

[MS-STANXICAL]: Exchange iCalendar Conformance Document - RFC 2445, 2446, 2447

This document provides a statement of conformance for protocol implementations. It is intended for use in conjunction with the Microsoft protocol technical specifications, publicly available standard specifications, network programming art, and Microsoft distributed systems concepts. It assumes that the reader is either familiar with the aforementioned material or has immediate access to it.

A protocol conformance document does not require the use of Microsoft programming tools or programming environments in order to implement the protocols in the system. Developers who have access to Microsoft programming tools and environments are free to take advantage of them.

Abstract

This document describes the choices made when implementing the iCalendar protocol. It identifies ambiguities and implementer choices and indicates the approach taken in the implementation. These details of the protocols are described in the protocol specifications for each of the protocols and data structures not in this document.

Revision Summary

Date	Revision History	Revision Class	Comments
10/01/2008	1.0		Initial Release.
12/03/2008	1.01		Updated IP notice.
04/10/2009	2.0		Updated applicable product releases.
07/15/2009	3.0	Major	Revised and edited technical content.

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1 Introduction

This document specifies the level of support provided by the Exchange iCalendar component for the Internet iCalendar Protocol (iCalendar), the iCalendar Transport-Independent Interoperability Protocol (iTIP), and the iCalendar Message-Based Interoperability Protocol (iMIP). The Exchange iCalendar component is used by clients that implement the iCalendar, iTIP, and iMIP protocols to store and retrieve calendar data on the server.

1.1 Glossary

The following terms are defined in MS-OXGLOS:

Augmented Backus-Naur Form (ABNF)
Bcc recipient component
Coordinated Universal Time (UTC)
MIME
MIME entity
MIME message
MIME part parameter property(2)
reminder
Uniform Resource Identifier (URI)
vCard

The following protocol abbreviations are used in this document:

None.

1.2 Normative References

[MS-OXCICAL] Microsoft Corporation, "iCalendar to Appointment Object Conversion Protocol Specification", June 2008.

[MS-OXORMDR] Microsoft Corporation, "Reminder Settings Protocol Specification", June 2008.

[RFC822] Crocker, D.H., "Standard for ARPA Internet Text Messages", RFC 822, August 1982, <http://www.ietf.org/rfc/rfc0822.txt>.

[RFC1738] Berners-Lee, T., Masinter, L., and McCahill, M., "Uniform Resource Locators (URL)", RFC 1738, December 1994, <http://www.ietf.org/rfc/rfc1738.txt>.

[RFC1847] Galvin, J., Murphy, S., Crocker, S., and Freed, N., "Security Multiparts for MIME: Multipart/Signed and Multipart/Encrypted", RFC 1847, October 1995, <http://www.ietf.org/rfc/rfc1847.txt>.

[RFC2045] Freed, N., et al., "Multipurpose Internet Mail Extensions (MIME) Part One: Format of Internet Message Bodies", RFC 2045, November 1996, <http://www.ietf.org/rfc/rfc2045.txt>.

[RFC2111] Levinson, E., "Content-ID and Message-ID Uniform Resource Locators", RFC 2111, March 1997, <http://www.ietf.org/rfc/rfc2111.txt>.

[RFC2445] Dawson, F. and Stenerson, D., "Internet Calendaring and Scheduling Core Object Specification (iCalendar)", RFC 2445, November 1998, <http://www.ietf.org/rfc/rfc2445.txt>.

[RFC2446] Dawson, F., Hopson, R., Mansour, S., and Silverberg, S., "iCalendar Transport-Independent Interoperability Protocol (iTIP)", RFC 2446, November 1998, <http://www.ietf.org/rfc/rfc2446.txt>.

[RFC2447] Dawson, F., Mansour, S., and Silverberg, S., "iCalendar Message-Based Interoperability Protocol (iMIP)", RFC 2447, November 1998, <http://www.ietf.org/rfc/rfc2447.txt>.

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.

1.3 Informative References

None.

We conduct frequent surveys of the informative references to assure their continued availability. If you have any issue with finding an informative 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.

1.4 Microsoft Implementations

Microsoft Exchange Server 2007

Microsoft Exchange Server 2010

1.5 Conformance Requirements

The conformance requirements for [RFC2445], [RFC2446], and [RFC2447] are simply that all required portions of the specifications are implemented according to the specification, and any optional portions that are implemented are implemented according to the specification.

The following table lists the sections of [RFC2445] that are considered normative and the sections that are considered informative.

Section(s)	Normative/Informative
1 - 2.2	Informative
2.3 - 3.5	Normative
3.6 - 3.9	Informative
3.10	Normative
3.11 - 4	Informative
4.1 - 4.8.8.2	Normative

5	Informative
6 – 7.3	Normative
8 – 11	Informative

The following table lists the sections of [RFC2446] that are considered normative and the sections that are considered informative.

Section(s)	Normative/Informative
1 – 1.3	Informative
2 – 3.7.3	Normative
4 – 4.7.2	Informative
5 – 6.2.2	Normative
7 – 8	Informative

The following table lists the sections of [RFC2447] that are considered normative and the sections that are considered informative.

Section(s)	Normative/Informative
1 – 1.1	Informative
1.2 – 5.1	Normative
6 – 8	Informative

1.6 Notation

The following notations are:

Notation	Explanation
C####	This identifies a clarification of ambiguity in the target specification. This includes imprecise statements, omitted information, discrepancies, and errata. This does not include data formatting clarifications.

V###	This identifies an intended point of variability in the target specification such as the use of MAY, SHOULD, or RECOMMENDED. This does not include extensibility points.
E###	Because the use of extensibility points (such as optional implementation-specific data) may impair interoperability, this profile indentifies such points in the target specification.

2 Conformance Statements

2.1 Normative Variations

The following sub-sections detail the normative variations from [RFC2445], [RFC2446], and [RFC2447].

2.1.1 [RFC2445] Section 4.3.8, Valid Range of INTEGER Value Type

The specification states the valid range for the **INTEGER** value type is -2147483648 to 2147483647. Exchange's valid range for the **INTEGER** value type is -2147483647 to 2147483647.

2.1.2 [RFC2445] Section 4.8.2.2, DTEND MUST be Later in Time than DTSTART

The specification states "Within the "VEVENT" calendar **component**, this **property** defines the date and time by which the event ends. The value **MUST** be later in time than the value of the "**DTSTART**" property." Exchange 2007 and Exchange 2010 can export iCalendar objects that have the same values for **DTSTART** and **DTEND**.

2.1.3 [RFC2445] Section 4.8.2.4, VEVENT with no End Time does not take up Any Time

The specification states that "Events can have a start date/time but no end date/time. In that case, the event does not take up any time." Exchange 2007 and Exchange 2010 fail to import VEVENTs that are missing both the **DURATION** and **DTEND** properties. See section 2.2.72 for more details.

2.1.4 [RFC2445] Section 4.8.4.1, ATTENDEE MUST be Present on Group Scheduled Calendar Entities

The specification states "This property **MUST** be specified in an iCalendar object that specifies a group scheduled calendar entity." Exchange 2007 and Exchange 2010 can export a VEVENT without **ATTENDEE** properties.

2.1.5 [RFC2445] Section 4.8.4.1, Delegate MUST Inherit RSVP and ROLE from Delegator

The specification states "A recipient delegated a request **MUST** inherit the *RSVP* and *ROLE* values from the attendee that delegated the request to them." On import, Exchange 2007 and Exchange 2010 ignore the *DELEGATED-TO* and *DELEGATED-FROM* **parameters** on the **ATTENDEE** property. As a result, a delegate's **ATTENDEE** property inherits no values from the delegator's **ATTENDEE** property.

2.1.6 [RFC2445] Section 4.8.4.3, ORGANIZER MUST be Present on Group Scheduled Calendar Entities

The specification states "This property **MUST** be specified in an iCalendar object that specifies a group scheduled calendar entity." Exchange 2007 and Exchange 2010 can export VEVENT components that represent meetings without an **ORGANIZER**.

2.1.7 [RFC2445] Section 4.8.5.4, Modified Duration MUST be Explicitly Specified using RDATE

The specification states "Any modified duration for specific recurrences **MUST** be explicitly specified using the "**RDATE**" property." Exchange 2007 and Exchange 2010 fail to parse **RDATE** properties with a value data type of **PERIOD**, causing the import of the entire iCalendar object to fail.

2.1.8 [RFC2445] Section 4.8.8.1, ABNF Format of Non-Standard Properties

The specification uses the following ABNF to specify the format of non-standard properties:

```
x-prop      = x-name *(";" xparam) [;" languageparam] ":" text CRLF
              ; Lines longer than 75 octets should be folded
```

Exchange 2007 and Exchange 2010 can export non-standard properties with standard property parameters other than *LANGUAGE*.

2.1.9 [RFC2446] Section 3.2.2, VEVENT Components in REQUEST-type iCalendar Objects MUST Contain One or More ATTENDEE Properties

The table in [RFC2446] Section 3.2.2 contains a value of "1+" in the Presence column for the **ATTENDEE** property within the VEVENT component. Exchange 2007 and Exchange 2010 can omit the **ATTENDEE** properties when exporting a meeting where all attendees are **Bcc recipients**.

2.1.10 [RFC2446] Section 3.2.3, VEVENT Components in REPLY-type iCalendar Objects MUST Contain an ORGANIZER Property

The table in [RFC2446] section 3.2.3 contains a value of "1" in the Presence column for the **ORGANIZER** property within the VEVENT component. Exchange 2007 and Exchange 2010 do not export the **ORGANIZER** property in the VEVENT component on REPLY-type iCalendar objects.

2.1.11 [RFC2446] Section 3.2.7, VEVENT Components in COUNTER-type iCalendar Objects MUST Contain an ORGANIZER Property

The table in [RFC2446] section 3.2.7 contains a value of "1" in the Presence column for the **ORGANIZER** property within the VEVENT component. Exchange 2007 and Exchange 2010 do not export the **ORGANIZER** property in the VEVENT component on COUNTER-type iCalendar objects.

2.2 Clarifications

The following sub-sections identify clarifications relative to [RFC2445], [RFC2446], and [RFC2447].

Unless otherwise stated, the specified products conform to all SHOULD and RECOMMENDED behavior in [RFC2445], [RFC2446], and [RFC2447]. The term "can" is used throughout [RFC2445] and is interpreted to indicate optional behavior.

Because Exchange is not a calendar user agent, requirements and guidance intended for calendar user agents is ignored unless otherwise stated.

2.2.1 [RFC2445] Section 3.2 Parameters

V0001:

The specification states that the "*charset*", "*method*", "*component*", and "*optinfo*" **parameters** are optional.

Exchange 2007, Exchange 2010

Parameter	Behavior
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<i>charset</i>	This parameter is honored on import and is set to the appropriate character set on export.
<i>method</i>	For both import and export, only the following values are supported: "REQUEST", "REPLY", "CANCEL", and "COUNTER" (case-insensitive). "PUBLISH" is treated the same as "REQUEST". On import, if a "text/calendar" MIME part has a <i>method</i> parameter with any other value, or if the <i>method</i> parameter is not present, the MIME part is not imported as an iCalendar entity.
<i>component</i>	This parameter is ignored on import. It is not set on export.
<i>optinfo</i>	This parameter is ignored on import. It is not set on export.

2.2.2 [RFC2445] Section 3.3 Content Header Fields

V0002:

The specification states that any header fields defined by [RFC2045] are optional.

Exchange 2007, Exchange 2010

Optional content header fields are ignored on import. No optional content header fields are set on export.

2.2.3 [RFC2445] Section 3.4 Encoding Considerations

V0003:

The specification states:

"This **MIME** content type can contain 8bit characters, so the use of quoted-printable or BASE64 MIME content-transfer-encodings might be necessary when iCalendar objects are transferred across protocols restricted to the 7bit repertoire. Note that a text valued **property** in the content entity can also have content encoding of special characters using a BACKSLASH character (US-ASCII decimal 92) escapement technique. This means that content values can end up encoded twice."

Exchange 2007, Exchange 2010

Exchange can import "text/calendar" MIME parts that are BASE64-encoded. On export, Exchange does not BASE64-encode "text/calendar" MIME parts.

2.2.4 [RFC2445] Section 3.5 Security Considerations

V0004:

The specification raises three security considerations but provides no normative guidance regarding these considerations.

Exchange 2007, Exchange 2010

Security	Mitigation
----------	------------

Consideration	
SPOOFING	The only anti-spoofing measures implemented by Exchange are digital signatures. However, Exchange accepts and processes unsigned mail, including "text/calendar" MIME parts.
PROCEDURAL ALARMS	Exchange does not implement or support procedural alarms.
ATTACHMENTS	Exchange does not import attachments from the ATTACH property.

2.2.5 [RFC2445] Section 3.10 File Extensions

V0005:

The specification describes the .ics and .ifb file extensions.

Exchange 2007, Exchange 2010

Exchange can export files with the .ics file extension, but does not export files with the .ifb file extension. Exchange does not import files with the .ics or .ifb file extensions.

V0006:

The specification describes the Macintosh file type codes "iCal" and "iFBf".

Exchange 2007, Exchange 2010

Exchange does not import or export files with the Macintosh file type codes "iCal" or "iFBf".

2.2.6 [RFC2445] Section 4.1 Content Lines

V0007:

The specification states that content lines are delimited by a CRLF sequence.

Exchange 2007, Exchange 2010

On import, Exchange can parse files that use any combination of CRLF, CR, or LF as content line delimiters. On export, Exchange uses CRLF as the content line delimiter.

V0008:

The specification states "Lines of text SHOULD NOT be longer than 75 octets, excluding the line break. Long content lines SHOULD be split into a multiple line representations using a line "folding" technique."

Exchange 2007, Exchange 2010

On export, Exchange uses a CRLF followed by an HTAB character to fold lines and ensure no line is longer than 75 octets as recommended. On import, Exchange parses any line regardless of length, and treats any of the following as a line fold: CR followed by SPACE or HTAB, LF followed by SPACE or HTAB, and CRLF followed by SPACE or HTAB.

V0009:

The specification uses **Augmented Backus-Naur Form (ABNF)** to define the format of content lines.

Exchange 2007, Exchange 2010

On import and export, Exchange conforms to the ABNF rules specified. On import, Exchange attempts to salvage any content lines that do not conform to the ABNF rules in some scenarios, but in general ignores any lines that do not conform.

2.2.7 [RFC2445] Section 4.1.2 Multiple Values

V0010:

The specification states that multi-valued properties are generally encoded by creating a content line for each value, including the property name. It also describes an alternative encoding, a single content line with the multiple values separated by a COMMA character.

Exchange 2007, Exchange 2010

On export, Exchange uses the single content line encoding method. On import, Exchange can parse either method, or a combination of both.

2.2.8 [RFC2445] Section 4.1.3 Binary Content

V0011:

The specification states that binary content should be referenced using a **URI** within a property value, but if this is not feasible, then it should be BASE64-encoded and included in the iCalendar entity.

Exchange 2007, Exchange 2010

When exporting iCalendar information, Exchange references binary content with a cid: type URI.

When importing iCalendar information, Exchange ignores the **ATTACH** property. All attachments from the MIME structure of the message are imported.

2.2.9 [RFC2445] Section 4.2 Property Parameters

C0001:

The specification defines a set of parameters but does not specify how to respond to undefined or unrecognized parameters

Exchange 2007, Exchange 2010

On import, Exchange ignores any parameters that are undefined or unrecognized. It also ignores recognized parameters in unsupported contexts (for example, a *FMTTYPE* parameter on an **ATTENDEE** property).

2.2.10 [RFC2445] Section 4.2.1 Alternate Text Representation

V0012:

The specification describes the *ALTREP* parameter.

Exchange 2007, Exchange 2010

Exchange supports the *ALTREP* parameter on the **LOCATION** and **CONTACT** properties. Exchange does not import or export the *ALTREP* parameter on any other properties.

2.2.11 [RFC2445] Section 4.2.2 Common Name

V0013:

The specification describes the optional *CN* parameter.

Exchange 2007, Exchange 2010

On export, Exchange only exports a *CN* parameter for the **ATTENDEE**, **ORGANIZER**, and **X-MS-OLK-SENDER** ([MS-OXCICAL] section 2.2.1.20.60) properties.

On import, Exchange ignores the *CN* parameter on any properties other than **ATTENDEE**, **ORGANIZER**, and **X-MS-OLK-SENDER**.

2.2.12 [RFC2445] Section 4.2.3 Calendar User Type

V0014:

The specification describes the optional *CUTYPE* parameter.

Exchange 2007, Exchange 2010

On export, Exchange only exports a *CUTYPE* parameter for the **ATTENDEE** property. If set, the only possible values are "RESOURCE" or "ROOM".

On import, Exchange ignores the *CUTYPE* parameter on any properties other than **ATTENDEE**. Furthermore, values other than "RESOURCE" (case-insensitive) or "ROOM" (case-insensitive) are ignored.

2.2.13 [RFC2445] Section 4.2.4 Delegators

V0015:

The specification describes the optional *DELEGATED-FROM* parameter.

Exchange 2007, Exchange 2010

Exchange does not export this parameter and ignores it on import.

2.2.14 [RFC2445] Section 4.2.5 Delegates

V0016:

The specification describes the optional *DELEGATED-TO* parameter.

Exchange 2007, Exchange 2010

Exchange does not export this parameter and ignores it on import.

2.2.15 [RFC2445] Section 4.2.6 Directory Entry Reference

V0017:

The specification describes the optional *DIR* parameter.

Exchange 2007, Exchange 2010

Exchange does not export this parameter and ignores it on import.

2.2.16 [RFC2445] Section 4.2.7 Inline Encoding

V0018:

The specification describes the optional *ENCODING* parameter.

Exchange 2007, Exchange 2010

Exchange does not export this parameter and ignores it on import.

2.2.17 [RFC2445] Section 4.2.8 Format Type

V0019:

The specification describes the optional *FMTTYPE* parameter.

Exchange 2007, Exchange 2010

Exchange does not export this parameter and ignores it on import.

2.2.18 [RFC2445] Section 4.2.9 Free/Busy Time Type

V0020:

The specification describes the optional *FBYTYPE* parameter.

Exchange 2007, Exchange 2010

Exchange does not export this parameter and ignores it on import.

2.2.19 [RFC2445] Section 4.2.10 Language

V0021:

The specification describes the optional *LANGUAGE* parameter.

Exchange 2007, Exchange 2010

Exchange only exports a *LANGUAGE* parameter for the **SUMMARY**, **LOCATION**, **COMMENT**, and **DESCRIPTION** properties.

On import, Exchange uses the value of the last *LANGUAGE* parameter found in a **SUMMARY**, **LOCATION**, **COMMENT**, or **DESCRIPTION** property within a **VEVENT component**. All other instances of the *LANGUAGE* parameter are ignored.

2.2.20 [RFC2445] Section 4.2.11 Group or List Membership

V0022:

The specification describes the optional *MEMBER* parameter.

Exchange 2007, Exchange 2010

Exchange does not export this parameter and ignores it on import.

2.2.21 [RFC2445] Section 4.2.12 Participation Status

V0023:

The specification describes the optional *PARTSTAT* parameter.

Exchange 2007

Exchange 2007 only exports the *PARTSTAT* parameter for **ATTENDEE** properties in iCalendar objects with a **METHOD** of "REPLY" or "COUNTER". The possible values of this parameter are: "DECLINED", "ACCEPTED", and "TENTATIVE".

On import, Exchange 2007 ignores all *PARTSTAT* parameters except those on **ATTENDEE** properties in iCalendar objects with a **METHOD** of "REPLY" or "COUNTER" (case-insensitive).

For iCalendar objects with a **METHOD** of "REPLY", Exchange 2007 fails to import the iCalendar object unless there is exactly one **ATTENDEE** property with a *PARTSTAT* parameter, and the value of the parameter is "ACCEPTED", "DECLINED", or "TENTATIVE" (case-insensitive).

For iCalendar objects with a **METHOD** of "COUNTER", Exchange 2007 fails to import the iCalendar object unless there is exactly one **ATTENDEE** property with a *PARTSTAT* parameter, and the value of the parameter is "ACCEPTED", "DECLINED", "TENTATIVE", or "NEEDS-ACTION" (case-insensitive).

