

[MS-ASAIRS]: ActiveSync AirSyncBase Namespace Protocol Specification

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Revision Summary

Date	Revision History	Revision Class	Comments
12/03/2008	1.0	Major	Initial Release.
03/04/2009	1.0.1	Editorial	Revised and edited technical content.
04/10/2009	2.0	Major	Updated technical content and applicable product releases.
07/15/2009	3.0	Major	Revised and edited for technical content.
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1 Introduction

This document specifies the elements and complex types in the AirSyncBase namespace, which are used by the AirSync commands specified in [\[MS-ASCMD\]](#) to identify the size, type, and content of the data returned to the client in the response Message. The AirSyncBase namespace contains elements and complex types used in both request and response command messages.

1.1 Glossary

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

attachment
attachment table
calendar
class
collection
contact
display name
embedded message
Hypertext Transfer Protocol (HTTP)
identifier
message
MIME
Rich Text Format (RTF)
property
rules
store
Uniform Resource Locator (URL)
XML
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-ASCMD] Microsoft Corporation, "[ActiveSync Command Reference Protocol Specification](#)", December 2008.

[MS-ASDTYPE] Microsoft Corporation, "[ActiveSync Data Types](#)", December 2008.

[MS-ASEMAIL] Microsoft Corporation, "[ActiveSync E-Mail Class Protocol Specification](#)", December 2008.

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

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

[XMLNS] World Wide Web Consortium, "Namespaces in XML 1.0 (Second Edition)", August 2006, <http://www.w3.org/TR/REC-xml-names/>.

1.2.2 Informative References

None.

1.3 Protocol Overview

The elements and complex types specified in the AirSyncBase namespace are used by multiple Exchange ActiveSync commands to identify the size, type, and content of data returned to the client in the response message. In order to use the elements in the AirSyncBase namespace, the namespace is included in the command response message, and then elements and complex types are included in the request and response as specified in this document.

1.4 Relationship to Other Protocols

The **Fetch**, **Search**, and **Sync** commands use **properties** from the AirSyncBase namespace as a part of their request and response commands. For more details about these commands, see [\[MS-ASCMD\]](#).

1.5 Prerequisites/Preconditions

To use the properties in the AirSyncBase namespace, include the namespace in the command request. The namespace is included by adding the following to the command request:

```
<CommandName xmlns:airsyncbase="ClassName:">
```

For a complete example, see [\[MS-ASCMD\]](#) section 4.5.1.1.

1.6 Applicability Statement

This specification applies to the **Fetch**, **Search**, and **Sync** commands, as specified in [\[MS-ASCMD\]](#).

1.7 Versioning and Capability Negotiation

None.

1.8 Vendor-Extensible Fields

The <Type> element can be extended to include custom **message** types. For more details, see section [2.2.2.14](#).

1.9 Standards Assignments

None.

2 Messages

2.1 Transport

The properties specified in the following sections are sent and received by using the **Fetch**, **Search**, and **Sync** commands, as specified in [\[MS-ASCMD\]](#), and are used by the E-mail **class**, as specified in [\[MS-ASEMAIL\]](#).

