changes since its last release.

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