2.2.22 [RFC2445] Section 4.2.13 Recurrence Identifier Range

V0024:

The specification describes the optional *RANGE* parameter.

Exchange 2007, Exchange 2010

Exchange does not export this parameter. On import Exchange fails to import the iCalendar object if *RANGE* is present.

2.2.23 [RFC2445] Section 4.2.14 Alarm Trigger Relationship

V0025:

The specification describes the optional *RELATED* parameter.

Exchange 2007, Exchange 2010

Exchange exports the *RELATED* parameter value as "START". On import, Exchange imports "START" or "END", but converts any alarms with a *RELATED* parameter of "END" to the equivalent "START".

2.2.24 [RFC2445] Section 4.2.15 Relationship Type

V0026:

The specification describes the optional *RELTYPE* parameter.

Exchange 2007, Exchange 2010

Exchange does not export this parameter and ignores it on import.

2.2.25 [RFC2445] Section 4.2.16 Participation Role

V0027:

The specification describes the optional *ROLE* parameter.

Exchange 2007, Exchange 2010

Exchange only exports a *ROLE* parameter on the **ATTENDEE** property. The value of the parameter is "OPT-PARTICIPANT", "REQ-PARTICIPANT", or absent (for attendees with *CUTYPE* of "ROOM" or "RESOURCE").

On import, Exchange ignores the *ROLE* parameter on any property other than **ATTENDEE**.

2.2.26 [RFC2445] Section 4.2.17 RSVP Expectation

V0028:

The specification describes the optional *RSVP* parameter.

Exchange 2007, Exchange 2010

Exchange only exports the *RSVP* parameter on the **ATTENDEE** property. The value of this parameter is "TRUE" or "FALSE".

On import, Exchange ignores the *RSVP* parameter on any property other than **ATTENDEE**. Furthermore, all *RSVP* parameters with values other than "TRUE" (case-insensitive) are ignored.

2.2.27 [RFC2445] Section 4.2.18 Sent By

V0029:

The specification describes the optional *SENT-BY* parameter.

Exchange 2007, Exchange 2010

Exchange exports *SENT-BY* if the sender is not the organizer for requests or participant for responses. Exchange imports *SENT-BY* if present.

2.2.28 [RFC2445] Section 4.2.19 Time Zone Identifier

V0030:

The specification describes the *TZID* parameter.

Exchange 2007, Exchange 2010

On export, Exchange exports the *TZID* parameter on any property of type **DATE-TIME** if the value is not in **UTC**. Exchange always exports the *TZID* parameter on the **EXDATE** property.

On import, Exchange ignores the *TZID* parameter on any property that is not of type **DATE-TIME**. It also ignores the *TZID* parameter on any **DATE-TIME** property that has a value in UTC.

V0031:

The specification states that an individual *VTIMEZONE* calendar component **MUST** be specified for each unique *TZID* parameter value specified in the iCalendar object.

Exchange 2007, Exchange 2010

Exchange conforms to this statement on export. On import, if the iCalendar object does not have a VTIMEZONE component for a particular *TZID* parameter, Exchange fails to import the iCalendar object.

C0002:

The specification states that the SOLIDUS character as a prefix to the *TZID* parameter indicates that the *TZID* represents "a unique ID in a globally defined time zone registry (when such registry is defined)." It further notes that "the specification of globally unique time zone identifiers is not addressed by this document and is left for future study."

Exchange 2007, Exchange 2010

Exchange performs no special parsing of the SOLIDUS character in the *TZID* parameter.

2.2.29 [RFC2445] Section 4.2.20 Value Data Types

V0032:

The specification describes the optional *VALUE* parameter.

Exchange 2007, Exchange 2010

On export, Exchange only exports the *VALUE* parameter for the following properties: **EXDATE**, **RDATE**, **DTSTART**, **DTEND**, and **RECURRENCE-ID**. The value is either "DATE" or absent.

On import, Exchange parses the *VALUE* parameter on all properties.

2.2.30 [RFC2445] Section 4.3 Property Value Data Types

V0033:

The specification states that if a property's value is not in the default type for that property, the type **MUST** be explicitly specified with a *VALUE* parameter.

Exchange 2007, Exchange 2010

On import, Exchange ignores the *VALUE* parameter and only supports the default property types for all properties unless otherwise specified in this document.

2.2.31 [RFC2445] Section 4.3.1 Binary

V0034:

The specification describes the **BINARY** data type.

Exchange 2007, Exchange 2010

Exchange does not import or export any properties with a **BINARY** data type.

2.2.32 [RFC2445] Section 4.3.2 Boolean

V0035:

The specification describes the **BOOLEAN** data type.

Exchange 2007, Exchange 2010

On export, Exchange always uses either "TRUE" or "FALSE" for the values.

On import, Exchange's handling of illegal values for **BOOLEAN** properties is documented on a property-by-property basis in this document.

2.2.33 [RFC2445] Section 4.3.3 Calendar User Address

V0036:

The specification describes the **CAL-ADDRESS** data type.

Exchange 2007, Exchange 2010

On export, Exchange uses a MAILTO URI ([RFC1738]).

On import, Exchange's behavior when encountering illegal values for **CAL-ADDRESS** properties is documented on a property-by-property basis in this document.

2.2.34 [RFC2445] Section 4.3.5 Date-Time

V0037:

The specification describes the **DATE-TIME** data type.

Exchange 2007, Exchange 2010

On import, Exchange parses any valid value **DATE-TIME** format (or **DATE** format if the *VALUE* parameter is set to "DATE"), as specified in [RFC2445]. Exchange fails to import iCalendar objects that have an invalid **DATE** or **DATE-TIME**.

Exchange treats any date before January 1, 1601, and any date after December 31, 4500 as invalid.

V0038:

The specification states that a time value MUST ONLY specify 60 seconds when specifying the periodic "leap second" in the time value.

Exchange 2007, Exchange 2010

Exchange does not support "leap seconds." A value of 60 seconds is approximated as 59 seconds.

2.2.35 [RFC2445] Section 4.3.6 Duration

V0039:

The specification describes the **DURATION** data type.

Exchange 2007, Exchange 2010

Exchange imports a value of 0 in place of invalid **DURATION** values.

2.2.36 [RFC2445] Section 4.3.7 Float

V0040:

The specification describes the **FLOAT** data type.

Exchange 2007, Exchange 2010

Exchange does not export any properties of type **FLOAT**, and it ignores any properties of type **FLOAT** on import.

2.2.37 [RFC2445] Section 4.3.8 Integer

V0041:

The specification describes the **INTEGER** data type.

Exchange 2007, Exchange 2010

Exchange imports a value of 0 in place of invalid **INTEGER** values.

2.2.38 [RFC2445] Section 4.3.9 Period of Time

V0042:

The specification describes the **PERIOD** data type.

Exchange 2007, Exchange 2010

On import, Exchange fails to import iCalendar objects with an invalid value for a **PERIOD** type property.

2.2.39 [RFC2445] Section 4.3.10 Recurrence Rule

V0043:

The specification describes the **RECUR** data type.

Exchange 2007, Exchange 2010

Exchange only supports a subset of the recurrences specified in this section. See [MS-OXCICAL] section 2.3 for details of the recurrences supported by Exchange.

On import, Exchange fails to import iCalendar objects with a recurrence that it does not support.

2.2.40 [RFC2445] Section 4.3.11 Text

V0044:

The specification describes the **TEXT** data type.

Exchange 2007, Exchange 2010

On import, Exchange interprets the data as specified in [RFC2445] section 4.3.11, with the following additions:

"\n" or "\N" are parsed as a newline (U+000D U+000A).

"\"" is parsed as a double-quote (U+0022).

"'" is parsed as a single-quote (U+0027).

Backslashes not handled by these rules or any of the rules described in [RFC2445] section 4.3.11 are parsed literally (U+005C).

2.2.41 [RFC2445] Section 4.3.12 Time

V0045:

The specification describes the **TIME** data type.

Exchange 2007, Exchange 2010

On import, Exchange parses any valid value in **TIME** format, as specified in [RFC2445]. Exchange fails to import iCalendar objects with an invalid **TIME**.

V0046:

The specification states that a time value **MUST ONLY** specify 60 seconds when specifying the periodic "leap second" in the time value.

Exchange 2007, Exchange 2010

Exchange does not support "leap seconds." A value of 60 seconds is approximated as 59 seconds.

2.2.42 [RFC2445] Section 4.3.13 URI

V0047:

The specification describes the **URI** data type.

Exchange 2007, Exchange 2010

The only type of **URI** that Exchange exports is the "cid:" type **URI**, as specified in [RFC2111].

On import, Exchange imports any **URI** type property with any value.

2.2.43 [RFC2445] Section 4.3.14 UTC Offset

V0048:

The specification describes the **UTC-OFFSET** data type.

Exchange 2007, Exchange 2010

On import, Exchange fails to import iCalendar objects with an invalid **UTC-OFFSET**.

2.2.44 [RFC2445] Section 4.4 iCalendar Object

V0049:

The specification allows multiple iCalendar objects to be sequentially grouped together.

Exchange 2007, Exchange 2010

On export, Exchange only exports one VCALENDAR component per MIME part.

On import, Exchange fails to import iCalendar objects with multiple VCALENDAR components in a MIME component.

2.2.45 [RFC2445] Section 4.5 Property

V0050:

The specification imposes no ordering of properties within an iCalendar object.

Exchange 2007, Exchange 2010

On export, Exchange orders properties before sub-components.

On import, Exchange parses properties and sub-components in any order, provided that the component hierarchy is correct.

V0051:

The specification specifies that property names, parameter names, and enumerated parameter values are case-insensitive.

Exchange 2007, Exchange 2010

On export, Exchange uses capitalized letters for property names, parameter names, component names, and enumerated values.

2.2.46 [RFC2445] Section 4.6 Calendar Components

V0052:

The specification imposes no ordering of components within an iCalendar object.

Exchange 2007, Exchange 2010

On export, Exchange exports VTIMEZONE components before VEVENT components.

On import, Exchange parses any ordering of components within an iCalendar object.

2.2.47 [RFC2445] Section 4.6.2 To-do Component

V0053:

The specification describes the VTODDO component.

Exchange 2007, Exchange 2010

Exchange does not export VTODDO components and ignores them on import.

2.2.48 [RFC2445] Section 4.6.3 Journal Component

V0054:

The specification describes the VJOURNAL component.

Exchange 2007, Exchange 2010

Exchange does not export VJOURNAL components and ignores them on import.

2.2.49 [RFC2445] Section 4.6.4 Free/Busy Component

V0055:

The specification describes the VFREEBUSY component.

Exchange 2007, Exchange 2010

Exchange does not export VFREEBUSY components and ignores them on import.

2.2.50 [RFC2445] Section 4.6.5 Time Zone Component

V0056:

The specification describes the VTIMEZONE component.

Exchange 2007, Exchange 2010

On import, Exchange attempts to approximate VTIMEZONE components to a VTIMEZONE with one annually-recurring standard-to-daylight savings transition date, and one annually-recurring daylight savings-to-standard transition date. The approximation process is specified in [MS-OXCICAL] section 2.2.1.19. Only the following properties are used to approximate a VTIMEZONE, all other properties are ignored: **TZID** (in VTIMEZONE components), **DTSTART** (in DAYLIGHT or STANDARD components), **RRULE** (in DAYLIGHT or STANDARD components), **TZOFFSETFROM** (in DAYLIGHT or STANDARD components), and **TZOFFSETTO**, (in DAYLIGHT or STANDARD components). If a time zone cannot be approximated or parsed, Exchange fails to import the iCalendar object.

2.2.51 [RFC2445] Section 4.6.6 Alarm Component

V0057:

The specification states that the **ACTION** property is required on VALARM components, and describes the possible values of the **ACTION** property of the VALARM component. The possible values specified are "AUDIO", "DISPLAY", "EMAIL", and "PROCEDURE". The format for the VALARM component is specified for each possible value of the **ACTION** property.

Exchange 2007, Exchange 2010

Exchange only exports VALARM components with the **ACTION** property set to "DISPLAY". The other types ("AUDIO", "EMAIL", and "PROCEDURE") are not implemented by Exchange.

On import, Exchange ignores the **ACTION** property of the VALARM component. All VALARM components are treated as a **reminder** [MS-OXORMDR].

V0058:

The specification states that the **TRIGGER** property is required on VALARM components.

Exchange 2007, Exchange 2010

On import, Exchange fails to import iCalendar objects with any VALARM components that do not have a **TRIGGER** property.

V0059:

The specification states that the **DURATION** and **REPEAT** properties are optional on VALARM components.

Exchange 2007, Exchange 2010

Exchange does not export **DURATION** or **REPEAT** properties on VALARM components. On import, these properties are ignored on VALARM components.

V0060:

The specification states that the **ATTACH** property is optional for VALARM components that have the **ACTION** property set to "AUDIO" or "EMAIL", and is required for VALARM components that have the **ACTION** property set to "PROCEDURE".

Exchange 2007, Exchange 2010

Exchange does not implement VALARM components with the **ACTION** property set to "AUDIO", "EMAIL", or "PROCEDURE". Exchange does not export the **ATTACH** property on VALARM components. On import, this property is ignored on VALARM components.

V0061:

The specification states that VALARM components can optionally have additional x-prop properties set on them.

Exchange 2007, Exchange 2010

Exchange does not export any x-prop properties on VALARM components. On import, any x-prop properties on VALARM components are ignored.

V0062:

The specification states that the **DESCRIPTION** property is required for VALARM components with the **ACTION** property set to "DISPLAY" or "EMAIL", and optional for VALARM components with the **ACTION** property set to "PROCEDURE".

Exchange 2007, Exchange 2010

On import, Exchange ignores the **DESCRIPTION** property.

V0063:

The specification states that the **DESCRIPTION** property is required for VALARM components with the **ACTION** property set to "DISPLAY" or "EMAIL", and optional for VALARM components with the **ACTION** property set to "PROCEDURE".

Exchange 2007, Exchange 2010

On import, Exchange ignores the **DESCRIPTION** property.

V0064:

The specification states that the **ATTENDEE** property is required for VALARM components with the **ACTION** property set to "EMAIL".

Exchange 2007, Exchange 2010

Exchange does not export VALARM components with the **ACTION** property set to "EMAIL". Therefore it does not export the **ATTENDEE** property on VALARM components. On import, Exchange ignores the **ATTENDEE** property.

C0003:

The specification states "When the action is "AUDIO", the alarm can also include one and only one **ATTACH** property, which MUST point to a sound resource, which is rendered when the alarm is triggered." It is unclear if "which is rendered when the alarm is triggered" is a normative requirement.

Exchange 2007, Exchange 2010

This is interpreted as a recommendation, not a requirement. Exchange ignores the **ATTACH** property on VALARM components.

C0004:

The specification states "When the action is "DISPLAY", the alarm MUST also include a "**DESCRIPTION**" property, which contains the text to be displayed when the alarm is triggered." It is unclear if "to be displayed when the alarm is triggered" is a normative requirement.

Exchange 2007, Exchange 2010

This is interpreted as a recommendation, not a requirement. On import, Exchange ignores the **DESCRIPTION** property on VALARM components.

C0005:

The specification states "When the action is "EMAIL", the alarm MUST include a "**DESCRIPTION**" property, which contains the text to be used as the message body, a "**SUMMARY**" property, which contains the text to be used as the message subject, and one or more "**ATTENDEE**" properties, which contain the email address of attendees to receive the message. It can also include one or more "**ATTACH**" properties, which are intended to be sent as message attachments. When the alarm is triggered, the email message is sent." It is unclear if "When the alarm is triggered, the email message is sent." is a normative requirement.

Exchange 2007, Exchange 2010

This is interpreted as a recommendation, not a requirement. On import, Exchange ignores the **DESCRIPTION**, **SUMMARY**, **ATTENDEE**, and **ATTACH** properties. Exchange does not send email messages when alarms are triggered.

C0006:

The specification states "When the action is "PROCEDURE", the alarm MUST include one and only one "**ATTACH**" property, which MUST point to a procedure resource, which is invoked when the alarm is triggered." It is unclear if "which is invoked when the alarm is triggered" is a normative requirement.

Exchange 2007, Exchange 2010

This is interpreted as a recommendation, not a requirement. On import, Exchange ignores the **ATTACH** property. Exchange does not invoke procedures when alarms are triggered.

V0065:

The specification states that VALARM components must only appear within VEVENT or VTODD components.

Exchange 2007, Exchange 2010

Exchange only exports VALARM components within VEVENT components. On import, any VALARM component found outside of a VEVENT component is ignored.

V0066:

The specification states that multiple mutually independent VALARM components can be specified for a single VEVENT or VTODD component

Exchange 2007, Exchange 2010

Exchange only exports at most one VALARM component per VEVENT component. On import, Exchange uses the first VALARM component with a valid **TRIGGER** property found in a VEVENT component. All other VALARM components within that VEVENT are ignored.

V0067:

The specification states that the **TRIGGER** edge may be explicitly set to be relative to the START or END of a VEVENT or VTODDO with the RELATIVE parameter on the **TRIGGER** property.

Exchange 2007, Exchange 2010

Exchange exports the RELATIVE parameter of the **TRIGGER** property with a value of "START". Exchange can import the RELATIVE parameter with a value of "START" or "END".

V0068:

The specification states that the **TRIGGER** property can alternatively be set to an absolute calendar date and time of day value.

Exchange 2007, Exchange 2010

Exchange does not export the VALUE parameter of the **TRIGGER** property. On import, if the value of the **TRIGGER** property is not a **DURATION** type as specified in [RFC2445] section 4.3.6, Exchange fails to import the iCalendar object.

V0069:

The specification states that an alarm in a VTODDO component that is set to trigger on the END of the to-do either MUST have the **DUE** property, or MUST have both **DTSTART** and **DURATION**.

Exchange 2007, Exchange 2010

Exchange does not export or import VTODDO components.

V0070:

The specification states that an alarm can be defined such that it triggers repeatedly, using the **DURATION** and **REPEAT** properties on the VALARM component.

Exchange 2007, Exchange 2010

Exchange does not export repeating alarms. On import, Exchange ignores the **DURATION** and **REPEAT** properties on VALARM components.

V0071:

The specification states that it is typically the responsibility of the Calendar User Agent to deliver the alarm in the specified fashion.

Exchange 2007, Exchange 2010

On import, Exchange ignores the **ACTION** property on VALARM components. All VALARM components are treated as a reminder [MS-OXORMDR].

C0007:

The specification states "In an AUDIO alarm, if the optional "**ATTACH**" property is included, it **MUST** specify an audio sound resource. The intention is that the sound will be played as the alarm effect. If an "**ATTACH**" property is specified that does not refer to a sound resource, or if the specified sound resource cannot be rendered (because its format is unsupported, or because it cannot be retrieved), then the CUA or other entity responsible for playing the sound may choose a fallback action, such as playing a built-in default sound, or playing no sound at all." It is unclear if "The intention is that the sound will be played as an alarm effect" is a normative requirement.

Exchange 2007, Exchange 2010

This is interpreted as a recommendation, not a requirement. On import, Exchange ignores the **ATTACH** property on VALARM components.

C0008:

The specification states "In a DISPLAY alarm, the intended alarm effect is for the text value of the "**DESCRIPTION**" property to be displayed to the user." It is unclear if "the intended alarm effect is for the text value of the "**DESCRIPTION**" property to be displayed to the user" is a normative requirement.

Exchange 2007, Exchange 2010

This is interpreted as a recommendation, not a requirement. On import, Exchange ignores the **DESCRIPTION** property on VALARM components.

C0009:

The specification states "In an EMAIL alarm, the intended alarm effect is for an email message to be composed and delivered to all the addresses specified by the "**ATTENDEE**" properties in the "VALARM" calendar component. The "**DESCRIPTION**" property of the "VALARM" calendar component **MUST** be used as the body text of the message, and the "**SUMMARY**" property **MUST** be used as the subject text. Any "**ATTACH**" properties in the "VALARM" calendar component **SHOULD** be sent as attachments to the message." It is unclear if "the intended alarm effect is for an email message to be composed and delivered to all the addresses specified by the "**ATTENDEE**" properties in the "VALARM" calendar component" is a normative requirement.