2.2 Message Syntax

The AirSyncBase namespace adheres to the following **XML schema definition (XSD)**:

```
<?xml version="1.0" encoding="utf-8"?>
<xs:schema
  attributeFormDefault="unqualified"
  xmlns:airsyncbase="AirSyncBase:"
  elementFormDefault="qualified"
  targetNamespace="AirSyncBase:"
  xmlns:xs="http://www.w3.org/2001/XMLSchema"
  xmlns="AirSyncBase:">

  <xs:element name="FileReference" type="xs:string" />
  <xs:element name="BodyPreference">
    <xs:complexType>
      <xs:sequence>
        <xs:element name="Type" type="xs:unsignedByte" />
        <xs:element name="TruncationSize" minOccurs="0" type="xs:unsignedInt" />
        <xs:element name="AllOrNone" minOccurs="0" type="xs:boolean"/>
        <xs:element name="Restriction" minOccurs="0" type="xs:string" />
        <xs:element name="Preview" minOccurs="0">
          <xs:simpleType>
            <xs:restriction base="xs:unsignedInt">
              <xs:minInclusive value="0"/>
              <xs:maxInclusive value="255"/>
            </xs:restriction>
          </xs:simpleType>
        </xs:element>
      </xs:sequence>
    </xs:complexType>
  </xs:element>
  <xs:element name="Body">
    <xs:complexType>
      <xs:sequence>
        <xs:element name="Type" type="xs:unsignedByte" />
        <xs:element name="EstimatedDataSize" type="xs:unsignedInt" minOccurs="0"/>
        <xs:element name="Truncated" minOccurs="0" type="xs:boolean"/>
        <xs:element name="Data" type="xs:string" />
      </xs:sequence>
    </xs:complexType>
  </xs:element>
  <xs:element name="Attachments">
    <xs:complexType>
      <xs:sequence>
        <xs:element name="Attachment">
          <xs:complexType>
            <xs:all>
              <xs:element name="DisplayName" type="xs:string" minOccurs="0"/>
            </xs:all>
          </xs:complexType>
        </xs:element>
      </xs:sequence>
    </xs:complexType>
  </xs:element>
</xs:schema>
```

```

        <xs:element name="FileReference" type="xs:string" />
        <xs:element name="Method" type="xs:unsignedByte" />
        <xs:element name="EstimatedDataSize" type="xs:unsignedInt" />
        <xs:element name="ContentId" type="xs:string" minOccurs="0" />
        <xs:element name="ContentLocation" type="xs:string"
minOccurs="0"/>
        <xs:element name="IsInline" minOccurs="0" type="xs:boolean"/>
    </xs:all>
</xs:complexType>
</xs:element>
</xs:sequence>
</xs:complexType>
</xs:element>
<xs:complexType name="EmptyTag"/>
<xs:element name="NativeBodyType" type="xs:unsignedByte" />
<xs:group name="TopLevelSchemaProps">
    <xs:sequence>
        <xs:choice maxOccurs="unbounded">
            <xs:element name="Body" type="airsyncbase:EmptyTag"/>
            <xs:element name="Attachments" type="airsyncbase:EmptyTag"/>
        </xs:choice>
    </xs:sequence>
</xs:group>
</xs:schema>

```

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

Prefix	Namespace URI
AIRSYNCBASE:	None.

2.2.1 Complex Types

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

Complex Type	Description
Attachments	A collection of elements that contains one or more Attachment items.
Attachment	Specifies the attachment information for a single attachment item.
Body	A collection of elements that contain the body of the calendar , contact , document, email, or task.
BodyPreference	A collection of elements that sets the preference information related to the type and size of information that is returned from searching, synchronizing, or fetching.

2.2.1.1 Attachments

The Attachments type is an optional child element of the Properties element in the **Fetch** command ([\[MS-ASCMD\]](#) section 2.2.1.8.3.10) that contains one or more attachment items.

There is no limit on the number of Attachments types in a command response. Command requests **MUST NOT** include the Attachments type.

The Attachments type, if present, **MUST** have at least one child Attachment type.

2.2.1.2 Attachment

The Attachment type is a required child element of the Attachments type and specifies the attachment information for a single attachment item.

Command requests **MUST NOT** include the Attachment type.

The Attachment type can have one or more of the following child elements in any order (elements noted as optional can be in the response):

- <DisplayName> (section [2.2.2.5](#)). This element is optional.
- <FileReference> (section [2.2.2.7](#)). This element is required.
- <Method> (section [2.2.2.9](#)). This element is required.
- <EstimatedDataSize> (section [2.2.2.6](#)). This element is required.
- <ContentId> (section [2.2.2.2](#)). This element is optional.
- <ContentLocation> (section [2.2.2.3](#)). This element is optional.
- <IsInline> (section [2.2.2.8](#)). This element is optional.

2.2.1.3 Body

The **Body** type is an optional child type of the <ApplicationData> element that specifies details about the body of an e-mail, contact, task, or calendar item in a response message. The **Body** type **MUST** be included in a response message whenever a content class has changes or new items.

The **Body** type is a container ([\[MS-ASDTYPE\]](#) section 2.8).

There is no limit on the number of **Body** types in a command response. Command requests can include the **Body** type.

In a response, the <ApplicationData> element **MUST** be the parent element of the **Body** type. For more information about the <ApplicationData> element, see [\[MS-ASCMD\]](#) section 2.2.1.19.1.16.

The **Body** type, if present, **MUST** have the following child elements in this order (elements noted as optional can be in the response):

- <Type> (section [2.2.2.14](#)). This element is required.
- <EstimatedDataSize> (section [2.2.2.6](#)). This element is optional in the response.
- <Truncated> (section [2.2.2.12](#)). This element is optional in the response.
- <Data> (section [2.2.2.4](#)). This element is required.