Exchange 2007, Exchange 2010

This is interpreted as a recommendation, not a requirement. On import, Exchange ignores the **DESCRIPTION**, **SUMMARY**, **ATTENDEE**, and **ATTACH** properties. Exchange does not send email messages when alarms are triggered.

C0010:

The specification states "In a PROCEDURE alarm, the "**ATTACH**" property in the "VALARM" calendar component **MUST** specify a procedure or program that is intended to be invoked as the alarm effect. If the procedure or program is in a format that cannot be rendered, then no procedure alarm will be invoked. If the "**DESCRIPTION**" property is present, its value specifies the argument string to be passed to the procedure or program. "Calendar User Agents" that receive an iCalendar object with this category of alarm, can disable or allow the "Calendar User" to disable, or otherwise ignore this type of alarm. While a very useful alarm capability, the PROCEDURE type of alarm **SHOULD** be treated by the "Calendar User Agent" as a potential security risk." It is unclear if "intended to be invoked as the alarm effect" is a normative requirement.

Exchange 2007, Exchange 2010

This is interpreted as a recommendation, not a requirement. On import, Exchange ignores the **DESCRIPTION** and **ATTACH** properties. Exchange does not invoke procedures when alarms are triggered.

2.2.52 [RFC2445] Section 4.7 Calendar Properties

C0011:

The specification states that these properties do not appear within a calendar component. They SHOULD be specified after the "BEGIN:VCALENDAR" property and prior to any calendar component. This is ambiguous because "calendar component" can refer to the VCALENDAR itself, or to any of the sub-components within the VCALENDAR component.

Exchange 2007, Exchange 2010

This statement is interpreted as applying to sub-components of the VCALENDAR, and not the VCALENDAR itself. On export, Exchange does not export the **CALSCALE** property at all, and does not export the **METHOD**, **PROID**, or **VERSION** properties anywhere beside the VCALENDAR component. On import, Exchange ignores any of these properties outside of the VCALENDAR component.

2.2.53 [RFC2445] Section 4.7.1 Calendar Scale

V0072:

The specification describes the **CALSCALE** property.

Exchange 2007, Exchange 2010

Exchange does not export the **CALSCALE** property. Exchange ignores the **CALSCALE** property and any parameters on the **CALSCALE** property on import.

2.2.54 [RFC2445] Section 4.7.2 Method

V0073:

The specification states that non-standard property parameters can be specified on the **METHOD** property.

Exchange 2007, Exchange 2010

Exchange exports no non-standard property parameters on the **METHOD** property, and ignores any non-standard property parameters on the **METHOD** property on import.

V0074:

The specification states that the **METHOD** property can be specified in an iCalendar object, and that it can only appear once.

Exchange 2007, Exchange 2010

On import, if there is no **METHOD** property, Exchange fails to import the iCalendar object. If multiple **METHOD** properties are specified on a VCALENDAR, Exchange ignores all **METHOD** properties except the last.

V0075:

The specification states that in a **MIME message** entity, the value of the **METHOD** property MUST be the same as the value of the Content-Type "*method*" parameter. Furthermore, if either the **METHOD** property or the Content-Type "*method*" parameter is present, the other MUST also be present.

Exchange 2007, Exchange 2010

On export, Exchange conforms to this requirement. On import, if the value of the **METHOD** property is not the same as the value of the Content-Type "*method*" parameter, the value of the **METHOD** property is used to evaluate the iCalendar object. Furthermore, if the value of the Content-Type "*method*" parameter is not "REQUEST", "REPLY", "CANCEL", "PUBLISH", or "COUNTER" (case-insensitive), Exchange fails to import the iCalendar object.

V0076:

The specification states "If this property is not present in the iCalendar object, then a scheduling transaction MUST NOT be assumed. In such cases, the iCalendar object is merely being used to transport a snapshot of some calendar information; without the intention of conveying a scheduling semantic."

Exchange 2007, Exchange 2010

If the **METHOD** property is not present, Exchange fails to import the iCalendar object.

V0077:

The specification sets no limitation on the possible values of the **METHOD** property beyond the ABNF notation:

```
method      = "METHOD" metparam ":" metvalue CRLF
metparam    = *(";" xparam)
metvalue    = iana-token
```

Exchange 2007, Exchange 2010

Exchange only implements the following values of the **METHOD** property: "PUBLISH", "REQUEST", "REPLY", "CANCEL", and "COUNTER" ([RFC2446]). Exchange only exports these values for the **METHOD** property. On import, if the **METHOD** property is missing or set to an unimplemented value, Exchange fails to import the iCalendar object.

2.2.55 [RFC2445] Section 4.7.3 Product Identifier

V0078:

The specification states that non-standard property parameters can be specified on the **PRODID** property.

Exchange 2007, Exchange 2010

Exchange exports no non-standard property parameters on the **PRODID** property, and ignores all parameters on the **PRODID** property on import.

V0079:

The specification states that the **PRODID** property MUST be specified once in an iCalendar object.

Exchange 2007, Exchange 2010

On import, Exchange ignores the **PRODID** property and can import iCalendar objects with any number of **PRODID** properties, including zero.

V0080:

The specification states that the vendor of an implementation SHOULD assure that this is a globally unique identifier.

Exchange 2007

On export, Exchange 2007 sets this to "Microsoft Exchange Server 2007".

On import, Exchange 2007 ignores the **PRODID** property.

Exchange 2010

Exchange 2010 behaves identically to Exchange 2007, except that on export, Exchange 2010 sets **PRODID** to "Microsoft Exchange Server 2010".

2.2.56 [RFC2445] Section 4.7.4 Version

V0081:

The specification states that non-standard property parameters can be specified on the **VERSION** property.

Exchange 2007, Exchange 2010

Exchange exports no non-standard property parameters on the **VERSION** property, and ignores all parameters on the **VERSION** property on import.

V0082:

The specification states that the **VERSION** property MUST be specified by an iCalendar object, but MUST be specified only once.

Exchange 2007, Exchange 2010

On import, Exchange ignores the **VERSION** property.

V0083:

The specification states that a value of "2.0" for the **VERSION** property corresponds to [RFC2445].

Exchange 2007, Exchange 2010

On export, Exchange sets the **VERSION** property to "2.0". On import, Exchange ignores the **VERSION** property.

2.2.57 [RFC2445] Section 4.8.1.1 Attachment

V0084:

The specification states that the default value type for the **ATTACH** property is **URI**, and that the value type can be set to **BINARY** to indicate inline binary encoded content information.

Exchange 2007, Exchange 2010

Exchange only exports **ATTACH** properties with a value type of **URI**. On import, Exchange ignores the **ATTACH** property and imports all attachments that are present in the MIME message.

V0085:

The specification states that non-standard, inline encoding, format type and value data type property parameters can be specified on the **ATTACH** property.

Exchange 2007, Exchange 2010

Exchange does not export any parameters on the **ATTACH** property. On import Exchange ignores all **ATTACH** properties.

V0086:

The specification states that the **ATTACH** property can be specified within the VEVENT, VTODD, VJOURNAL, or VALARM components.

Exchange 2007, Exchange 2010

Exchange only exports the **ATTACH** property within VEVENT components. On import, Exchange ignores all **ATTACH** properties.

2.2.58 [RFC2445] Section 4.8.1.2 Categories

V0087:

The specification states that non-standard and language property parameters can be specified on the **CATEGORIES** property.

Exchange 2007, Exchange 2010

Exchange exports no non-standard or language property parameters on the **CATEGORIES** property, and ignores all parameters on the **CATEGORIES** property on import.

V0088:

The specification states that the **CATEGORIES** property can be specified within the VEVENT, VTODD, or VJOURNAL components.

Exchange 2007, Exchange 2010

Exchange only exports the **CATEGORIES** property within VEVENT components. On import, **CATEGORIES** properties in any component other than a VEVENT component are ignored.

V0089:

The specification states that multiple categories can be specified as a list of categories separated by the COMMA character (US-ASCII decimal 44).

Exchange 2007, Exchange 2010

On export, Exchange exports at most one **CATEGORIES** property per VEVENT component. The value of the **CATEGORIES** property can contain multiple categories, which are separated by commas.

On import, Exchange can parse multiple instances of the **CATEGORIES** property on a single VEVENT component.

2.2.59 [RFC2445] Section 4.8.1.3 Classification

V0090:

The specification states that non-standard property parameters can be specified on the **CLASS** property.

Exchange 2007, Exchange 2010

Exchange exports no non-standard property parameters on the **CLASS** property, and ignores all parameters on the **CLASS** property on import.

V0091:

The specification states that the **CLASS** property can be specified within the VEVENT, VTOD0, or VJOURNAL components.

Exchange 2007, Exchange 2010

Exchange only exports the **CLASS** property within VEVENT components. On import, **CLASS** properties in any component other than a VEVENT component are ignored.

V0092:

The specification lists the possible values for the **CLASS** property as "PUBLIC", "PRIVATE", "CONFIDENTIAL", iana-token, or x-name.

Exchange 2007, Exchange 2010

On export, Exchange can set the following values of the **CLASS** property: "PUBLIC", "PRIVATE", "CONFIDENTIAL", and "PERSONAL". On import, Exchange imports the first **CLASS** property with a value of "PUBLIC", "PRIVATE", "CONFIDENTIAL", or "PERSONAL" (case-insensitive). Any other values are treated as "PRIVATE". If no such **CLASS** property exists, Exchange treats the value of **CLASS** as "PUBLIC".

2.2.60 [RFC2445] Section 4.8.1.4 Comment

V0093:

The specification states that non-standard, alternate text representation, and language property parameters can be specified on the **COMMENT** property.

Exchange 2007, Exchange 2010

Exchange exports no parameters except *LANGUAGE* on the **COMMENT** property. On import, Exchange uses the first *LANGUAGE* parameter found in a **SUMMARY**, **LOCATION**, **COMMENT**, or **DESCRIPTION** property of a VEVENT component. In all other cases, parameters on the **DESCRIPTION** property are ignored.

V0094:

The specification states that the **COMMENT** property can be specified within the VEVENT, VTOD0, VJOURNAL, VTIMEZONE, or VFREEBUSY components.

Exchange 2007, Exchange 2010

Exchange only exports the **COMMENT** property within VEVENT components, and only if the **METHOD** property for the iCalendar object is "REPLY" or "COUNTER". On import, **COMMENT**

properties in any component other than a VEVENT component are ignored. Furthermore, if the **METHOD** property for the iCalendar object is anything other than "REPLY" or "COUNTER", the **COMMENT** property is parsed and used as the **DESCRIPTION** property if no **DESCRIPTION** property exists in the iCalendar object.

V0095:

The specification states that the **COMMENT** property can be specified multiple times.

Exchange 2007, Exchange 2010

On export, Exchange only exports at most one **COMMENT** property. On import, if more than one **COMMENT** property exists in a VEVENT component, Exchange ignores all but the last.

2.2.61 [RFC2445] Section 4.8.1.5 Description

V0096:

The specification states that non-standard, alternate text representation, and language property parameters can be specified on the **DESCRIPTION** property.

Exchange 2007, Exchange 2010

Exchange exports no parameters except *LANGUAGE* on the **DESCRIPTION** property. On import, Exchange uses the first *LANGUAGE* parameter found in a **SUMMARY, LOCATION, COMMENT, or DESCRIPTION** property of a VEVENT component. In all other cases, parameters on the **DESCRIPTION** property are ignored.

V0097:

The specification states that the **DESCRIPTION** property can be specified within the VEVENT, VTOD, VJOURNAL, or VALARM components, and may be specified multiple times in a VJOURNAL component.

Exchange 2007, Exchange 2010

Exchange can export at most one **DESCRIPTION** property on a VEVENT component. Exchange exports exactly one **DESCRIPTION** property on a VALARM component, and the value is "Reminder". Exchange does not export a **DESCRIPTION** property for any component other than a VEVENT or VALARM.

On import, if multiple **DESCRIPTION** properties are present in a VEVENT component, Exchange ignores all but the first. Exchange ignores **DESCRIPTION** properties on any component other than a VEVENT.

2.2.62 [RFC2445] Section 4.8.1.6 Geographic Position

V0098:

The specification describes the **GEO** property.

Exchange 2007, Exchange 2010

Exchange does not implement the **GEO** property. Exchange does not export or import this property.

C0012:

The specification does not explicitly state that implementing this property is required. It states "This property can be specified in "VEVENT" or "VTODO" calendar components." Later it states "The longitude and latitude values MAY be specified up to six decimal places, which will allow for accuracy to within one meter of geographical position. Receiving applications MUST accept values of this precision and MAY truncate values of greater precision."

Exchange 2007, Exchange 2010

The phrase "Receiving applications MUST accept values" is interpreted as being required contingent on actually implementing this property. The phrase "This property can be specified" is interpreted to mean that the property is optional.

2.2.63 [RFC2445] Section 4.8.1.7 Location

V0099:

The specification states that non-standard, alternate text representation, and language property parameters can be specified on the **LOCATION** property.

Exchange 2007, Exchange 2010

Exchange exports no parameters except *LANGUAGE* on the **LOCATION** property. On import, Exchange uses the first *LANGUAGE* parameter found in a **SUMMARY**, **LOCATION**, **COMMENT**, or **DESCRIPTION** property of a VEVENT component. In all other cases, parameters on the **LOCATION** property are ignored.

V0100:

The specification states that the **LOCATION** property can be specified within VEVENT or VTODO components.

Exchange 2007, Exchange 2010

Exchange exports **LOCATION** only on VEVENT components. On import, Exchange ignores **LOCATION** outside of VEVENT components.

V0101:

The specification states that an alternate representation may be specified that is a URI that points to directory information.

Exchange 2007, Exchange 2010

Exchange can import or export the *ALTREP* parameter on the **LOCATION** property.

2.2.64 [RFC2445] Section 4.8.1.8 Percent Complete

V0102:

The specification describes the **PERCENT-COMPLETE** property.

Exchange 2007, Exchange 2010

Exchange does not implement the **PERCENT-COMPLETE** property. Exchange does not export or import the **PERCENT-COMPLETE** property.

2.2.65 [RFC2445] Section 4.8.1.9 Priority

V0103:

The specification states that non-standard property parameters can be specified on the **PRIORITY** property.

Exchange 2007, Exchange 2010

Exchange does not export or import any parameters on the **PRIORITY** property.

V0104:

The specification states that the **PRIORITY** property can be specified within VEVENT or VTODO components.

Exchange 2007, Exchange 2010

Exchange exports **PRIORITY** only on VEVENT components. On import, Exchange ignores **PRIORITY** outside of VEVENT components.

V0105:

The specification states that the value of **PRIORITY** is specified as an integer in the range of zero to nine, with zero being an undefined priority, one being the highest priority, and nine being the lowest priority.

Exchange 2007, Exchange 2010

Exchange only exports a value for **PRIORITY** of one (1), five (5), or nine (9). On import, Exchange can import any integer value.

V0106:

The specification states that a client with a three-level priority scheme of "HIGH", "MEDIUM", and "LOW" is mapped as follows: 1-4 is "HIGH", 5 is "MEDIUM", and 6-9 is "LOW".

Exchange 2007, Exchange 2010

Exchange implements a three-level priority scheme and conforms to this statement. Any other integer values are treated as "MEDIUM".

V0107:

The specification describes how to implement a priority scheme of "A1", "A2", "A3", "B1", "B2", ..., "C3".

Exchange 2007, Exchange 2010

Exchange does not implement this priority scheme.

2.2.66 [RFC2445] Section 4.8.1.10 Resources

V0108:

The specification describes the **RESOURCES** property.

Exchange 2007, Exchange 2010

Exchange does not implement the **RESOURCES** property. Exchange does not export or import the **RESOURCES** property.

2.2.67 [RFC2445] Section 4.8.1.11 Status

V0109:

The specification states that non-standard property parameters can be specified on the **STATUS** property.

Exchange 2007, Exchange 2010

Exchange does not export any non-standard parameters on the **STATUS** property. On import, Exchange ignores all parameters on the **STATUS** property.

V0110:

The specification states that the **STATUS** property can be specified within the VEVENT, VTODD, or VJOURNAL components.

Exchange 2007, Exchange 2010

Exchange only export the **STATUS** property on VEVENT components. On import, Exchange imports the **STATUS** property on VEVENT components. All other instances of the **STATUS** property are ignored.

2.2.68 [RFC2445] Section 4.8.1.12 Summary

V0111:

The specification states that non-standard, alternate text representation, and language property parameters can be specified on the **SUMMARY** property.

Exchange 2007, Exchange 2010

Exchange exports the *LANGUAGE* parameter on the **SUMMARY** property. On import, Exchange uses the first *LANGUAGE* parameter found in a **SUMMARY**, **LOCATION**, or **DESCRIPTION** property of a VEVENT component. In all other cases, parameters on the **SUMMARY** property are ignored.

V0112:

The specification states that the **SUMMARY** property can be specified within the VEVENT, VTODD, VJOURNAL, or VALARM components.

Exchange 2007, Exchange 2010

Exchange only exports **SUMMARY** properties on VEVENT components. On import, Exchange ignores any **SUMMARY** properties outside of a VEVENT component.

2.2.69 [RFC2445] Section 4.8.2.1 Date/Time Completed

V0113:

The specification describes the **COMPLETED** property.

Exchange 2007, Exchange 2010

Exchange does not implement the **COMPLETED** property. Exchange does not import or export the **COMPLETED** property.

2.2.70 [RFC2445] Section 4.8.2.2 Date/Time End

V0114:

The specification states that the default value type for **DTEND** is **DATE-TIME**, but it can be set to a **DATE** type.

Exchange 2007, Exchange 2010

Exchange can export **DTEND** as **DATE-TIME** or **DATE**. On import, it can import value types of **DATE-TIME** or **DATE**. If the value cannot be parsed as either a **DATE-TIME** or **DATE**, Exchange fails to import the iCalendar object.

V0115:

The specification states that non-standard, value data type, and time-zone identifier property parameters can be specified on the **DTEND** property.

Exchange 2007, Exchange 2010

On export, Exchange exports the *VALUE* parameter if **DTEND** is a **DATE**. Exchange exports the *TZID* parameter if the **DTEND** value is not a UTC date/time.

On import, Exchange ignores all parameters on **DTEND** except *TZID* and *VALUE*.

V0116:

The specification states that the **DTEND** property can be specified within *VEVENT* or *VFREEBUSY* components.

Exchange 2007, Exchange 2010

Exchange only exports the **DTEND** property on *VEVENT* components. On import, any instances of **DTEND** outside of a *VEVENT* component are ignored.

V0117:

The specification states that on *VEVENT* components, the value of **DTEND** must be later than the value of **DTSTART**.

Exchange 2007, Exchange 2010

On import, Exchange can import *VEVENT* components that have equal values for **DTEND** and **DTSTART**. If **DTEND** is earlier than **DTSTART**, Exchange fails to import the iCalendar object.

See section 2.1.2 for export behavior.

2.2.71 [RFC2445] Section 4.8.2.3 Date/Time Due

V0118:

The specification describes the **DUE** property.

Exchange 2007, Exchange 2010

Exchange does not import or export the **DUE** property.

2.2.72 [RFC2445] Section 4.8.2.4 Date/Time Start

V0119:

The specification states that the default value type for **DTSTART** is **DATE-TIME**, but it can be set to a **DATE** type.

Exchange 2007, Exchange 2010

Exchange can export **DTSTART** as **DATE-TIME** or **DATE**. On import, it can import value types of **DATE-TIME** or **DATE**. If the value cannot be parsed as either a **DATE-TIME** or **DATE**, Exchange fails to import the iCalendar object.

V0120:

The specification states that non-standard, value data type, and time-zone identifier property parameters can be specified on the **DTSTART** property.

Exchange 2007, Exchange 2010

On export, Exchange exports the *VALUE* parameter if **DTSTART** is a **DATE**. Exchange exports the *TZID* parameter if the **DTSTART** is not a UTC date/time.

On import, Exchange ignores all parameters on **DTSTART** except *TZID* and *VALUE*.

V0121:

The specification states that the **DTSTART** property can be specified within *VEVENT*, *VTODO*, *VFREEBUSY*, or *VTIMEZONE* components.

Exchange 2007, Exchange 2010

Exchange exports the **DTSTART** property on *VEVENT*, *STANDARD*, and *DAYLIGHT* components. On import, any instances of **DTSTART** outside of a *VEVENT*, *STANDARD*, or *DAYLIGH* component are ignored.

V0122:

The specification states that **DTSTART** is REQUIRED on *VEVENT* components, and that events can have a start date/time but no end date/time. In that case, the event does not take up any time.

Exchange 2007, Exchange 2010

On import, Exchange fails to import iCalendar objects with *VEVENT*s that are missing a **DTSTART** property. The following table lists the import behavior when **DTSTART**, **DTEND**, **DURATION**, or any combination of these three are missing:

Missing Properties	Start	End
None	DTSTART	DTEND
DTSTART	Fail to import	Fail to import

DTEND	DTSTART	DTSTART + DURATION
DURATION	DTSTART	DTEND
DTEND, DURATION	Fail to import	Fail to import

C0013:

The specification states "Events can have a start date/time but no end date/time. In that case, the event does not take up any time." However, in [RFC2445] section 4.8.2.5, it states that the **DURATION** property may be used instead of an explicit date/time to specify the duration of the event. These statements are contradictory.

Exchange 2007, Exchange 2010

On import, if a **DURATION** is specified and there is no **DTEND** property, Exchange imports the event as lasting the amount of time specified in **DURATION**.

V0123:

The specification describes the usage of **DTSTART** in VFREEBUSY components.

Exchange 2007, Exchange 2010

Exchange does not import or export VFREEBUSY components.

V0124:

The specification states that the **DTSTART** property is REQUIRED within the STANDARD and DAYLIGHT subcomponents of the VTIMEZONE component, and MUST be specified as a local **DATE-TIME** with no **TZID** parameter.

Exchange 2007, Exchange 2010

On import, Exchange fails to import iCalendar objects with any STANDARD or DAYLIGHT subcomponent that does not have a **DTSTART** property. If a **DTSTART** in a STANDARD or DAYLIGHT subcomponent is specified in UTC or with a **TZID** parameter, Exchange approximates it as local time.

2.2.73 [RFC2445] Section 4.8.2.5 Duration

V0125:

The specification states that non-standard property parameters can be specified on the **DURATION** property.

Exchange 2007, Exchange 2010

Exchange does not export the **DURATION** property. On import, Exchange ignores all parameters on the **DURATION** property.

V0126:

The specification states that the **DURATION** property can be specified within VEVENT, VTOD0, VFREEBUSY, or VALARM components.

Exchange 2007, Exchange 2010

Exchange does not export the **DURATION** property. On import, Exchange ignores all instances of the **DURATION** property outside of a VEVENT component.

V0127:

The specification states that in a VEVENT component, the **DURATION** property may be used to specify the duration of an event instead of an explicit end date/time.

Exchange 2007, Exchange 2010

Exchange does not export the **DURATION** property. On import, Exchange can import the **DURATION** property if the **DTEND** property is missing. See section 2.2.72 for more details.

V0128:

The specification states that in a VTOD0 component, the **DURATION** property may be used to specify a duration for the to-do instead of an explicit due date/time.

Exchange 2007, Exchange 2010

Exchange does not import or export VTOD0 components.

V0129:

The specification states that in a VFREEBUSY component, the **DURATION** property may be used to specify the interval of free time being requested.

Exchange 2007, Exchange 2010

Exchange does not import or export VFREEBUSY components.

V0130:

The specification states that in a VALARM component, the **DURATION** property may be used to specify the delay period prior to repeating an alarm.

Exchange 2007, Exchange 2010

Exchange does not export the **DURATION** property. On import, Exchange ignores the **DURATION** property on VALARM components.

V0131:

The specification uses ABNF notation to describe the format of the **DURATION** property.

Exchange 2007, Exchange 2010

Exchange does not export the **DURATION** property. On import, any value of the **DURATION** property that is negative or otherwise does not conform to the ABNF notation in [RFC2445] section 4.8.2.5 is ignored.

2.2.74 [RFC2445] Section 4.8.2.6 Free/Busy Time

V0132:

The specification describes the **FREEBUSY** property.

Exchange 2007, Exchange 2010

Exchange does not implement the **FREEBUSY** property. Exchange does not import or export the **FREEBUSY** property.

2.2.75 [RFC2445] Section 4.8.2.7 Time Transparency

V0133:

The specification states that non-standard property parameters can be specified on the **TRANSP** property.

Exchange 2007, Exchange 2010

Exchange does not export any parameters on the **TRANSP** property. On import, Exchange ignores all parameters on the **TRANSP** property.

V0134:

The specification states that the **TRANSP** property can be specified once in a VEVENT component.

Exchange 2007, Exchange 2010

Exchange can export at most one **TRANSP** property in a VEVENT component. On import, if more than one **TRANSP** property exists in a VEVENT component, Exchange imports the last valid value and ignore the rest.

V0135:

The specification states "Events that consume actual time for the individual or resource associated with the calendar SHOULD be recorded as OPAQUE, allowing them to be detected by free-busy time searches. Other events, which do not take up the individual's (or resource's) time SHOULD be recorded as TRANSPARENT, making them invisible to free-busy time searches."

Exchange 2007, Exchange 2010

Exchange exports the value of the **PidNameTransparent** property directly to the **TRANSP** property. On import, Exchange imports the value of the **TRANSP** property directly to the **PidNameTransparent** property. See [MS-OXCICAL] section 2.2.1.20.25 for more information.

2.2.76 [RFC2445] Section 4.8.3.1 Time Zone Identifier

V0136:

The specification states that non-standard property parameters can be specified on the **TZID** property.

Exchange 2007, Exchange 2010

Exchange does not export any parameters on the **TZID** property. On import, Exchange ignores all parameters on the **TZID** property.

V0137:

The specification states that the **TZID** property MUST be specified in a VTIMEZONE component.

Exchange 2007, Exchange 2010

Exchange exports exactly one **TZID** property in a VTIMEZONE component. On import, Exchange fails to import iCalendar objects with any VTIMEZONE without a **TZID** property. If multiple **TZID** properties are specified within a VTIMEZONE, Exchange ignores all but the last.

V0138:

The specification states that the presence of a SOLIDUS character as a prefix indicates that the **TZID** represents an unique ID in a globally defined time zone registry.

Exchange 2007, Exchange 2010

Exchange does not export **TZID** properties with a SOLIDUS prefix. On import, Exchange performs no special handling of **TZID** properties prefixed with a SOLIDUS character.

V0139:

The specification states "This document does not define a naming convention for time zone identifiers. Implementers may want to use the naming conventions defined in existing time zone specifications such as the public-domain Olson database [TZ]. The specification of globally unique time zone identifiers is not addressed by this document and is left for future study."

Exchange 2007, Exchange 2010

On export, Exchange relies on the operating system for time zone names. On import, Exchange makes no assumptions regarding the naming convention used to name a time zone in the **TZID** property.

2.2.77 [RFC2445] Section 4.8.3.2 Time Zone Name

V0140:

The specification describes the **TZNAME** property.

Exchange 2007, Exchange 2010

Exchange does not implement the **TZNAME** property. Exchange does not import or export the **TZNAME** property.

2.2.78 [RFC2445] Section 4.8.3.3 Time Zone Offset From

V0141:

The specification states that non-standard property parameters can be specified on the **TZOFFSETFROM** property.

Exchange 2007, Exchange 2010

Exchange exports no parameters on the **TZOFFSETFROM** property. On import, Exchange ignores all parameters on the **TZOFFSETFROM** property.

V0142:

The specification states that the **TZOFFSETFROM** property MUST be specified in a VTIMEZONE component.

Exchange 2007, Exchange 2010

Exchange exports exactly one **TZOFFSETFROM** property on each STANDARD and DAYLIGHT subcomponent of the VTIMEZONE component. On import, Exchange ignores the **TZOFFSETFROM** property.

V0143:

The specification states that the **TZOFFSETFROM** property MUST only be specified in a VTIMEZONE component.

Exchange 2007, Exchange 2010

Exchange only exports **TZOFFSETFROM** within STANDARD or DAYLIGHT subcomponents of the VTIMEZONE component. Exchange ignores the **TZOFFSETFROM** property.

2.2.79 [RFC2445] Section 4.8.3.4 Time Zone Offset To

V0144:

The specification states that non-standard property parameters can be specified on the **TZOFFSETTO** property.

Exchange 2007, Exchange 2010

Exchange exports no parameters on the **TZOFFSETTO** property. On import, Exchange ignores all parameters on the **TZOFFSETTO** property.

V0145:

The specification states that the **TZOFFSETTO** property MUST be specified in a VTIMEZONE component.

Exchange 2007, Exchange 2010

Exchange exports exactly one **TZOFFSETTO** property on each STANDARD and DAYLIGHT subcomponent of the VTIMEZONE component.

On import, if a STANDARD or DAYLIGHT subcomponent is missing the **TZOFFSETTO** property, Exchange fails to import the iCalendar object.

V0146:

The specification uses ABNF notation to describe the format of the **TZOFFSETTO** property.

Exchange 2007, Exchange 2010

On import, Exchange attempts to approximate the value of **TZOFFSETTO** properties that do not conform to the ABNF in [RFC2445] section 4.8.3.3. If the value cannot be approximated Exchange fails to import the iCalendar object.

2.2.80 [RFC2445] Section 4.8.3.5 Time Zone URL

V0147:

The specification describes the **TZURL** property.

Exchange 2007, Exchange 2010

Exchange does not implement the **TZURL** property. Exchange does not import or export the **TZURL** property.

2.2.81 [RFC2445] Section 4.8.4.1 Attendee

V0148:

The specification states that non-standard, language, calendar user type, group or list membership, participation role, participation status, RSVP expectation, delegatee, delegator, sent by, common name or directory entry reference property parameters can be specified on the **ATTENDEE** property.

Exchange 2007, Exchange 2010

Exchange can export the *CN*, *CUTYPE*, *ROLE*, *RSVP*, and *PARTSTAT* parameters on the **ATTENDEE** property. On import, Exchange can import the *CN*, *CUTYPE*, *ROLE*, *RSVP*, and *PARTSTAT* parameters on the **ATTENDEE** property. All other parameters are ignored.

V0149:

The specification states that the **ATTENDEE** property MUST be specified on group scheduled calendar entities.

Exchange 2007, Exchange 2010

Exchange can import a VEVENT representing a meeting request that has no **ATTENDEE** properties and does not declare the user as the **ORGANIZER**.

V0150:

The specification states that the **ATTENDEE** property MUST NOT be specified in an iCalendar object when publishing the calendar information.

Exchange 2007, Exchange 2010

On import, Exchange can successfully import iCalendar objects with **METHOD** set to "PUBLISH" containing **ATTENDEE** and **ORGANIZER** properties.

V0151:

The specification states that the **ATTENDEE** property is not specified in an iCalendar object that specifies only a time zone definition or that defines calendar entities that are not group scheduled entities, but are entities only on a single user's calendar.

Exchange 2007, Exchange 2010

Exchange does not export iCalendar objects that only specify a time zone definition. Exchange does not export the **ATTENDEE** property for VEVENT components that do not represent meetings.

On import, Exchange fails to import an iCalendar object that only specifies a time zone definition. If a VEVENT contains one or more **ATTENDEE** properties, Exchange imports it as a meeting.

V0152:

The specification states that the **ATTENDEE** property MUST only be used to specify participants, non-participants, and the chair of a group scheduled calendar entity.

Exchange 2007, Exchange 2010

Exchange exports the **ATTENDEE** property for participants and non-participants. On import, all **ATTENDEE** properties are treated as participants or non-participants.

V0153:

The specification states that the **ATTENDEE** property is used within an EMAIL category of the VALARM component to specify an email address that is to receive an email when the alarm is triggered.

Exchange 2007, Exchange 2010

Exchange does not export EMAIL-type VALARM components. On import, the **ATTENDEE** property is ignored on VALARM components.

V0154:

The specification states that the *CN*, *ROLE*, *PARTSTAT*, *RSVP*, *CUTYPE*, *MEMBER*, *DELEGATED-TO*, *DELEGATED-FROM*, *SENT-BY*, and *DIR* parameters can be specified on **ATTENDEE** properties within VEVENT, VTODD, or VJOURNAL components, and that they MUST NOT be specified on **ATTENDEE** properties within a VFREEBUSY or VALARM component.

Exchange 2007, Exchange 2010

Exchange only exports **ATTENDEE** properties within VEVENT components. On import, Exchange ignores all **ATTENDEE** properties outside of VEVENT components.

V0155:

The specification states that a recipient delegated a request MUST inherit the *RSVP* and *ROLE* values from the attendee that delegated the request to them.

Exchange 2007, Exchange 2010

Exchange does not export the *DELEGATED-FROM* or *DELEGATED-TO* parameters. See section 2.1.5 for Exchange's import behavior.

V0156:

The specification states that multiple attendees can be specified by including multiple **ATTENDEE** properties with the calendar component.

Exchange 2007, Exchange 2010

Exchange can import and export multiple **ATTENDEE** properties in a VEVENT component.

2.2.82 [RFC2445] Section 4.8.4.2 Contact

V0157:

The specification states that non-standard, alternate text representation, and language property parameters can be specified on the **CONTACT** property.

Exchange 2007, Exchange 2010

Exchange does not export any parameters on the **CONTACT** property. On import, Exchange ignores all parameters on the **CONTACT** property.

V0158:

The specification states that the **CONTACT** property can be specified in VEVENT, VTODO, VJOURNAL, or VFREEBUSY components.

Exchange 2007, Exchange 2010

Exchange can export the **CONTACT** property on VEVENT components. On import, any **CONTACT** properties outside of a VEVENT component are ignored.

V0159:

The specification states that an alternative representation for the property value can be specified that refers to a URI pointing to an alternate form, such as a **vCard**, for the contact information.

Exchange 2007, Exchange 2010

Exchange can import and export the *ALTREP* parameter.

2.2.83 [RFC2445] Section 4.8.4.3 Organizer

V0160:

The specification states that non-standard, language, common name, directory entry reference, and sent by property parameters can be specified on the **ORGANIZER** property.

Exchange 2007, Exchange 2010

Exchange exports the *CN* parameter on the **ORGANIZER** property. On import, Exchange imports the *CN* parameter and ignores all other parameters on the **ORGANIZER** property.

V0161:

The specification states that the **ORGANIZER** property **MUST** be specified in an iCalendar object that specifies a group scheduled calendar entity.

Exchange 2007, Exchange 2010

Exchange can import VEVENT components that represent meetings that do not have an **ORGANIZER** property.

C0014:

The specification states "This property **MUST** be specified in an iCalendar object that specifies the publication of a calendar user's busy time."

Exchange 2007, Exchange 2010

It is assumed that "an iCalendar object that specifies the publication of a calendar user's busy time" refers to a VFREEBUSY component. Exchange does not export or import VFREEBUSY components.

2.2.84 [RFC2445] Section 4.8.4.4 Recurrence ID

V0162:

The specification states that the default value type for **RECURRENCE-ID** is **DATE-TIME**, but it can be set to a **DATE** type.

Exchange 2007, Exchange 2010

Exchange can export **RECURRENCE-ID** as **DATE-TIME** or **DATE**. On import, it can import value types of **DATE-TIME** or **DATE**.

V0163:

The specification states that non-standard, value data type, time zone identifier, and recurrence identifier range property parameters can be specified on the **RECURRENCE-ID** property.

Exchange 2007, Exchange 2010

Exchange can only export the *VALUE* parameter on the **RECURRENCE-ID** property. On import, Exchange ignores all parameters except *VALUE* on the **RECURRENCE-ID** property.

V0164:

The specification states that the **RECURRENCE-ID** property can be specified in an iCalendar object containing a recurring calendar component.

Exchange 2007, Exchange 2010

Exchange exports **RECURRENCE-ID** on VEVENT components that represent exceptions to a recurring appointment/meeting. On import, Exchange treats VEVENT components with a **RECURRENCE-ID** as an exception to a recurring appointment/meeting.

C0015:

The specification states "If the value of the **DTSTART** property is a **DATE** type value, then the value MUST be the calendar date for the recurrence instance." It is unclear whether "the value" refers to **DTSTART** or **RECURRENCE-ID**. Furthermore, it is unclear whether "the calendar date for the recurrence instance" refers to the original start date/time of the instance, or the new start date/time of the instance.

Exchange 2007, Exchange 2010

Exchange exports **DTSTART** and **RECURRENCE-ID** as a **DATE-TIME**.

Exchange can import a **RECURRENCE-ID** of type **DATE-TIME** or **DATE**, provided that the value falls on the same day as the original start date of an instance in the recurrence (in the recurrence's time zone).

V0165:

The specification states that when the definition of the recurrence set for a calendar component changes, and hence the **SEQUENCE** property value changes, the **RECURRENCE-ID** for a given recurrence instance might also change.

Exchange 2007, Exchange 2010

This passage describes a calendar user agent action. Exchange is not a calendar user agent, and does no processing of recurrence changes.

V0166:

The specification states that the value of the *RANGE* parameter on the **RECURRENCE-ID** property can be set to "THISANDPRIOR" to indicate a range defined by the given instance and all prior instances, or it can be set to "THISANDFUTURE" to indicate a range defined by the given instance and all future instances.

Exchange 2007, Exchange 2010

Exchange does not export the *RANGE* parameter on the **RECURRENCE-ID** property, and ignores it on import.

2.2.85 [RFC2445] Section 4.8.4.5 Related To

V0167:

The specification describes the **RELATED-TO** property.

Exchange 2007, Exchange 2010

Exchange does not implement the **RELATED-TO** property. Exchange does not import or export the **RELATED-TO** property.

2.2.86 [RFC2445] Section 4.8.4.6 Uniform Resource Locator

V0168:

The specification describes the **URL** property.

Exchange 2007, Exchange 2010

Exchange does not implement the **URL** property. Exchange does not import or export the **URL** property.

2.2.87 [RFC2445] Section 4.8.4.7 Unique Identifier

V0169:

The specification states that non-standard property parameters can be specified on the **UID** property.

Exchange 2007, Exchange 2010

Exchange exports no parameters on the **UID** property. Exchange ignores all parameters on the **UID** property.

V0170:

The specification states that the **UID** property **MUST** be specified in **VEVENT**, **VTODO**, **VJOURNAL**, and **VFREEBUSY** components, and that calendaring and scheduling applications **MUST** generate this property in **VEVENT**, **VTODO**, and **VJOURNAL** components.

Exchange 2007, Exchange 2010

Exchange exports exactly one **UID** property on **VEVENT** components. Exchange does not export **VTODO**, **VJOURNAL**, or **VFREEBUSY** components.

On import, Exchange ignores all instances of **UID** outside of **VEVENT** components. If multiple **UID** instances are found in a **VEVENT**, or if no **UID** property is found, Exchange fails to import the iCalendar object.

V0171:

The specification states that the **UID** **MUST** be a globally unique identifier, and the generator of the identifier **MUST** guarantee that the identifier is unique.

Exchange 2007, Exchange 2010

On export, Exchange generates unique values for **UID**. On import, Exchange behavior is undefined if a non-unique **UID** value is imported.

V0172:

The specification states that the identifier is RECOMMENDED to be identical syntax to the [RFC822] addr-spec.

Exchange 2007, Exchange 2010

On export, Exchange exports any **UID** property that the calendar user agent sets.

On import, Exchange can import any valid **UID**.

V0173:

The specification states that though other algorithms will work, it is RECOMMENDED that the right-hand side of the **UID** contain some domain identifier such that the generator can guarantee the left-hand side within the scope of that domain.

Exchange 2007, Exchange 2010

On export, Exchange exports any **UID** property that the calendar user agent sets.

On import, Exchange can import any valid **UID**.

2.2.88 [RFC2445] Section 4.8.5.1 Exception Date/Times

V0175:

The specification states that the default value type of **EXDATE** is **DATE-TIME**, but it can be set to a **DATE** type.

Exchange 2007, Exchange 2010

On export, Exchange exports **EXDATE** as a **DATE-TIME**.

On import, Exchange can import **EXDATE** as either a **DATE-TIME** or **DATE**. If the parsed date is inconsistent with a recurrence value, Exchange fails to import the iCalendar object.

V0176:

The specification states that non-standard, value data type, and time zone identifier property parameters can be specified on the **EXDATE** property.