2.2.1.4 BodyPreference

The **BodyPreference** type is an optional container ([MS-ASDTYPE] section 2.8) complex type that sets preference information related to the type and size of information that is returned from searching, synchronizing, or fetching.

A command response MUST NOT include **BodyPreference** type. Command requests can include the **BodyPreference** type.

In a request, the <Options> element MUST be the parent element of the **BodyPreference** type. The **BodyPreference** type, if present, MUST have the following child elements in this order (elements noted as optional can be in the response):

- <Type> (section 2.2.2.14). This element is required.
- <TruncationSize> (section 2.2.2.13). This element is optional.
- <AllOrNone> (section 2.2.2.1). This element is optional.
- <Preview> (section 2.2.2.15). This element is optional.

The contents of the <Options> element specify preferences for all of the content that the user is interested in searching, synchronizing, or retrieving. These preferences are set on a per-request basis and override any stored information. Because this information is required to process every request, the information can be persisted on the server if network load is a concern.

There MUST be one explicit **BodyPreference** type specified for each set of preferences. The client specifies the sets of preferences for different types of content by using a separate **BodyPreference** type for each <Type>. If multiple content types have the same preferences, then the client sends a different complex type for each <Type> to prevent ambiguity in specifying the preferences.

2.2.2 Elements

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

Element	Description
AllOrNone	Specifies whether to search, synchronize, or retrieve all or none of the content based on the <TruncationSize> element.
ContentId	Contains the unique object ID for an attachment.
ContentLocation	Contains the relative URL for an attachment, which is used to match a reference to an inline attachment in an HTML message to the attachment in the attachment table .
Data	The body of the calendar item, contact, document, e-mail, or task.
DisplayName	The display name of the attachment.
EstimatedDataSize	An informational estimate of the size of the complete body of the calendar item, contact, document, e-mail, or task
FileReference	The location of an item on the server to retrieve.
IsInline	Specifies whether the attachment is embedded in the message.

Element	Description
Method	Identifies the method in which the attachment was attached.
NativeBodyType	The original format type of the item.
Preview	The length of the message preview to be returned to the client.
Truncated	Specifies whether the body of the item has been truncated according to the BodyPreferences indicated by the client.
TruncationSize	Specifies the size, in bytes, of the content that the client wants to search, synchronize, or fetch.
Type	The format type of the body content of the item.

2.2.2.1 AllOrNone

The <AllOrNone> element is an optional child element of the **BodyPreference** type that specifies whether to search, synchronize, or retrieve all or none of the content based on the <TruncationSize> (section [2.2.2.13](#)) element.

The value of this element is a **boolean** value ([\[MS-ASDTYPE\]](#) section 2.3). When the value is set to 1 (TRUE) and the content has not been truncated, all of the content is searched, synchronized, or retrieved. When the value is set to 1 (TRUE) and the content has been truncated, the content is not searched, synchronized, or retrieved. When the value is set to 0 (FALSE), the truncated or non-truncated content is searched, synchronized, or retrieved.

A command request MUST have a maximum of 1 <AllOrNone> value per **BodyPreference** container element. If the <AllOrNone> value is not included in the request, then the truncated or non-truncated content is searched, synchronized, or retrieved as if the value was set to 0 (FALSE). The <AllOrNone> element MUST NOT be used in command responses.

This element MUST be ignored if the <TruncationSize> element is not included.

By default, the server returns the content truncated to the size requested by <TruncationSize>, but in some cases the client does not want to receive a truncated response for a particular content type. In this case, the server SHOULD choose the next best format in which it can deliver the content. An example is to enable servers to downgrade an **appointment** body to **plain text** if the **Rich Text Format (RTF)** equivalent is larger than the <TruncationSize> because the client cannot process partial RTF.

2.2.2.2 ContentId

The <ContentId> element is an optional child element of the Attachment type that contains the unique object ID for an attachment. This element is provided for informational purposes only and can be ignored by the client.

The value of this element is a **string** value ([\[MS-ASDTYPE\]](#) section 2.1).

A command response MUST have a maximum of one <ContentId> element per Attachment type. Command requests MUST NOT include the <ContentId> element.

The <ContentId> element MUST have no child elements.

2.2.2.3 ContentLocation

The <ContentLocation> element is an optional child element of the Attachment type that contains the relative URL for an attachment, and is used to match a reference to an inline attachment in an HTML message to the attachment in the attachment table.

The value of this element is a **string** ([MS-ASDTYPE] section 2.1) value.