Exchange 2007, Exchange 2010

Exchange exports the *TZID* parameter.

Exchange can import the *TZID* parameter on the **EXDATE** property. All other parameters are ignored.

V0177:

The specification states that the **EXDATE** property can be specified in an iCalendar object that includes a recurring calendar appointment.

Exchange 2007, Exchange 2010

Exchange only exports **EXDATE** in VEVENT components. **EXDATE** instances outside of VEVENT components are ignored on import.

V0178:

The specification states that multiple instances of the **RRULE** and **EXRULE** properties can be specified to define more sophisticated recurrence sets.

Exchange 2007, Exchange 2010

See section 2.2.89 and section 2.2.90 for information regarding this statement.

V0179:

The specification states that the **EXDATE** property can be used to exclude the value specified in **DTSTART**. However, in such cases the original **DTSTART** date MUST still be maintained by the calendaring and scheduling system because the original **DTSTART** value has inherent usage dependencies by other properties.

Exchange 2007, Exchange 2010

Exchange can export **EXDATE** properties that correspond to the first instance of a recurrence. On import, Exchange can import **EXDATE** properties that correspond to the first instance of a recurrence if an **RRULE** is present. In this scenario, the original **DTSTART** is maintained.

2.2.89 [RFC2445] Section 4.8.5.2 Exception Rule

V0180:

The specification describes the **EXRULE** property.

Exchange 2007, Exchange 2010

Exchange does not export the **EXRULE** property. On import, if **EXRULE** is present, Exchange fails to import the iCalendar object.

2.2.90 [RFC2445] Section 4.8.5.3 Recurrence Date/Times

V0181:

The specification states that the default value type of **RDATE** is **DATE-TIME**, but it can be set to a **DATE** or **PERIOD** type.

Exchange 2007, Exchange 2010

Exchange exports **RDATE** as a **DATE-TIME**.

On import, Exchange can import an **RDATE** of type **DATE** or **DATE-TIME**. Exchange ignores **RDATE** properties of type **PERIOD**.

Exchange does not support the arbitrary creation of instances in recurrences. Exchange attempts to match **RDATE** values to **EXDATE** values and treat these pairs as moved instances conforming to the rules specified in [MS-OXCICAL] section 2.2.1.20.18. If an **RDATE** cannot be paired with an **EXDATE**, Exchange fails to import the iCalendar object.

V0182:

The specification states that non-standard, value data type, and time zone identifier property parameters can be specified on the **RDATE** property.

Exchange 2007, Exchange 2010

Exchange exports the *VALUE* parameter on **RDATE** if the value data type is **DATE**. Otherwise, Exchange exports the *TZID* parameter.

Exchange can import the *TZID* parameter on the **RDATE** property. All other parameters are ignored.

V0183:

The specification states that the **RDATE** property can be specified within VEVENT, VTODD, VJOURNAL, or VTIMEZONE components.

Exchange 2007, Exchange 2010

Exchange can export **RDATE** in VEVENT components. On import, Exchange ignores any **RDATE** properties outside of VEVENT components.

V0184:

The specification states that multiple instances of the **RRULE** and **EXRULE** properties can be specified to define more sophisticated recurrence sets.

Exchange 2007, Exchange 2010

See section 2.2.89 and section 0 for information regarding this statement.

2.2.91 [RFC2445] Section 4.8.5.4 Recurrence Rule

V0185:

The specification states that non-standard property parameters can be specified on the **RRULE** property.

Exchange 2007, Exchange 2010

Exchange does not export any parameters on the **RRULE** property. On import, Exchange ignores all parameters on the **RRULE** property.

V0186:

The specification states that the **RRULE** property can be specified one or more times within recurring VEVENT, VTODD, or VJOURNAL components. It can also be specified once in each STANDARD and DAYLIGHT sub-component of a VTIMEZONE component.

Exchange 2007, Exchange 2010

Exchange can export **RRULE** in VEVENT, STANDARD, and DAYLIGHT components. On import, Exchange ignores any **RDATE** properties outside of VEVENT, STANDARD, and DAYLIGHT components.

V0187:

The specification states that multiple instances of the **RRULE** and **EXRULE** properties can be specified to define more sophisticated recurrence sets.

Exchange 2007, Exchange 2010

Exchange exports at most one **RRULE** property per VEVENT, STANDARD, or DAYLIGHT component. On import, Exchange fails to import iCalendar objects with multiple **RRULE** properties in the same VEVENT, STANDARD, or DAYLIGHT component.

C0016:

The specification states "When used with a recurrence rule, the "**DTSTART**" and "**DTEND**" properties MUST be specified in local time and the appropriate set of "VTIMEZONE" calendar components MUST be included." This statement does not address recurrences that are expressed with floating time values.

Exchange 2007, Exchange 2010

Exchange exports **DTSTART** and **DTEND** as floating time for all-day recurring meetings or appointments. Exchange does not export VTIMEZONE components if the **DTSTART** and **DTEND** properties are expressed in floating time.

On import, Exchange imports the time zone specified in the **DTSTART** property as the time zone of the entire occurrence. If the **DTSTART** property is not present, Exchange uses the time zone specified in the **DTEND** property. If the property is specified in UTC time, UTC is used as the time zone. If the property is specified in floating time, the user's time zone is used.

C0017:

The specification states "Any modified duration for specific recurrences MUST be explicitly specified using the "**RDATE**" property." It is unclear if this applies to exceptions defined using a separate VEVENT component with a **RECURRENCE-ID** property.

Exchange 2007, Exchange 2010

Exchange does not export **PERIOD** values in the **RDATE** property. Instead, Exchange represents changes in the duration of an exception using a separate VEVENT component with the **RECURRENCE-ID** property.

See section 2.1.7 for import behavior.

V0188:

The specification uses ABNF notation to describe the format of the **RRULE** property.

Exchange 2007, Exchange 2010

On export, Exchange conforms to the ABNF specified in [RFC2445] section 4.8.5.4.

On import, Exchange only supports a subset of **RECUR** values. This subset is specified in [MS-OXCICAL] section 2.3 (and all sub-sections). Exchange attempts to convert unsupported **RECUR** values into a finite number of supported recurrences. If it cannot convert, Exchange fails to import the iCalendar object.

2.2.92 [RFC2445] Section 4.8.6.1 Action

V0189:

The specification states that non-standard property parameters can be specified on the **ACTION** property.

Exchange 2007, Exchange 2010

Exchange does not export any parameters on the **ACTION** property. All instances of the **ACTION** property are ignored on import.

V0190:

The specification states that the **ACTION** property MUST be specified once in a VALARM component.

Exchange 2007, Exchange 2010

Exchange ignores the **ACTION** property on import.

2.2.93 [RFC2445] Section 4.8.6.2 Repeat Count

V0191:

The specification describes the **REPEAT** property.

Exchange 2007, Exchange 2010

Exchange does not implement the **REPEAT** property. Exchange does not import or export the **REPEAT** property.

C0018:

The specification states "If the alarm triggers more than once, then this property MUST be specified along with the "**DURATION**" property."

Exchange 2007, Exchange 2010

The MUST in this statement is interpreted as being contingent on the alarm triggering more than once. Exchange does not export VALARM components that trigger more than once.

2.2.94 [RFC2445] Section 4.8.6.3 Trigger

V0192:

The specification states that the default value type of the **TRIGGER** property is **DURATION**, but that it can be set to **DATE-TIME**.

Exchange 2007, Exchange 2010

Exchange only exports the **TRIGGER** property as a **DURATION**. On import, Exchange can parse the **TRIGGER** property as a **DURATION** or a **DATE-TIME**.

V0193:

The specification states that non-standard, value data type, time zone identifier, and trigger relationship property parameters can be specified on the **TRIGGER** property.

Exchange 2007, Exchange 2010

Exchange exports no parameters on the **TRIGGER** property. Exchange ignores all parameters on the **TRIGGER** property on import.

V0194:

The specifications states that the **TRIGGER** property MUST be specified in VALARM components.

Exchange 2007, Exchange 2010

On import, Exchange ignores any VALARM components that do not have a valid **TRIGGER** property of type **DURATION**. If multiple **TRIGGER** properties are found, only the last instance of type **DURATION** is used.

V0195:

The specification states that the duration can be explicitly set to trigger from either the end or the start of the associated event or to-do with the *RELATED* parameter.

Exchange 2007, Exchange 2010

Exchange does not export the *RELATED* parameter on the **TRIGGER** property. On import, Exchange ignores the *RELATED* parameter on the **TRIGGER** property and treats all reminders as relative to the start of each instance of the event.

V0196:

The specification states that either a positive or negative duration may be specified for the **TRIGGER** property. An alarm with a positive duration is triggered after the associated start or end of the event or to-do. An alarm with a negative duration is triggered before the associated start or end of the event or to-do.

Exchange 2007, Exchange 2010

Exchange only exports the **TRIGGER** property with a negative or zero duration. On import, positive values are treated as negative values.

V0197:

The specification states that if a value type of **DATE-TIME** is specified, then the property value MUST be specified in UTC time format.

Exchange 2007, Exchange 2010

Exchange does not export the **TRIGGER** property as a **DATE-TIME**.

2.2.95 [RFC2445] Section 4.8.7.1 Date/Time Created

V0198:

The specification describes the **CREATED** property.

Exchange 2007, Exchange 2010

Exchange does not implement the **CREATED** property. Exchange does not import or export the **CREATED** property.

2.2.96 [RFC2445] Section 4.8.7.2 Date/Time Stamp

V0199:

The specification states that non-standard property parameters can be specified on the **DTSTAMP** property.

Exchange 2007, Exchange 2010

Exchange does not export any parameters on the **DTSTAMP** property. On import, Exchange ignores all parameters except *TZID* on the **DTSTAMP** property.

V0200:

The specification states that the **DTSTAMP** property MUST be specified within the *VEVENT*, *VTODO*, *VJOURNAL*, and *VFREEBUSY* components.

Exchange 2007, Exchange 2010

Exchange exports exactly one **DTSTAMP** property in each *VEVENT* component. Exchange does not export *VTODO*, *VJOURNAL*, or *VFREEBUSY* components.

On import, if the **DTSTAMP** property is not present on a *VEVENT* component, Exchange uses the time of import. If multiple **DTSTAMP** properties are found, Exchange ignores all but the last. Exchange ignores all **DTSTAMP** properties outside of a *VEVENT* component.

V0201:

The specification states that the **DTSTAMP** property value MUST be specified in UTC time format.

Exchange 2007, Exchange 2010

On import, Exchange can import **DTSTAMP** property values specified in UTC, local, or floating time format.

2.2.97 [RFC2445] Section 4.8.7.3 Last Modified

V0202:

The specification describes the **LAST-MODIFIED** property.

Exchange 2007, Exchange 2010

Exchange does not implement the **LAST-MODIFIED** property. Exchange does not import or export the **LAST-MODIFIED** property.

2.2.98 [RFC2445] Section 4.8.7.4 Sequence Number

V0203:

The specification states that non-standard property parameters can be specified on the **SEQUENCE** property.

Exchange 2007, Exchange 2010

Exchange does not export any parameters on the **SEQUENCE** property. On import, Exchange ignores all parameters on the **SEQUENCE** property.

V0204:

The specification states that the **SEQUENCE** property can be specified within the *VEVENT*, *VTODO*, or *VJOURNAL* components.

Exchange 2007, Exchange 2010

Exchange exports at most one **SEQUENCE** property on VEVENT components. Exchange does not export VTOD0 or VJOURNAL components.

On import, Exchange ignores all instances of the **SEQUENCE** property outside of VEVENT components.

C0019:

The specification states that the sequence number **MUST** be incremented when either the organizer changes any of the properties listed in [RFC2445] section 4.8.7.4, or whenever the organizer calendar user agent "makes changes to properties in the calendar component that the organizer deems will jeopardize the validity of the participation status of the attendees." This passage seems to indicate an intentional point of variability as to what kind of change would "jeopardize the validity of the participation status of attendees."

Exchange 2007, Exchange 2010

Exchange exports the **PidLidAppointmentSequence** property to the **SEQUENCE** property. Clients are responsible for incrementing this value as necessary. See [MS-OXCICAL] section 2.2.1.20.22 for details.

Exchange imports the **SEQUENCE** property to the **PidLidAppointmentSequence** property. Clients are responsible for handling out-of-order receipt of meeting updates. See [MS-OXCICAL] section 2.2.1.20.22 for details.

2.2.99 [RFC2445] Section 4.8.8.1 Non-standard Properties

V0205:

The specification states that non-standard and language property parameters can be specified on non-standard properties.

Exchange 2007, Exchange 2010

Exchange can import and export standard and non-standard property parameters on non-standard properties. For a list of the supported non-standard properties, see [MS-OXCICAL] section 2.2 (and all subsections).

V0206:

The specification states that non-standard properties can be specified within any calendar component.

Exchange 2007, Exchange 2010

Exchange can export and import non-standard properties on the VEVENT and VCALENDAR components. For a list of the supported non-standard properties, see [MS-OXCICAL] section 2.2 (and all subsections). Exchange ignores all non-standard properties outside of VEVENT or VCALENDAR components.

V0207:

The specification states that it is recommended that vendors concatenate onto the "X-" prefix for non-standard properties another short prefix text to identify the vendor.

Exchange 2007, Exchange 2010

Exchange exports several non-standard properties. Not all of them follow this recommendation. On import, Exchange ignores all unrecognized properties, whether or not they follow this

recommendation. Exchange imports some non-standard properties that do not follow this recommendation. For a list of the supported non-standard properties, see [MS-OXCICAL] section 2.2 (and all subsections).

V0208:

The specification states that the data type for non-standard properties is **TEXT**. Optionally, the data type can be any other valid data type.

Exchange 2007, Exchange 2010

Exchange exports some non-standard property types that have a data type other than **TEXT**. For a list of the supported non-standard properties, see [MS-OXCICAL] section 2.2 (and all subsections).

2.2.100 [RFC2445] Section 4.8.8.2 Request Status

V0209:

The specification describes the **REQUEST-STATUS** property.

Exchange 2007, Exchange 2010

Exchange does not implement the **REQUEST-STATUS** property. Exchange does not import or export the **REQUEST-STATUS** property.

2.2.101 [RFC2445] Section 6 Recommended Practices

V0210:

The specification states that content lines longer than 75 octets SHOULD be folded.

Exchange 2007, Exchange 2010

On import, Exchange can parse content lines regardless of their folded width.

V0211:

The specification states that a calendar entry with a **DTSTART** property but no **DTEND** property does not take up any time. It is intended to represent an event that is associated with a given calendar date and time of day, such as an anniversary. Since the event does not take up any time, it **MUST NOT** be used to record busy time no matter what the value for the **TRANSP** property.

Exchange 2007, Exchange 2010

On export, Exchange always exports both a **DTSTART** and a **DTEND** property. Exchange can create and export zero-duration events.

On import, Exchange fails to import VEVENT components with a **DTSTART** property but no **DTEND** or **DURATION** property.

V0212:

The specification states that when the **DTSTART** and **DTEND** properties (for VEVENT, VJOURNAL, and VFREEBUSY components) or the **DTSTART** and **DUE** properties (for VTOD0 components) have the same value data type, they SHOULD specify values in the same time format.

Exchange 2007, Exchange 2010

Within a given VEVENT component, Exchange exports **DTSTART** and **DTEND** as the same value data type in the same format. On import, Exchange can import different value data types and formats for **DTSTART** and **DTEND**.

Note: Exchange only supports floating time in the context of all-day appointments, which have a floating start time that occurs at midnight on one day, and a floating end time that occurs at midnight of another day. If a VEVENT has a floating **DTSTART** or **DTEND**, but is not an all-day appointment, the floating time is converted to local time in the user's time zone.

V0213:

The specification states when the combination of the **RRULE** and **RDATE** properties on an iCalendar object produces multiple instances having the same start date/time, they should be collapsed to and considered as one instance.

Exchange 2007, Exchange 2010

On export, Exchange can export an **RDATE** property that has the same start date/time as an instance of the recurrence.

On import, Exchange does not follow this recommendation. Exchange's handling of the **RDATE** property is documented in section 2.2.90 and [MS-OXCICAL] section 2.2.1.20.18.

V0214:

The specification states when a calendar user receives multiple requests for the same calendar component as a result of being on multiple mailing lists specified by **ATTENDEE** properties in the request, they SHOULD respond to only one of the requests. The calendar user SHOULD also specify (using the **MEMBER** parameter of the **ATTENDEE** property) which mailing list they are a member of.

Exchange 2007, Exchange 2010

Exchange does not enforce this behavior, leaving it to the calendar user agent.

Exchange does not export the **MEMBER** parameter, and ignores it on import.

V0215:

The specification states that an implementation can truncate a **SUMMARY** property value to 255 characters.

Exchange 2007, Exchange 2010

Exchange does not truncate the **SUMMARY** property on import or export.

V0216:

The specification states if seconds of the minute are not supported by an implementation, then a value of "00" SHOULD be specified for the seconds component in a time value.

Exchange 2007, Exchange 2010

Exchange can export non-zero seconds in **DATE-TIME** properties.

On import, Exchange supports non-zero seconds.

V0217:

The specification states if the *VALUE* parameter contains an unknown value type, it SHOULD be treated as **TEXT**.

Exchange 2007, Exchange 2010

Exchange does not export unknown value types in the *VALUE* parameter.

On import, Exchange generally ignores the *VALUE* parameter and attempts to parse values based on the default value type for the property. Exceptions to this were noted earlier in this document on a per-property basis. If a property fails to parse or if the resulting property is dissimilar to the default *VALUE* type (a **TEXT** value in a property with a default type of **DATE-TIME** for example), Exchange fails to import the iCalendar object.

V0218:

The specification states that **TZURL** values SHOULD NOT be specified as a FILE URI type.

Exchange 2007, Exchange 2010

Exchange does not export the **TZURL** property. On import, all instances of the **TZURL** property are ignored.

V0219:

The specification lists possible English values for the **CATEGORIES** property and states that categories can be specified in any registered language.

Exchange 2007, Exchange 2010

On export, Exchange allows the user to define categories with arbitrary names. Exchange can import any value for the **CATEGORIES** property. However, some processing is performed on the strings during import ([MS-OXCICAL] section 2.2.1.20.3).

V0220:

The specification lists possible English values for the **RESOURCES** property and states that categories can be specified in any registered language.

Exchange 2007, Exchange 2010

Exchange does not import or export the **RESOURCES** property.

2.2.102 [RFC2445] Section 7.2 Registration of New Properties

V0221:

The specification states that non-IANA properties can be used by bilateral agreement, provided the associated property names follow the "X-" convention.

Exchange 2007, Exchange 2010

Exchange does not export any non-IANA properties in a Content-Type header for a text/calendar MIME part.

On import, Exchange ignores any non-IANA properties in a Content-Type header for a text/calendar MIME part.

2.2.103 [RFC2446] Section 2 Interoperability Models

V0222:

The specification states that an application written to this specification may work with bindings for the store-and-forward transport, the real time transport, or both. Also note that iTIP could be bound to other transports.

Exchange 2007, Exchange 2010

Exchange can export certain types of iTIP data within a text/calendar MIME part of an email. The following table specifies what type of data can be exported.

iTIP Method	MIME Part
PUBLISH	Cannot export
REQUEST	Can export
REPLY	Can export
ADD	Cannot export
CANCEL	Can export
REFRESH	Cannot export
COUNTER	Can export
DECLINE-COUNTER	Cannot export

Exchange can import certain types of iTIP data from a text/calendar MIME part of an email. The following table specifies what type of data can be imported.

iTIP Method	MIME Part
PUBLISH	Can import (Treated as a REQUEST)
REQUEST	Can import
REPLY	Can import
ADD	Cannot import (rendered as raw content lines in message)

	body)
CANCEL	Can import
REFRESH	Cannot import (rendered as raw content lines in message body)
COUNTER	Can import
DECLINE-COUNTER	Cannot import (rendered as raw content lines in message body)

2.2.104 [RFC2446] Section 2.1.3 Acting on Behalf of Other Calendar Users

V0223:

The specification states that a role of CHAIR may be ascribed to one or more attendees. The "chair" and the organizer may or may not be the same calendar user.

Exchange 2007, Exchange 2010

Exchange does not support the role of CHAIR, and does not export an **ATTENDEE** property with a *ROLE* of CHAIR. On import, Exchange treats **ATTENDEE** properties with a *ROLE* of CHAIR as if *ROLE* were REQ-PARTICIPANT.

V0224:

The specification states that a sent-by parameter may be specified in either the organizer or attendee properties. When specified, the sent-by parameter indicates that the responding calendar user acted on behalf of the specified attendee or organizer.

Exchange 2007, Exchange 2010

Exchange exports the *SENT-BY* parameter if the sender is not the organizer or attendee.

2.2.105 [RFC2446] Section 2.1.4 Component Revisions

C0020:

The specification describes rules for incrementing the **SEQUENCE** property.

Exchange 2007, Exchange 2010

This passage describes a calendar user agent action. Exchange is not a calendar user agent, and does no processing of the **SEQUENCE** property.

2.2.106 [RFC2446] Section 2.1.5 Message Sequencing

C0021:

The specification describes rules for handling messages that arrive in an unexpected order.

Exchange 2007, Exchange 2010

This passage describes a calendar user agent action. Exchange is not a calendar user agent, and does no processing of out-of-order messages.

2.2.107 [RFC2446] Section 3 Application Protocol Elements

V0225:

The specification specifies various combinations of calendar components and the method types that are supported.

Exchange 2007, Exchange 2010

Exchange does not export VTODD, VJOURNAL, or VFREEBUSY components, and ignores them on import. Exchange's support for each method is specified in section 2.2.103 .

2.2.108 [RF2446] Section 3.1 Common Component Restriction Tables

V0226:

The specification specifies the allowed number of instances of components and properties in the following table:

Component/Property	Presence	
CALSCALE	0 or 1	
PRODID	1	
VERSION	1	Value MUST be "2.0"
X-PROPERTY	0+	

Exchange 2007, Exchange 2010

The following table specifies the number of instances Exchange exports for these components and properties:

Component/Property	Number of instances exported	Notes
CALSCALE	0	
PRODID	1	
VERSION	1	Value is "2.0"
X-PROPERTY	0-19	

The following table specifies the number of instances Exchange imports for these components and properties. If more instances are found, Exchange fails to import the iCalendar object.

Component/Property	Number of instances imported	Notes
CALSCALE	0	
PRODID	0-1	
VERSION	0	
X-PROPERTY	0+	

C0022:

The specification includes a property called TZOFFSET in the table of allowed components/properties for a VTIMEZONE component.

Exchange 2007, Exchange 2010

It is assumed that this is a typographical error. No property called TZOFFSET is defined in [RFC2445]. The requirement for this property is ignored.

V0227:

The specification specifies the allowed number of instances of components and properties in a VTIMEZONE component in the following table:

Component/Property	Presence	
-----	-----	-----
VTIMEZONE	0+	MUST be present if any date/time refers to timezone
DAYLIGHT	0+	MUST be one or more of either STANDARD or DAYLIGHT
COMMENT	0 or 1	
DTSTART	1	MUST be local time format
RDATE	0+	if present RRULE MUST NOT be present
RRULE	0+	if present RDATE MUST NOT be present
TZNAME	0 or 1	
TZOFFSET	1	
TZOFFSETFROM	1	


```

TZOFFSETTO 1
X-PROPERTY 0+
LAST-MODIFIED 0 or 1
STANDARD 0+ MUST be one or more of either STANDARD or
DAYLIGHT
COMMENT 0 or 1
DTSTART 1 MUST be local time format
RDATE 0+ if present RRULE MUST NOT be present
RRULE 0+ if present RDATE MUST NOT be present
TZNAME 0 or 1
TZOFFSETFROM 1
TZOFFSETTO 1
X-PROPERTY 0+
TZID 1
TZURL 0 or 1
X-PROPERTY 0+

```

Exchange 2007, Exchange 2010

The following table specifies the number of instances Exchange exports for these components and properties in a VTIMEZONE component:

Component/Property	Number of instances exported	Notes
VTIMEZONE	0+	Is present if a TZID refers to this timezone
•DAYLIGHT	0-1	
••COMMENT	0	
••DTSTART	1	Value is in local time
••RDATE	0	
••RRULE	1	

••TZNAME	0	
••TZOFFSETFROM	1	
••TZOFFSETTO	1	
••X-PROPERTY	0	
•LAST-MODIFIED	0	
•STANDARD	1	
••COMMENT	0	
••DTSTART	1	Value is in local time
••RDATE	0	
••RRULE	0-1	
••TZNAME	0	
••TZOFFSETFROM	1	
••TZOFFSETTO	1	
••X-PROPERTY	0	
•TZID	1	
•TZURL	0	
•X-PROPERTY	0	

The following table specifies the number of instances Exchange imports for these components and properties in a VTIMEZONE component. If more instances are found, Exchange fails to import the iCalendar object. If fewer instances than required are found, Exchange fails to import the iCalendar object.

Component/Property	Number of instances imported	Notes
--------------------	------------------------------	-------

VTIMEZONE	0+	If not present for a TZID , a default time zone is used.
•DAYLIGHT	0-1	VTIMEZONE components that contain no STANDARD or DAYLIGHT components are ignored.
••COMMENT	0	
••DTSTART	0-1	Values in UTC are treated as local time.
••RDATE	0	
••RRULE	0-1	
••TZNAME	0	
••TZOFFSETFROM	1	
••TZOFFSETTO	1	
••X-PROPERTY	0	
•LAST-MODIFIED	0	
•STANDARD	0-1	VTIMEZONE components that contain no STANDARD or DAYLIGHT components are ignored.
••COMMENT	0	
••DTSTART	1	Values in UTC are treated as local time.
••RDATE	0	
••RRULE	0-1	
••TZNAME	0	

••TZOFFSETFROM	1	
••TZOFFSETTO	1	
••X-PROPERTY	0	
•TZID	1	
•TZURL	0	
•X-PROPERTY	0	

V0228:

The specification specifies the allowed number of instances of components and properties in a VALARM component in the following table:

Component/Property Presence

```

-----
VALARM                0+
  ACTION              1
  ATTACH              0+
  DESCRIPTION         0 or 1
  DURATION            0 or 1  if present REPEAT MUST be present
  REPEAT              0 or 1  if present DURATION MUST be present
  SUMMARY             0 or 1
  TRIGGER             1
  X-PROPERTY         0+

```

Exchange 2007, Exchange 2010

The following table specifies the number of instances Exchange exports for these components and properties in a VALARM component:

Component/Property	Number of instances exported	Notes
VALARM	0-1	
•ACTION	1	

•ATTACH	0	
•DESCRIPTION	1	
•DURATION	0	
•REPEAT	0	
•SUMMARY	0	
•TRIGGER	1	
•X-PROPERTY	0	

The following table specifies the number of instances Exchange imports for these components and properties in a VALARM component. If more instances are found, Exchange fails to import the iCalendar object. If fewer instances than required are found, Exchange fails to import the iCalendar object.

Component/Property	Number of instances imported	Notes
VALARM	0-1	
•ACTION	0	
•ATTACH	0	
•DESCRIPTION	0	
•DURATION	0	
•REPEAT	0	
•SUMMARY	0	
•TRIGGER	1	
•X-PROPERTY	0	

2.2.109 [RFC2446] Section 3.2 Methods for VEVENT Calendar Components

V0229:

The specification lists the methods that are defined for VEVENT components.

Exchange 2007, Exchange 2010

Exchange's support for the listed methods are specified in section 2.2.103 .

2.2.110 [RFC2446] Section 3.2.1 PUBLISH

V0230:

The specification describes the PUBLISH value for the **METHOD** parameter.

Exchange 2007, Exchange 2010

Exchange imports and exports PUBLISH-type iCalendar objects as REQUEST-type iCalendar objects. See section 2.2.111 for details.

2.2.111 [RFC2446] Section 3.2.2 REQUEST

V0231:

The specification states that for the REQUEST method, multiple VEVENT components in a single iCalendar object are only permitted for components with the same **UID** property.

Exchange 2007, Exchange 2010

On import, Exchange imports REQUEST-type iCalendar objects with multiple VEVENT components provided the following conditions are met:

All VEVENT components have the same **UID** value.

Exactly one VEVENT component has an **RRULE** property and no **RECURRENCE-ID** property.

All other VEVENT components have a **RECURRENCE-ID** property.

C0023:

The specification lists a VALARM component in the table of allowed components and properties in a REQUEST-type iCalendar object. The indentation of the VALARM component is the same as the VEVENT component.

Exchange 2007, Exchange 2010

It is assumed that the author intended to indent the VALARM component to visually indicate that it is a sub-component of the VEVENT.

V0232:

The specification specifies the allowed number of instances of components and properties in a REQUEST-type iCalendar object in the following table:

Component/Property Presence

METHOD	1	MUST be "REQUEST"
VEVENT	1+	All components MUST have the same UID
ATTENDEE	1+	
DTSTAMP	1	
DTSTART	1	
ORGANIZER	1	
SEQUENCE	0 or 1	MUST be present if value is greater than 0, MAY be present if 0
SUMMARY	1	Can be null
UID	1	
ATTACH	0+	
CATEGORIES	0 or 1	This property may contain a list of values
CLASS	0 or 1	
COMMENT	0 or 1	
CONTACT	0+	
CREATED	0 or 1	
DESCRIPTION	0 or 1	Can be null
DTEND	0 or 1	if present DURATION MUST NOT be present
DURATION	0 or 1	if present DTEND MUST NOT be present
EXDATE	0+	
EXRULE	0+	
GEO	0 or 1	
LAST-MODIFIED	0 or 1	
LOCATION	0 or 1	
PRIORITY	0 or 1	
RDATE	0+	
RECURRENCE-ID	0 or 1	only if referring to an instance of a recurring calendar component. Otherwise it MUST NOT be present.
RELATED-TO	0+	

REQUEST-STATUS 0+
 RESOURCES 0 or 1 This property MAY contain a list of values
 RRULE 0+
 STATUS 0 or 1 MAY be one of TENTATIVE/CONFIRMED
 TRANSP 0 or 1
 URL 0 or 1
 X-PROPERTY 0+

 VALARM 0+
 VTIMEZONE 0+ MUST be present if any date/time refers to
 a timezone

 X-COMPONENT 0+
 VFREEBUSY 0
 VJOURNAL 0
 VTODO 0

Exchange 2007, Exchange 2010

The following table specifies the number of instances Exchange exports for these components and properties in a REQUEST-type iCalendar object:

Component/Property	Number of instances exported	Notes
METHOD	1	Is set to "REQUEST".
VEVENT	1+	All components have the same UID value.
•ATTENDEE	0+	See section 2.1.9 .
•DTSTAMP	1	
•DTSTART	1	
•ORGANIZER	1	
•SEQUENCE	0-1	Can be 0.

•SUMMARY	1	Can be an empty string.
•UID	1	
•ATTACH	0+	
•CATEGORIES	0-1	Can be a list.
•CLASS	0-1	
•COMMENT	0	
•CONTACT	0+	
•CREATED	0-1	
•DESCRIPTION	0-1	Can be an empty string.
•DTEND	1	
•DURATION	0	
•EXDATE	0-1	
•EXRULE	0	
•GEO	0	
•LAST-MODIFIED	0-1	
•LOCATION	0-1	
•PRIORITY	0-1	
•RDATE	0-2	
•RECURRENCE-ID	0-1	
•RELATED-TO	0	

•REQUEST-STATUS	0	
•RESOURCES	0	
•RRULE	0-1	
•STATUS	0	
•TRANSP	0-1	
•URL	0	
•X-PROPERTY	0-34	
•VALARM	0-1	
VTIMEZONE	0+	A VTIMEZONE is exported for each unique TZID parameter in the iCalendar object.
X-COMPONENT	0	
VFREEBUSY	0	
VJOURNAL	0	
VTODO	0	

The following table specifies the number of instances Exchange imports for these components and properties in a REQUEST-type iCalendar object. If more instances are found, Exchange fails to import the iCalendar object. If fewer instances than required are found, Exchange fails to import the iCalendar object.

Component/Property	Number of instances exported	Notes
METHOD	1	MUST be set to "REQUEST".
VEVENT	1+	All components MUST have the same UID value.

•ATTENDEE	0+	
•DTSTAMP	0-1	
•DTSTART	0-1	
•ORGANIZER	0-1	
•SEQUENCE	0-1	Can import 0.
•SUMMARY	0-1	Can import an empty string.
•UID	0-1	
•ATTACH	0+	
•CATEGORIES	0+	Can import a list.
•CLASS	0-1	
•COMMENT	0	
•CONTACT	0+	
•CREATED	0	
•DESCRIPTION	0-1	Can import an empty string.
•DTEND	0-1	If DTEND and DURATION are present, DTEND is used.
•DURATION	0-1	If DTEND and DURATION are present, DTEND is used.
•EXDATE	0+	
•EXRULE	0	
•GEO	0	

•LAST-MODIFIED	0	
•LOCATION	0-1	
•PRIORITY	0-1	
•RDATE	0+	
•RECURRENCE-ID	0-1	Assumed to refer to an instance of a recurring appointment.
•RELATED-TO	0	
•REQUEST-STATUS	0	
•RESOURCES	0	
•RRULE	0-1	
•STATUS	0-1	Can import "TENTATIVE" or "CONFIRMED".
•TRANSP	0-1	
•URL	0	
•X-PROPERTY	0+	
•VALARM	0-1	
VTIMEZONE	0+	If a TZID references an undeclared VTIMEZONE, a default time zone is used.
X-COMPONENT	0	
VFREEBUSY	0	
VJOURNAL	0	

VTODO	0	
-------	---	--

2.2.112 [RFC2446] Section 3.2.2.1 Rescheduling an Event

V0233:

The specification states that the REQUEST method may be used to reschedule an event.

Exchange 2007, Exchange 2010

Exchange can export REQUEST-type iCalendar objects to reschedule an event. Exchange can import REQUEST-type iCalendar objects that reschedule an event. However, the actual rescheduling is left to the calendar user agent.

2.2.113 [RFC2446] Section 3.2.2.2 Updating or Reconfirmation of an Event

V0234:

The specification states that the REQUEST method may be used to update or reconfirm an event.

Exchange 2007, Exchange 2010

Exchange can export REQUEST-type iCalendar objects to update or reconfirm an event. Exchange can import REQUEST-type iCalendar objects that update or reconfirm an event.

2.2.114 [RFC2446] Section 3.2.2.3 Delegating an Event to Another CU

C0024:

The specification describes methodology to support allowing attendees to delegate their presence at an event to another calendar user. It states that implementations may support or restrict delegation as they see fit. It then describes a number of required behaviors (using MUST).

Exchange 2007, Exchange 2010

It is assumed that the "MUST" statements in this section are contingent on the implementation choosing to support delegation. Exchange does not implement the type of delegation described in [RFC2446] section 3.2.2.3.

V0235:

The specification states that the delegator MUST send a REPLY method to the organizer with the delegator's **ATTENDEE** property *PARTSTAT* parameter set to "delegated". In addition, the *DELEGATED-TO* parameter MUST be included with the calendar address of the delegate.

Exchange 2007, Exchange 2010

Exchange does not implement the type of delegation described in [RFC2446] section 3.2.2.3. On import, Exchange fails to import REPLY-type iCalendar objects where the **ATTENDEE** property has a *PARTSTAT* parameter of "DELEGATED", and ignores all instances of the *DELEGATED-TO* parameter.

2.2.115 [RFC2446] Section 3.2.2.5 Sending on Behalf of the Organizer

V0236:

The specification states that using the "sent-by" parameter, a calendar user could send an updated VEVENT REQUEST. In the case where one calendar user sends on behalf of another calendar user, the attendee responses are still directed back towards the calendar user designated as the organizer.

Exchange 2007, Exchange 2010

Exchange exports the *SENT-BY* parameter if one user sends on behalf of another user.

2.2.116 [RFC2446] Section 3.2.2.6 Forwarding to an Uninvited CU

C0025:

The specification describes an attendee forwarding a meeting invitation to another calendar user.

Exchange 2007, Exchange 2010

This passage describes a calendar user agent action. Exchange is not a calendar user agent, and does no special processing of forwarded meeting invitations.

2.2.117 [RFC2446] Section 3.2.2.7 Updating Attendee Status

C0026:

The specification describes rules methods of updating attendee status.

Exchange 2007, Exchange 2010

This passage describes a calendar user agent action. Exchange is not a calendar user agent, and does no updating of attendee status.

2.2.118 [RFC2446] Section 3.2.3 REPLY

V0237:

The specification states that when a REPLY is used to provide a delegation response, the "Delegator" SHOULD include the calendar address of the "Delegate" on the "delegated-to" property parameter of the "Delegator's" **ATTENDEE** property. The "Delegate" SHOULD include the calendar address of the "Delegator" on the "delegated-from" property parameter of the "Delegate's" **ATTENDEE** property.

Exchange 2007, Exchange 2010

Exchange does not support this type of delegation and does not export or import the *DELEGATED-TO* or *DELEGATED-FROM* property parameters.

V0238:

The specification states that the REPLY method may be used to respond to an unsuccessful REQUEST method. Depending on the value of the **REQUEST-STATUS** property no scheduling action may have been performed.

Exchange 2007, Exchange 2010

Exchange does not export the **REQUEST-STATUS** property. On import, Exchange ignores the **REQUEST-STATUS** property.

V0239:

The specification states that an attendee can include a message to the organizer in a REPLY using the **COMMENT** property.

Exchange 2007, Exchange 2010

Exchange exports any text from the **ATTENDEE** to the **ORGANIZER** in the **COMMENT** property. On import, Exchange imports the **COMMENT** property as text from the **ATTENDEE** to the **ORGANIZER**.

V0240:

The specification states that the organizer may receive a REPLY from one calendar user on behalf of another calendar user by using the *SENT-BY* parameter.

Exchange 2007, Exchange 2010

Exchange exports the *SENT-BY* parameter if one user sends on behalf of another user. On import, Exchange imports the *SENT-BY* parameter.

C0027:

The specification lists a VALARM component in the table of allowed components and properties in a REPLY-type iCalendar object. The indentation of the VALARM component is the same as the VEVENT component.

Exchange 2007, Exchange 2010

It is assumed that the author intended to indent the VALARM component to visually indicate that it is a sub-component of the VEVENT.

V0241:

The specification specifies the allowed number of instances of components and properties in a REPLY-type iCalendar object in the following table:

Component/Property	Presence	
METHOD	1	MUST be "REPLY"
VEVENT	1+	All components MUST have the same UID
ATTENDEE	1	MUST be the address of the Attendee replying.
DTSTAMP	1	
ORGANIZER	1	
RECURRENCE-ID	0 or 1	only if referring to an instance of a recurring calendar component. Otherwise it must NOT be present.
UID	1	MUST be the UID of the original REQUEST

SEQUENCE	0 or 1	MUST if non-zero, MUST be the sequence number of the original REQUEST. MAY be present if 0.
ATTACH	0+	
CATEGORIES	0 or 1	This property may contain a list of values
CLASS	0 or 1	
COMMENT	0 or 1	
CONTACT	0+	
CREATED	0 or 1	
DESCRIPTION	0 or 1	
DTEND	0 or 1	if present DURATION MUST NOT be present
DTSTART	0 or 1	
DURATION	0 or 1	if present DTEND MUST NOT be present
EXDATE	0+	
EXRULE	0+	
GEO	0 or 1	
LAST-MODIFIED	0 or 1	
LOCATION	0 or 1	
PRIORITY	0 or 1	
RDATE	0+	
RELATED-TO	0+	
RESOURCES	0 or 1	This property MAY contain a list of values
REQUEST-STATUS	0+	
RRULE	0+	
STATUS	0 or 1	
SUMMARY	0 or 1	
TRANSP	0 or 1	
URL	0 or 1	
X-PROPERTY	0+	
VTIMEZONE	0 or 1	MUST be present if any date/time refers to a timezone

X-COMPONENT 0+

VALARM 0

VFREEBUSY 0

VJOURNAL 0

VTODO 0

Exchange 2007, Exchange 2010

The following table specifies the number of instances Exchange exports for these components and properties in a REPLY-type iCalendar object:

Component/Property	Number of instances exported	Notes
METHOD	1	Is set to "REPLY".
VEVENT	1	Exchange only exports one VEVENT in a REPLY.
•ATTENDEE	1	Is set to the address of the sender.
•DTSTAMP	1	
•ORGANIZER	0	See section 2.1.10 .
•RECURRENCE-ID	0-1	
•UID	1	Same value as the original REQUEST
•SEQUENCE	0-1	Used to resolve out-of-order delivery of messages.
•ATTACH	0+	
•CATEGORIES	0-1	Can be a list.
•CLASS	0-1	
•COMMENT	0-1	

•CONTACT	0-1	
•CREATED	0-1	
•DESCRIPTION	0-1	
•DTEND	1	
•DTSTART	1	
•DURATION	0	
•EXDATE	0-1	
•EXRULE	0	
•GEO	0	
•LAST-MODIFIED	0-1	
•LOCATION	0-1	
•PRIORITY	0-1	
•RDATE	0-2	
•RELATED-TO	0	
•RESOURCES	0	
•REQUEST-STATUS	0	
•RRULE	0-1	
•STATUS	0	
•TRANSP	0-1	
•URL	0	

•X-PROPERTY	0	
•VALARM	0-1	
VTIMEZONE	0-1	A VTIMEZONE is exported for each unique <i>TZID</i> parameter in the iCalendar object.
X-COMPONENT	0	
VFREEBUSY	0	
VJOURNAL	0	
VTODO	0	

The following table specifies the number of instances Exchange imports for these components and properties in a REPLY-type iCalendar object. If more instances are found, Exchange fails to import the iCalendar object. If fewer instances than required are found, Exchange fails to import the iCalendar object.