A command response MUST have a maximum of one <ContentLocation> element per Attachment type. Command requests MUST NOT include the <ContentLocation> element.

The <ContentLocation> element MUST have no child elements.

2.2.2.4 Data

The <Data> element is a child element of the **Body** type that contains the data of the body of the calendar item, contact, document, e-mail, or task.

The value of this element is a **string** ([MS-ASDTYPE] section 2.1)

A command response MUST have a maximum of one <Data> element. Command requests MAY include the <Data> element.

In a response, the <Data> element MUST have no child elements.

The **Body** type is returned as a **string** in the format that is specified by the <Type> element. If the <Truncated> element is included in the response, then the data in the <Data> element is truncated. The <EstimatedDataSize> element provides a rough estimation of the actual size of the complete **Body string**. The client makes appropriate buffer provisions to handle the incoming data. If the <AllOrNone> element of the **Search** command is included, and there is no **Body** type (also set by the **Search** command) that the server can fall back to, then the <Data> element is not sent to the client.

2.2.2.5 DisplayName

The <DisplayName> element is an optional child element of the Attachment type that specifies the display name of the attachment.

The value of this element is a **string** value ([MS-ASDTYPE] section 2.1).

A command response MUST have a maximum of one <DisplayName> element per Attachment type. Command requests MUST NOT include the <DisplayName> element.

The <DisplayName> element MUST have no child elements.

2.2.2.6 EstimatedDataSize

The <EstimatedDataSize> element is an optional child element of the **Body** type and a required child element of the Attachment type. This element provides an informational estimate of the size of the complete body of the calendar item, contact, document, e-mail, or task. The <EstimatedDataSize> element SHOULD be included in a response message whenever the <Truncated> element is set to TRUE.

The value of this element is an **integer** value ([MS-ASDTYPE] section 2.2).

A command response MUST have a maximum of one <EstimatedDataSize> element per **Body** or Attachment type. If an <EstimatedDataSize> element is included in a request, then the element is ignored and no error is thrown.

The <EstimatedDataSize> element MUST have no child elements.

The <EstimatedDataSize> value represents the original size of the content in the **store** and is specified in bytes. The client uses this number only for an informational display to the user when the **Body** is truncated so that the user can take further action. This number is only an estimate and the actual size of the body when fetched can differ based on the content filtering **rules** applied. The client does not make any memory allocations based on this number for future requests. The presence of this element in a response indicates that the content in the <Data> element is truncated.

2.2.2.7 FileReference

The <FileReference> element specifies a unique **identifier** that is assigned by the server to each attachment to a message. In an **ItemOperations** request ([\[MS-ASCMD\]](#) section 2.2.1.8), the <FileReference> element is an optional child element of the <Fetch> element ([\[MS-ASCMD\]](#) section 2.2.1.8.2.2). In a **Sync** command response, ([\[MS-ASCMD\]](#) section 2.2.1.19) the <FileReference> element is a required child element of the **Attachment** type (section [2.2.1.2](#)).

The value of this element is a **string** value ([\[MS-ASDTYPE\]](#) section 2.1).

The <FileReference> element MUST have no child elements.

2.2.2.8 IsInline

The <IsInline> element is an optional child element of the Attachment type that specifies whether the attachment is embedded in the message.

The value of this element is a **boolean** value ([\[MS-ASDTYPE\]](#) section 2.3).

A command response MUST have a maximum of one <IsInline> element per Attachment type. Command requests MUST NOT include the <IsInline> element.

The <IsInline> element MUST have no child elements.

2.2.2.9 Method

The <Method> element is a required child element of the attachment type that identifies the method in which the attachment was attached.

The value of this element is an **enumeration** value ([\[MS-ASDTYPE\]](#) section 2.9).

A command response MUST have a maximum of one <Method> element per attachment type. Command requests MUST NOT include the <Method> element.

The <Method> element MUST have no child elements.

The following table defines the valid values of the <Method> enumeration.

Value	Meaning	Notes
1	Normal attachment	The attachment is a normal attachment. This is the most common value.

Value	Meaning	Notes
2	Reserved	Do not use.
3	Reserved	Do not use.
4	Reserved	Do not use.
5	embedded message	Indicates that the attachment is an e-mail message, and that the attachment file has an.eml extension.
6	Attach OLE	Indicates that the attachment is an embedded OLE object, such as an inline image.

2.2.2.10 NativeBodyType

The <NativeBodyType> element is a required child element of the **ApplicationData** element in the **Sync** command ([\[MS-ASCMD\]](#) section 2.2.1.19.1.6) that specifies the original format type of the item.

The value of this element is an **enumeration** value ([\[MS-ASDTYPE\]](#) section 2.9).

A command response **MUST** have a maximum of one <NativeBodyType> element per **ApplicationData** element. Command requests **MAY** include the <NativeBodyType> element.

The <NativeBodyType> element **MUST** have no child elements.

The following table defines the valid values of the <NativeBodyType> enumeration.

Enumeration Value	Description
1	plain text
2	HTML
3	RTF

The <NativeBodyType> and <Type> elements have the same value unless the server has modified the format of the body to match the client's request. The client can specify a preferred body format by using the <Type> element of a **Search** or **Sync** command request.

2.2.2.11 Preview

The <Preview> element [<1>](#) is an optional child element of the **BodyPreference** type. In the request, <Preview> provides the length of the message preview to be returned to the client. In the response, Preview contains the number of characters specified in the request.

The value of this element is an **integer** value ([\[MS-ASDTYPE\]](#) section 2.2). This value can be set from 0 to 255, inclusive.

A command request **MUST** have a maximum of one <Preview> element per <Preview> type. Command responses **MUST** have a maximum <Preview> element per **Body** type.

The <Preview> element **MUST** have no child elements.

2.2.2.12 Truncated

The <Truncated> element is an optional child element of the **Body** type that specifies whether the body of the item has been truncated according to the **BodyPreferences** indicated by the client.

The value of this element is a **boolean** value ([MS-ASDTYPE] section 2.3).

A command response MUST have a maximum of one <Truncated> element per **Body** type. If the command response does not contain a <Truncated> element, then the client MUST process the message as if the whole body is contained in the message response (as if the <Truncated> is set to FALSE). Command requests MUST NOT include the <Truncated> element.

The <Truncated> element MUST have no child elements.

2.2.2.13 TruncationSize

The <TruncationSize> element is an optional child element of the **BodyPreferences** type that specifies the size, in bytes, of the content that the user wants to **Search, Synchronize, or Fetch**.

The value of this element is an **integer** value ([MS-ASDTYPE] section 2.2).

A command request MUST have a maximum of one <TruncationSize> element per **BodyPreferences** type. Command responses MUST NOT include the <TruncationSize> element.

The <TruncationSize> element MUST have no child elements.

If the <TruncationSize> element is absent, then the server assumes that the user will search the entire content. If the server sends the response in the corresponding content type and if the size of the entire content is greater than the value that is specified by <TruncationSize>, then the server truncates the message to the size that is specified by <TruncationSize> and sends it in the specified encoding. The maximum value for <TruncationSize> is 4,294,967,295.

2.2.2.14 Type

The <Type> element indicates the format type of the body content of the item. In a request, the <Type> element is a required child element of the **BodyPreferences** type. In a response, the <Type> element is a required child element of the **Body** type.

The value of this element is an **enumeration** value ([MS-ASDTYPE] section 2.9).

A command request or response MUST have a maximum of one <Type> element per **BodyPreferences** or **Body** type.

The <Type> element MUST have no child elements.

The following table defines the valid values of the <Type> enumeration.

Enumeration Value	Description
1	plain text
2	HTML
3	RTF
4	MIME

Additional <Type> values can be used if the client and the server support the content type. If the server or client receives a <Type> value that it does not support or understand, it skips the entire parent element without processing it.

2.2.2.15 Preview

The preview concept is communicated from the client to the server with the newly-defined <Preview> tag, which is a child element of the **BodyPreference** type (section [2.2.1.4](#)). It is a child element of the **body** type (section [2.2.1.3](#)) in server responses. This element is used to delineate how many Unicode characters of a plain text preview are needed up to a maximum of 255 characters. If a client device supports different kinds of encodings (RTF and HTML for example) and desires a <Preview> if it gets a **body** (section [2.2.1.3](#)) of any kind, then it SHOULD include the <Preview> tag with each **BodyPreference** type (section [2.2.1.4](#)). <Preview> has no child elements and is an **integer**.

2.2.3 Attributes

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

2.2.4 Groups

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

Attribute	Description
TopLevelSchemaProps	Identifies the Body , attachment, and <BodyPreference> types as being part of the TopLevelSchemaProps group.

2.2.4.1 TopLevelSchemaProps

The TopLevelSchemaProps group identifies the **Body** and attachment types as being part of the TopLevelSchemaProps group.