Component/Property	Number of instances imported	Notes
METHOD	1	MUST be set to "REPLY".
VEVENT	1	Exchange only imports the first VEVENT.
• ATTENDEE	1+	Exactly one ATTENDEE property MUST have the <i>PARTSTAT</i> parameter set or the import fails.
• DTSTAMP	0-1	
• ORGANIZER	0-1	
• RECURRENCE-ID	0-1	
• UID	1	

•SEQUENCE	0-1	Used to resolve out-of-order delivery of messages.
•ATTACH	0+	
•CATEGORIES	0+	Can import a list.
•CLASS	0-1	
•COMMENT	0-1	
•CONTACT	0+	
•CREATED	0	
•DESCRIPTION	0-1	
•DTEND	0-1	If both DTEND and DURATION are specified, DTEND is used.
•DTSTART	1	
•DURATION	0-1	If both DTEND and DURATION are specified, DTEND is used.
•EXDATE	0+	
•EXRULE	0	
•GEO	0	
•LAST-MODIFIED	0	
•LOCATION	0-1	
•PRIORITY	0-1	
•RDATE	0+	

•RELATED-TO	0	
•RESOURCES	0	
•REQUEST-STATUS	0	
•RRULE	0-1	
•STATUS	0-1	
•TRANSP	0-1	
•URL	0	
•X-PROPERTY	0+	
•VALARM	0-1	
VTIMEZONE	0+	If a TZID references an undeclared VTIMEZONE, a default time zone is used.
X-COMPONENT	0	
VFREEBUSY	0	
VJOURNAL	0	
VTODO	0	

2.2.119 [RFC2446] Section 3.2.4 ADD

V0242:

The specification describes the ADD value for the **METHOD** parameter.

Exchange 2007, Exchange 2010

Exchange does not export ADD-type iCalendar objects. Exchange fails to import ADD-type iCalendar objects.

2.2.120 [RFC2446] Section 3.2.5 CANCEL

C0028:

The specification describes an option for cancelling a sequence of instances of a recurring VEVENT calendar component by specifying multiple **RECURRENCE-ID** properties. This contradicts the table of allowed components and properties specified later in [RFC2446] section 3.2.5. The table specifies a value of "0 or 1" in the Presence column.

Exchange 2007, Exchange 2010

Exchange conforms to the "0 or 1" requirement. Exchange does not export CANCEL-type iCalendar objects with multiple **RECURRENCE-ID** components, and ignores any **RECURRENCE-ID** properties except the last on import.

V0243:

The specification states that there are two options for cancelling a sequence of instances of a recurring VEVENT calendar component:

(a) The **RECURRENCE-ID** property for an instance in the sequence **MUST** be specified with the *RANGE* property parameter value of THISANDPRIOR (or THISANDFUTURE) to indicate cancellation of the specified VEVENT calendar component and all instances before (or after).

(b) Individual recurrence instances may be cancelled by specifying multiple **RECURRENCE-ID** properties corresponding to the instances to be cancelled.

Exchange 2007, Exchange 2010

Exchange does not export the *RANGE* parameter. Exchange does not export more than one **RECURRENCE-ID** property per VEVENT component.

On import, Exchange fails to import iCalendar objects with the *RANGE* parameter. Exchange ignores all instances of the **RECURRENCE-ID** property except the last.

C0029:

The specification lists a VALARM component in the table of allowed components and properties in a CANCEL-type iCalendar object. The indentation of the VALARM component is the same as the VEVENT component.

Exchange 2007, Exchange 2010

It is assumed that the author intended to indent the VALARM component to visually indicate that it is a sub-component of the VEVENT.

V0244:

The specification specifies the allowed number of instances of components and properties in a CANCEL-type iCalendar object in the following table:

Component/Property	Presence	
METHOD	1	MUST be "CANCEL"
VEVENT	1+	All must have the same UID
ATTENDEE	0+	MUST include all "Attendees" being removed the event. MUST include all "Attendees" if

the entire event is cancelled.

DTSTAMP	1	
ORGANIZER	1	
SEQUENCE	1	
UID	1	MUST be the UID of the original REQUEST
COMMENT	0 or 1	
ATTACH	0+	
CATEGORIES	0 or 1	This property may contain a list of values
CLASS	0 or 1	
CONTACT	0+	
CREATED	0 or 1	
DESCRIPTION	0 or 1	
DTEND	0 or 1	if present DURATION MUST NOT be present
DTSTART	0 or 1	
DURATION	0 or 1	if present DTEND MUST NOT be present
EXDATE	0+	
EXRULE	0+	
GEO	0 or 1	
LAST-MODIFIED	0 or 1	
LOCATION	0 or 1	
PRIORITY	0 or 1	
RDATE	0+	
RECURRENCE-ID	0 or 1	MUST be present if referring to one or more or more recurring instances. Otherwise it MUST NOT be present
RELATED-TO	0+	
RESOURCES	0 or 1	
RRULE	0+	
STATUS	0 or 1	MUST be set to CANCELLED. If uninviting specific "Attendees" then MUST NOT be included.

SUMMARY	0 or 1	
TRANSP	0 or 1	
URL	0 or 1	
X-PROPERTY	0+	
REQUEST-STATUS	0	
VTIMEZONE	0+	MUST be present if any date/time refers to a timezone
X-COMPONENT	0+	
VTODO	0	
VJOURNAL	0	
VFREEBUSY	0	
VALARM	0	

Exchange 2007, Exchange 2010

The following table specifies the number of instances Exchange exports for these components and properties in a CANCEL-type iCalendar object:

Component/Property	Number of instances exported	Notes
METHOD	1	Is set to "CANCEL".
VEVENT	1	Exchange only exports one VEVENT in a CANCEL.
• ATTENDEE	1+	One ATTENDEE property is exported for each recipient of the cancellation.
• DTSTAMP	1	
• ORGANIZER	1	
• SEQUENCE	1	
• UID	1	
• COMMENT	0-1	

•ATTACH	0+	
•CATEGORIES	0-1	Can be a list.
•CLASS	0-1	
•CONTACT	0+	
•CREATED	0-1	
•DESCRIPTION	0-1	
•DTEND	1	
•DTSTART	1	
•DURATION	0	
•EXDATE	0-1	
•EXRULE	0	
•GEO	0	
•LAST-MODIFIED	0-1	
•LOCATION	0-1	
•PRIORITY	0-1	
•RDATE	0-2	
•RECURRENCE-ID	0-1	
•RELATED-TO	0	
•RESOURCES	0	
•RRULE	0-1	

•STATUS	0	
•SUMMARY	0-1	
•TRANSP	0-1	
•URL	0	
•X-PROPERTY	0+	
•REQUEST-STATUS	0	
•VALARM	0	
VTIMEZONE	0+	A VTIMEZONE is exported for each unique TZID parameter in the iCalendar object.
X-COMPONENT	0	
VTODO	0	
VJOURNAL	0	
VFREEBUSY	0	

The following table specifies the number of instances Exchange imports for these components and properties in a CANCEL-type iCalendar object. If more instances are found, Exchange fails to import the iCalendar object. If fewer instances than required are found, Exchange fails to import the iCalendar object.

Component/Property	Number of instances imported	Notes
METHOD	1	MUST be set to "CANCEL".
VEVENT	1	Exchange only imports the first VEVENT in a CANCEL.
•ATTENDEE	0+	ATTENDEE is only used in rendering the message to the user, it does not affect

		scheduling logic.
•DTSTAMP	0-1	
•ORGANIZER	0-1	
•SEQUENCE	0-1	
•UID	1	
•COMMENT	0-1	
•ATTACH	0+	
•CATEGORIES	0+	Can import a list.
•CLASS	0-1	
•CONTACT	0+	
•CREATED	0	
•DESCRIPTION	0-1	
•DTEND	0-1	If both DTEND and DURATION are specified, DTEND is used.
•DTSTART	1	
•DURATION	0-1	If both DTEND and DURATION are specified, DTEND is used.
•EXDATE	0+	
•EXRULE	0	
•GEO	0	
•LAST-MODIFIED	0	

•LOCATION	0-1	
•PRIORITY	0-1	
•RDATE	0+	
•RECURRENCE-ID	0-1	
•RELATED-TO	0	
•RESOURCES	0	
•RRULE	0-1	
•STATUS	0-1	STATUS is only used in rendering the message to the user, it does not affect scheduling logic.
•SUMMARY	0-1	
•TRANSP	0-1	
•URL	0	
•X-PROPERTY	0+	
•REQUEST-STATUS	0	
•VALARM	0	
VTIMEZONE	0+	If a <i>TZID</i> parameter references an undefined VTIMEZONE, a default time zone is used.
X-COMPONENT	0	
VTODO	0	
VJOURNAL	0	

VFREEBUSY	0	
-----------	---	--

2.2.121 [RFC2446] Section 3.2.6 REFRESH

V0245:

The specification describes the REFRESH value for the **METHOD** parameter.

Exchange 2007, Exchange 2010

Exchange does not export REFRESH-type iCalendar objects. On import, Exchange treats REFRESH-type iCalendar objects as PUBLISH-type iCalendar objects.

C0030:

The specification lists a VALARM component in the table of allowed components and properties in a COUNTER-type iCalendar object. The indentation of the VALARM component is the same as the VEVENT component.

Exchange 2007, Exchange 2010

It is assumed that the author intended to indent the VALARM component to visually indicate that it is a sub-component of the VEVENT.

C0031:

The table in [RFC2446] section 3.2.7 contains a value of "1" for the **SEQUENCE** property in the VEVENT component of a CANCEL-type iCalendar object. However, this is contradicted by the comment in the table: "MUST be present if value greater than 0, MAY be present if 0."

Exchange 2007, Exchange 2010

Exchange conforms to the comment in the table. It is assumed that the value of "1" was intended to be "0 or 1".

V0246:

The specification specifies the allowed number of instances of components and properties in a COUNTER-type iCalendar object in the following table:

Component/Property	Presence	
METHOD	1	MUST be "COUNTER"
VEVENT	1	
DTSTAMP	1	
DTSTART	1	
ORGANIZER	1	MUST be the "Organizer" of the original event
SEQUENCE	1	MUST be present if value is greater than 0,

		MAY be present if 0
SUMMARY	1	Can be null
UID	1	MUST be the UID associated with the REQUEST being countered
ATTACH	0+	
ATTENDEE	0+	Can also be used to propose other "Attendees"
CATEGORIES	0 or 1	This property may contain a list of values
CLASS	0 or 1	
COMMENT	0 or 1	
CONTACT	0+	
CREATED	0 or 1	
DESCRIPTION	0 or 1	
DTEND	0 or 1	if present DURATION MUST NOT be present
DURATION	0 or 1	if present DTEND MUST NOT be present
EXDATE	0+	
EXRULE	0+	
GEO	0 or 1	
LAST-MODIFIED	0 or 1	
LOCATION	0 or 1	
PRIORITY	0 or 1	
RDATE	0+	
RECURRENCE-ID	0 or 1	MUST only if referring to an instance of a recurring calendar component. Otherwise it MUST NOT be present.
RELATED-TO	0+	
REQUEST-STATUS	0+	
RESOURCES	0 or 1	This property may contain a list of values
RRULE	0+	
STATUS	0 or 1	Value must be one of CONFIRMED/TENATIVE/ CANCELLED

TRANSP	0 or 1	
URL	0 or 1	
X-PROPERTY	0+	
VALARM	0+	
VTIMEZONE	0+	MUST be present if any date/time refers to a timezone
X-COMPONENT	0+	
VTODO	0	
VJOURNAL	0	
VFREEBUSY	0	

Exchange 2007, Exchange 2010

The following table specifies the number of instances Exchange exports for these components and properties in a COUNTER-type iCalendar object:

Component/Property	Number of instances exported	Notes
METHOD	1	Is set to "COUNTER".
VEVENT	1	
•DTSTAMP	1	
•DTSTART	1	
•ORGANIZER	0	See section 2.1.11 .
•SEQUENCE	0-1	
•SUMMARY	0-1	Can be an empty string.
•UID	1	Set to the same value as the UID in the original REQUEST.
•ATTACH	0+	
•ATTENDEE	1	Set to the address of the sender. Exchange does not support counter-proposal of

		new attendees.
•CATEGORIES	0-1	Can be a list
•CLASS	0-1	
•COMMENT	0-1	
•CONTACT	0-1	
•CREATED	0-1	
•DESCRIPTION	0-1	
•DTEND	1	
•DURATION	0	
•EXDATE	0-1	
•EXRULE	0	
•GEO	0	
•LAST-MODIFIED	0-1	
•LOCATION	0-1	
•PRIORITY	0-1	
•RDATE	0-2	
•RECURRENCE-ID	0-1	
•RELATED-TO	0	
•REQUEST-STATUS	0	
•RESOURCES	0	

•RRULE	0-1	
•STATUS	0	
•TRANSP	0-1	
•URL	0	
•X-PROPERTY	0	
•VALARM	0-1	
VTIMEZONE	0-1	A VTIMEZONE is exported for each unique TZID parameter in the iCalendar object.
X-COMPONENT	0	
VTODO	0	
VJOURNAL	0	
VFREEBUSY	0	

The following table specifies the number of instances Exchange imports for these components and properties in a COUNTER-type iCalendar object. If more instances are found, Exchange fails to import the iCalendar object. If fewer instances than required are found, Exchange fails to import the iCalendar object.

Component/Property	Number of instances imported	Notes
METHOD	1	MUST be set to "COUNTER".
VEVENT	1	
•DTSTAMP	0-1	
•DTSTART	1	
•ORGANIZER	0-1	ORGANIZER is only used to

		render the message.
•SEQUENCE	0-1	
•SUMMARY	0-1	Can be an empty string.
•UID	1	
•ATTACH	0+	
•ATTENDEE	1+	Exactly one ATTENDEE property MUST have the <i>PARTSTAT</i> parameter set, or the import fails. All other attendees are ignored.
•CATEGORIES	0+	Can import a list.
•CLASS	0-1	
•COMMENT	0-1	
•CONTACT	0+	
•CREATED	0	
•DESCRIPTION	0-1	
•DTEND	0-1	If both DTEND and DURATION are specified, DTEND is used.
•DURATION	0-1	If both DTEND and DURATION are specified, DTEND is used.
•EXDATE	0+	
•EXRULE	0	
•GEO	0	

•LAST-MODIFIED	0	
•LOCATION	0-1	
•PRIORITY	0-1	
•RDATE	0+	
•RECURRENCE-ID	0-1	
•RELATED-TO	0	
•REQUEST-STATUS	0	
•RESOURCES	0	
•RRULE	0-1	
•STATUS	0-1	STATUS is only used to render the message.
•TRANSP	0-1	
•URL	0	
•X-PROPERTY	0+	
•VALARM	0-1	
VTIMEZONE	0+	If a TZID references an undeclared VTIMEZONE, a default time zone is used.
X-COMPONENT	0	
VTODO	0	
VJOURNAL	0	
VFREEBUSY	0	

2.2.122 [RFC2446] Section 3.2.8 DECLINECOUNTER

V0247:

The specification describes the DECLINECOUNTER value for the **METHOD** parameter.

Exchange 2007, Exchange 2010

Exchange does not export DECLINECOUNTER-type iCalendar objects. Exchange fails to import DECLINECOUNTER-type iCalendar objects.

2.2.123 [RFC2446] Section 3.3 Methods for VFREEBUSY Components

V0248:

The specification defines property sets for the methods that are applicable to VFREEBUSY components.

Exchange 2007, Exchange 2010

Exchange does not export VFREEBUSY components. Exchange ignores VFREEBUSY components on import.

2.2.124 [RFC2446] Section 3.3.1 PUBLISH

V0249:

The specification describes the use of PUBLISH with VFREEBUSY components.

Exchange 2007, Exchange 2010

Exchange does not export VFREEBUSY components. Exchange ignores VFREEBUSY components on import. For PUBLISH-type iCalendars objects, this is imported as an empty calendar.

2.2.125 [RFC2446] Section 3.3.2 REQUEST

V0250:

The specification describes the use of REQUEST with VFREEBUSY components.

Exchange 2007, Exchange 2010

Exchange does not export VFREEBUSY components. Exchange ignores VFREEBUSY components on import. For REQUEST-type iCalendar objects, the import fails.

2.2.126 [RFC2446] Section 3.3.3 REPLY

V0251:

The specification describes the use of REPLY with VFREEBUSY components.

Exchange 2007, Exchange 2010

Exchange does not export VFREEBUSY components. Exchange ignores VFREEBUSY components on import. For REPLY-type iCalendar objects, the import fails.

2.2.127 [RFC2446] Section 3.4 Methods for VTODD Components

V0252:

The specification defines property sets for the methods that are applicable to VTODD components.

Exchange 2007, Exchange 2010

Exchange does not export VTODD components. Exchange ignores VTODD components on import.

2.2.128 [RFC2446] Section 3.4.1 PUBLISH

V0253:

The specification describes the use of PUBLISH with VTODD components.

Exchange 2007, Exchange 2010

Exchange does not export VTODD components. Exchange ignores VTODD components on import. For PUBLISH-type iCalendars objects, this is imported as an empty calendar.

2.2.129 [RFC2446] Section 3.4.2 REQUEST

V0254:

The specification describes the use of REQUEST with VTODD components.

Exchange 2007, Exchange 2010

Exchange does not export VTODD components. Exchange ignores VTODD components on import. For REQUEST-type iCalendar objects, the import fails.

2.2.130 [RFC2446] Section 3.4.3 REPLY

V0255:

The specification describes the use of REPLY with VTODD components.

Exchange 2007, Exchange 2010

Exchange does not export VTODD components. Exchange ignores VTODD components on import. For REPLY-type iCalendar objects, the import fails.

2.2.131 [RFC2446] Section 3.4.4 ADD

V0256:

The specification describes the use of ADD with VTODD components.

Exchange 2007, Exchange 2010

Exchange does not export VTODD components. Exchange ignores VTODD components on import. For ADD-type iCalendars objects, this is imported as an empty calendar.

2.2.132 [RFC2446] Section 3.4.5 CANCEL

V0257:

The specification describes the use of CANCEL with VTODD components.

Exchange 2007, Exchange 2010

Exchange does not export VTODD components. Exchange ignores VTODD components on import. For CANCEL-type iCalendar objects, the import fails.

2.2.133 [RFC2446] Section 3.4.6 REFRESH

V0258:

The specification describes the use of REFRESH with VTODD components.

Exchange 2007, Exchange 2010

Exchange does not export VTODD components. Exchange ignores VTODD components on import. For REFRESH-type iCalendars objects, this is imported as an empty calendar.

2.2.134 [RFC2446] Section 3.4.7 COUNTER

V0259:

The specification describes the use of COUNTER with VTODD components.