2.2.5 Attribute Groups

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

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 specified in this document.

3.1.2 Timers

None.

3.1.3 Initialization

None.

3.1.4 Higher-Layer Triggered Events

None.

3.1.5 Message Processing Events and Sequencing Rules

3.1.5.1 Commands

Command	Description
Fetch	Retrieves an item from the server.
Search	Retrieves entries from the store.
Sync	Synchronizes changes in a collections set between the client and the server.

3.1.5.1.1 Fetch

The request Message for the **Fetch** command can include the following elements and types: **BodyPreference**, <Type>, <TruncationSize>, <FileReference>, and <AllOrNone>.

3.1.5.1.2 Search

The request Message for the **Search** command can include the following elements and types: **BodyPreference**, <Type>, <TruncationSize>, <FileReference>, and <AllOrNone>.

3.1.5.1.3 Sync

The request Message for the **Sync** command can include the following elements and types: **BodyPreference**, <Type>, <TruncationSize>, <FileReference>, and <AllOrNone>.

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 specified in this document.

The abstract data model used by the server and the client are the same.

3.2.2 Timers

None.

3.2.3 Initialization

None.

3.2.4 Higher-Layer Triggered Events

None.

3.2.5 Message Processing Events and Sequencing Rules

3.2.5.1 Commands

Command	Description
Sync	Synchronizes changes in a collections set between the client and the server.

3.2.5.1.1 Sync

The response Message for the **Sync** command can include the following: attachment, <DisplayName>, <FileReference>, <Method>, <EstimatedDataSize>, <ContentId>, <ContentLocation>, <IsInline>, **Body**, <Type>, <Truncated>, <Data>, and <NativeBodyType>.

4 Protocol Examples

See [\[MS-ASCMD\]](#) section 4.5.3.1 and [\[MS-ASCMD\]](#) section 4.5.3.2 for examples of the **Search** command utilizing the AirSyncBase Namespace protocol. For examples of the **Fetch** command utilizing the AirSyncBase Namespace protocol, see [\[MS-ASCMD\]](#) section 4.5.1.1 and [\[MS-ASCMD\]](#) section 4.5.2.

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 product versions. References to product versions include released service packs.

- Microsoft Exchange Server 2007
- Microsoft Exchange Server 2010

Exceptions, if any, are noted below. If a service pack number appears with the product version, behavior changed in that service pack. The new behavior also applies to subsequent service packs of the product unless otherwise specified.

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

[<1> Section 2.2.2.11](#): The Preview element is not supported by Exchange Server 2007.

7 Change Tracking

This section identifies changes made to [MS-ASAIRS] protocol documentation between July 2009 and November 2009 releases. Changes are classed as major, minor, or editorial.

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.
- A protocol is deprecated.
- The removal of a document from the documentation set.
- Changes made for template compliance.

Minor changes do not affect protocol interoperability or implementation. Examples are updates to fix technical accuracy or ambiguity at the sentence, paragraph, or table level.

Editorial changes apply to grammatical, formatting, and style issues.

No changes means that the document is identical to its last release.

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

- New content added.
- Content update.
- 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 always have the revision type "Editorially updated."

Some important terms used in revision 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.

Changes are listed in the following table. If you need further information, please contact protocol@microsoft.com.

Section	Tracking number (if applicable) and description	Major change (Y or N)	Revision Type
1.1 Glossary	52567 Added items to glossary list.	N	Content update.
1.2.1 Normative References	51553 Added [XMLNS] to the normative references list.	N	New content added.
2.2.1 Complex Types	52567 Added Attachments and Attachment to the table of Complex Types.	N	New content added.
2.2.1.4 BodyPreference	51637 Added Preview as an optional child element.	N	New content added.
2.2.2.4 Data	48144 Updated element description to indicate that including the element in a request is allowed.	N	Content update.
2.2.2.4 Data	48146 Updated element description to indicate that it is not a required element of the Body type.	N	Content update.
2.2.2.7 FileReference	48065 Clarified element usage in requests and responses.	N	Content update.
2.2.2.10 NativeBodyType	47746 Updated Element description.	N	Content update.
2.2.2.12 Truncated	51585 Updated element description to indicate that a client is required to process the entire message body when this element is not included in a command response.	N	Content update.
2.2.2.15 Preview	51637 Added new section.	N	New content added.
4	52567	N	Content

Section	Tracking number (if applicable) and description	Major change (Y or N)	Revision Type
Protocol Examples	Updated section references.		update.

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