Exchange 2007, Exchange 2010

Exchange does not export VTODD components. Exchange ignores VTODD components on import. For COUNTER-type iCalendar objects, the import fails.

2.2.135 [RFC2446] Section 3.4.8 DECLINECOUNTER

V0260:

The specification describes the use of DECLINECOUNTER with VTODD components.

Exchange 2007, Exchange 2010

Exchange does not export VTODD components. Exchange ignores VTODD components on import. For DECLINECOUNTER-type iCalendars objects, this is imported as an empty calendar.

2.2.136 [RFC2446] Section 3.5 Methods for VJOURNAL Components

V0261:

The specification defines property sets for the methods that are applicable to VJOURNAL components.

Exchange 2007, Exchange 2010

Exchange does not export VJOURNAL components. Exchange ignores VJOURNAL components on import.

2.2.137 [RFC2446] Section 3.5.1 PUBLISH

V0262:

The specification describes the use of PUBLISH with VJOURNAL components.

Exchange 2007, Exchange 2010

Exchange does not export VJOURNAL components. Exchange ignores VJOURNAL components on import. For PUBLISH-type iCalendars objects, this is imported as an empty calendar.

2.2.138 [RFC2446] Section 3.5.2 ADD

V0263:

The specification describes the use of ADD with VJOURNAL components.

Exchange 2007, Exchange 2010

Exchange does not export VJOURNAL components. Exchange ignores VJOURNAL components on import. For ADD-type iCalendar objects, this is imported as an empty calendar.

2.2.139 [RFC2446] Section 3.5.3 CANCEL

V0264:

The specification describes the use of CANCEL with VJOURNAL components.

Exchange 2007, Exchange 2010

Exchange does not export VJOURNAL components. Exchange ignores VJOURNAL components on import. For CANCEL-type iCalendar objects, the import fails.

2.2.140 [RFC2446] Section 3.6 Status Replies

V0265:

The specification lists the possible values of **REQUEST-STATUS**.

Exchange 2007, Exchange 2010

Exchange does not export the **REQUEST-STATUS** property. Exchange ignores all instances of the **REQUEST-STATUS** property on import.

2.2.141 [RFC2446] Section 3.7.1 Working with Recurrence Instances

V0266:

The specification states that implementations that choose to maintain per-instance properties (such as **ATTENDEE** property *PARTSTAT* parameter) may do so. However, the protocol does not require per-instance recognition unless the instance itself must be renegotiated.

Exchange 2007, Exchange 2010

Exchange stores recurring appointments as a single parent object, with child objects created as needed when a single instance is referenced.

2.2.142 [RFC2446] Section 3.7.2 Attendee Property Considerations

V0267:

The specification recommends a general approach to finding a calendar user in an attendee list as follows:

1. Search for the calendar user in the attendee list where "TYPE=INDIVIDUAL".
2. Failing (1) look for attendees where "TYPE=GROUP" or "TYPE=UNKNOWN", then check if the calendar user is a member of one or more of these groups.
3. Failing (2) the client may ignore or accept the request as the calendar user wishes.

Exchange 2007, Exchange 2010

Exchange does not export the *CUTYPE* parameter with a value of "INDIVIDUAL", "GROUP", or "UNKNOWN". Exchange does not export the *MEMBER* parameter..

2.2.143 [RFC2446] Section 3.7.3 X-Tokens

V0268:

The specification states that to make iCalendar objects extensible, new property types MAY be inserted into components.

Exchange 2007, Exchange 2010

Exchange does export X-Tokens as specified in [MS-OXCICAL]. On import, Exchange ignores all X-Tokens that it does not implement as specified in [MS-OXCICAL].

V0269:

The specification states that a client is not required to make sense of X-Tokens.

Exchange 2007, Exchange 2010

Exchange ignores all X-Tokens that it does not implement as specified in [MS-OXCICAL].

V0270:

The specification states that clients are not required to save X-Tokens or use them in replies.

Exchange 2007, Exchange 2010

Exchange does not save or use X-Tokens that it does not implement as specified in [MS-OXCICAL].

2.2.144 [RFC2446] Section 5.1 Partial Implementation

V0271:

The specification describes how methods and properties SHOULD fallback in applications that do not support the complete protocol. If a method or property is not addressed in this section, it may be ignored.

Exchange 2007, Exchange 2010

Exchange treats methods not addressed in this section as PUBLISH. Exchange ignores properties not implemented by Exchange and not addressed in this section.

2.2.145 [RFC2446] Section 5.1.1 Event-Related Fallbacks

C0032:

The tables in [RFC2446] Section 5.1.1 use the term "Required" in the Fallback column. However, the section prior ([RFC2446 Section 5.1) states that the tables describe how applications SHOULD fallback.

Exchange 2007, Exchange 2010

Since the tables follow SHOULD, the information in the tables is interpreted as a recommendation rather than a requirement.

V0272:

The specification uses the following table to specify fallbacks for values of the **METHOD** parameter.

Method	Fallback
PUBLISH	Required
REQUEST	PUBLISH
REPLY	Required
ADD	Required
CANCEL	Required
REFRESH	Required
COUNTER	Reply with Not Supported
DECLINECOUNTER	Required if EVENT-COUNTER is implemented; otherwise reply with Not Supported

Exchange 2007, Exchange 2010

The following table specifies how Exchange falls back when encountering an unimplemented **METHOD**:

Method	Fallback
PUBLISH	Implemented
REQUEST	Implemented
REPLY	Implemented
ADD	Not implemented, fall back to PUBLISH
CANCEL	Implemented
REFRESH	Not implemented, fall back to PUBLISH

COUNTER	Implemented
DECLINECOUNTER	Not implemented, fall back to PUBLISH

V0273:

The specification uses the following table to specify fallbacks for properties in the VCALENDAR component:

```

iCalendar
Property          Fallback
-----
CALSCALE          Ignore; assume GREGORIAN
PROPID            Ignore
METHOD            Required as described in the Method list above
VERSION           Ignore

```

Exchange 2007, Exchange 2010

The following table specifies how Exchange falls back when encountering an unimplemented VCALENDAR property:

Property	Fallback
CALSCALE	Not implemented, treated as "GREGORIAN".
PROPID	Some values implemented, others treated as "".
METHOD	Some values implemented, others treated as "PUBLISH".
VERSION	Some values implemented, others treated as "2.0".

V0274:

The specification uses the following table to specify fallbacks for event-related components:

```

Event-Related
Components      Fallback
-----
VALARM          Reply with Not Supported
VTIMEZONE       Required if any DateTime value refers to a time zone.

```

Exchange 2007, Exchange 2010

The following table specifies how Exchange falls back when encountering an unimplemented event-related component:

Component	Fallback
VALARM	Some configurations implemented, others ignored.
VTIMEZONE	Some configurations implemented, others ignored.

V0275:

The specification uses the following table to specify fallbacks for component properties:

Component	
Property	Fallback
-----	-----
ATTACH	Ignore
ATTENDEE	Required if EVENT-REQUEST is not implemented; otherwise reply with Not Supported
CATEGORIES	Ignore
CLASS	Ignore
COMMENT	Ignore
COMPLETED	Ignore
CONTACT	Ignore
CREATED	Ignore
DESCRIPTION	Required
DURATION	Reply with Not Supported
DTSTAMP	Required
DTSTART	Required
DTEND	Required
EXDATE	Ignore
EXRULE	Ignore Reply with Not Supported. If implemented, VTIMEZONE MUST also be implemented.
GEO	Ignore
LAST-MODIFIED	Ignore

LOCATION	Required
ORGANIZER	Ignore
PRIORITY	Ignore
RELATED-TO	Ignore
RDATE	Ignore
RRULE	Ignore. The first instance occurs on the DTSTART property. If implemented, VTIMEZONE MUST also be implemented.
RECURRENCE-ID	Required if RRULE is implemented; otherwise Ignore
REQUEST-STATUS	Required
RESOURCES	Ignore
SEQUENCE	Required
STATUS	Ignore
SUMMARY	Ignore
TRANSP	Required if FREEBUSY is implemented; otherwise Ignore
URL	Ignore
UID	Required
X-	Ignore

Exchange 2007, Exchange 2010

The following table specifies how Exchange falls back when encountering an unimplemented component property:

Component Property	Fallback
ATTACH	Not implemented, ignored
ATTENDEE	Implemented
CATEGORIES	Implemented
CLASS	Some values implemented, others treated as "PUBLIC"
COMMENT	Some cases implemented, others ignored

COMPLETED	Not implemented, ignored
CONTACT	Implemented
CREATED	Not implemented, ignored
DESCRIPTION	Implemented
DURATION	Implemented
DTSTAMP	Implemented
DTSTART	Implemented
DTEND	Implemented
EXDATE	Implemented
EXRULE	Not implemented, ignored
GEO	Not implemented, ignored
LAST-MODIFIED	Not implemented, ignored
LOCATION	Implemented
ORGANIZER	Implemented
PRIORITY	Implemented
RELATED-TO	Not implemented, ignored
RDATE	Implemented
RRULE	Some cases implemented, others cause the VEVENT to be ignored
RECURRENCE-ID	Implemented
REQUEST-STATUS	Not implemented, ignored

RESOURCES	Not implemented, ignored
SEQUENCE	Implemented
STATUS	Partially implemented, approximated into the Busy Status property of an appointment or meeting
SUMMARY	Implemented
TRANSP	Implemented
URL	Not implemented, ignored
X-	Some X-props implemented, others ignored

2.2.146 [RFC2446] Section 5.1.2 Free/Busy-Related Fallbacks

V0276:

The specification lists fallbacks for VFREEBUSY components.

Exchange 2007, Exchange 2010

Exchange does not export or import VFREEBUSY components.

2.2.147 [RFC2446] Section 5.1.2 To-Do-Related Fallbacks

V0277:

The specification lists fallbacks for VTODDO components.

Exchange 2007, Exchange 2010

Exchange does not export or import VTODDO components.

2.2.148 [RFC2446] Section 5.1.2 Journal-Related Fallbacks

V0278:

The specification lists fallbacks for VJOURNAL components.

Exchange 2007, Exchange 2010

Exchange does not export or import VJOURNAL components.

2.2.149 [RFC2446] Section 5.2.2 Unexpected Reply from an Unknown Delegate

V0279:

The specification states that when an attendee delegates an item to another calendar user they **MUST** send a **REPLY** method to the organizer using the **ATTENDEE** properties to indicate that the request was delegated and to whom.

Exchange 2007, Exchange 2010

Exchange does not export *DELEGATED-TO* or *DELEGATED-FROM*. Exchange ignores *DELEGATED-TO* and *DELEGATED-FROM* parameters on import.

2.2.150 [RFC2446] Section 6.1.6 Procedural Alarms

V0280:

The specification states that the **REQUEST** methods for **VEVENT** and **VTODO** calendar components **MAY** contain **VALARM** components. **VALARM** components may be of type "PROCEDURE" and **MAY** have an attachment containing an executable program. Implementations that incorporate these types of alarms are subject to any virus or malicious attack that may occur as a result of executing the attachment.

Exchange 2007, Exchange 2010

Exchange does not export **VALARM** components with an **ACTION** property value of "PROCEDURE". Exchange ignores the **ACTION** property on **VALARM** components.

2.2.151 [RFC2446] Section 6.1.7 Unauthorized Refresh Requests

V0281:

The specification states that it is possible for an organizer to receive a **REFRESH** request from someone who is not an attendee of an event or to-do. Only attendees of an event are authorized to receive replies to **REFRESH** requests. Replying to such requests to anyone who is not an attendee may be a security problem.

Exchange 2007, Exchange 2010

Exchange does not export iCalendar objects with a **METHOD** of "REFRESH".

On import, Exchange does not implement the **REFRESH** method and treats all such requests as **PUBLISH**.

2.2.152 [RFC2446] Section 6.2 Recommendations

V0282:

The specification states that for an application where the information is sensitive or critical and the network is subject to a high probability of attack, iTIP transactions **SHOULD** be encrypted. This may be accomplished using public key technology, specifically Security Multiparts for MIME [RFC1847] in the iTIP transport binding.

Exchange 2007, Exchange 2010

Exchange exports iCalendar data in clear text. Sending iTIP messages that are signed or encrypted via SMIME is not supported. Exchange can send an SMIME email that an .ics attachment.

On import, Exchange can receive digitally signed or encrypted SMIME email, which can contain an .ics attachment. Receiving iTIP messages that are signed or encrypted via SMIME is not supported.

2.2.153 [RFC2446] Section 6.2.1 Use of [RFC1847] to Secure iTIP Transactions

V0283:

The specification states that iTIP transport bindings **MUST** provide a mechanism based on Security Multiparts for MIME [RFC1847] to enable authentication of the sender's identity, and privacy and integrity of the data being transmitted.

Exchange 2007, Exchange 2010

Exchange exports iCalendar data in clear text. Sending iTIP messages that are signed or encrypted via SMIME is not supported. Exchange can send an SMIME email that an .ics attachment.

On import, Exchange can receive digitally signed or encrypted SMIME email, which can contain an .ics attachment. Receiving iTIP messages that are signed or encrypted via SMIME is not supported.

V0284:

The specification states that implementations **MAY** provide controls for users to disable the capability to use SMIME for authentication and data integrity.

Exchange 2007, Exchange 2010

By default, all mail sent from Exchange is unsigned and unencrypted. Exchange has no options to disable receipt of SMIME e-mail.

2.2.154 [RFC2446] Section 6.2.2 Implementation Controls

V0285:

The specification states that the threat of malicious procedural alarms **SHOULD** be mitigated by a calendar system that uses this protocol by providing controls that may be used to disallow procedural alarms in iTIP transactions and/or remove all alarms from the object before delivery to the recipient.

Exchange 2007, Exchange 2010

Exchange ignores the **ACTION** property on import and treats all VALARM components as reminders [MS-OXORMDR].

V0286:

The specification states that the threat of unauthorized REFRESH requests **SHOULD** be mitigated by a calendar system that uses this protocol by providing controls or alerts that allow the calendar user to decide whether or not the request should be honored.

Exchange 2007, Exchange 2010

Exchange does not implement the REFRESH method, and treats all such iCalendar data as PUBLISH.

V0287:

The specification states that an implementation **MAY** decide to maintain, for audit or historical purposes, calendar users who were part of an attendee list and who were subsequently uninvited.

Exchange 2007, Exchange 2010

Exchange does not maintain a list of uninvited attendees.

2.2.155 [RFC2447] Section 1.1 Related Memos

C0033:

The specification describes how iMIP relates to iCal [RFC2445] and iTIP [RFC2446].

Exchange 2007, Exchange 2010

iTIP is interpreted as being the use of iCalendar format to represent scheduling objects. iMIP is interpreted as a subset of iTIP, specifically a method for transmitting iTIP data over e-mail without any embedding. In particular, iCalendar files attached to an e-mail message is not considered in the scope of the iMIP protocol.

In some places, [RFC2447] does not imply that there is a difference between iMIP data and iCalendar files attached to an e-mail message. Exchange renders these two scenarios differently, as detailed in the following sections.

2.2.156 [RFC2447] Section 2.1 MIME Media Type

V0288:

The specification states that a **MIME entity** containing content information formatted according to [RFC2447] will be referenced as a "text/calendar" content type.

Exchange 2007, Exchange 2010

On export, Exchange exports iMIP data in MIME parts with a Content-Type of "text/calendar". .ics files attached to e-mail messages have a Content-Type of "application/octet-stream".

On import, MIME parts that contain iMIP data MUST have a Content-Type header of "text/calendar" in order for Exchange to treat them as iMIP data.

2.2.157 [RFC2447] Section 2.2.1 Authorization

V0289:

The specification states that implementations of iMIP SHOULD verify the authenticity of an iCalendar object before taking any action.

Exchange 2007, Exchange 2010

Exchange processes iMIP messages automatically upon receipt, without verification.

V0290:

The specification states it is left to implementations to provide mechanisms for the calendar users to decide if a calendar user has authorized someone to work on their behalf.

Exchange 2007, Exchange 2010

Exchange processes iMIP messages automatically upon receipt, without user interaction.

2.2.158 [RFC2447] Section 2.2.2 Authentication

V0291:

The specification states that authentication can be performed using an implementation of [RFC1847] "multipart/signed" that supports public/private key certificates.

Exchange 2007, Exchange 2010

Exchange exports iCalendar data in clear text. Sending iTIP messages that are signed or encrypted via SMIME is not supported. Exchange can send an SMIME email that contains an .ics attachment.

On import, Exchange can receive digitally signed or encrypted SMIME email, which can contain an .ics attachment. Receiving iTIP messages that are signed or encrypted via SMIME is not supported.

2.2.159 [RFC2447] Section 2.2.3 Confidentiality

V0292:

The specification states that to ensure confidentiality using iMIP implementations should utilize [RFC1847]-compliant encryption.

Exchange 2007, Exchange 2010

Exchange exports iCalendar data in clear text. Sending iTIP messages that are signed or encrypted via SMIME is not supported. Exchange can send an SMIME email that contains an .ics attachment.

On import, Exchange can receive digitally signed or encrypted SMIME email, which can contain an .ics attachment. Receiving iTIP messages that are signed or encrypted via SMIME is not supported.

2.2.160 [RFC2447] Section 2.3 [RFC822] Addresses

V0293:

The specification states that the calendar address specified within the **ATTENDEE** property in an iCalendar object **MUST** be a fully-qualified [RFC822] address specification for the corresponding organizer or attendee.

Exchange 2007, Exchange 2010

Exchange does not parse **ATTENDEE** properties with invalid calendar addresses, and fails to import the iCalendar object.

2.2.161 [RFC2447] Section 2.4 Content Type

V0294:

The specification states that a MIME body part containing content information that conforms to [RFC2447] **MUST** have an [RFC2045] "Content-Type" value of "text/calendar".

Exchange 2007, Exchange 2010

On export, Exchange exports iMIP data in MIME parts with a Content-Type of "text/calendar". .ics files attached to e-mail messages have a Content-Type of "application/octet-stream".

On import, MIME parts that contain iMIP data **MUST** have a Content-Type header of "text/calendar" in order for Exchange to treat them as iMIP data.

V0295:

The specification states that the [RFC2045] "Content-Type" header field must also include the type parameter "*method*", and the value **MUST** be the same as the value of the **METHOD** calendar property within the iCalendar object.

Exchange 2007, Exchange 2010

On import, if the value of the "*method*" parameter of the Content-Type header does not match the value of the **METHOD** property in the iCalendar object, the value of the **METHOD** property in the iCalendar object is used.

V0296:

The specification states that a MIME message containing multiple iCalendar objects with different method values must be further encapsulated with a "multipart/mixed" MIME entity.

Exchange 2007, Exchange 2010

Exchange does not export multiple iCalendar objects as iMIP data in one MIME message. In "multipart/mixed" MIME messages, Exchange only exports iMIP data as the first child of the "multipart/mixed" MIME part (or a descendant of that first child). iCalendar data located elsewhere in a "multipart/mixed" MIME message is intended to be an .ics attachment.

On import, Exchange only searches the first child (and its descendants) of a "multipart/mixed" MIME part for iMIP data. Any iCalendar data found elsewhere in a "multipart/mixed" MIME message is treated as an attachment.

V0297:

The specification states that the optional "component" parameter defines the iCalendar component type contained within the iCalendar object.

Exchange 2007, Exchange 2010

Exchange does not export the "component" parameter of the Content-Type header, and ignores it on import.

V0298:

The specification states that in order to permit the information in the scheduling message to be understood by MIME user agents that do not support the "text/calendar" content type, scheduling messages SHOULD be sent with an alternative, human-readable form of the information.

Exchange 2007, Exchange 2010

If the meeting has an attachment, Exchange exports the iMIP data as a child in a "multipart/alternative" MIME part that also contains a plain-text representation of the data.

On import, Exchange uses the first "text/html" child of a "multipart/alternative" parent to replace the **DESCRIPTION** property of the iMIP data.

2.2.162 [RFC2447] Section 2.5 Content-Transfer-Encoding

V0299:

The specification states that a transfer encoding SHOULD be used for iCalendar objects containing any characters that are not part of the US-ASCII character set.

Exchange 2007, Exchange 2010

Exchange exports iMIP data with a Content-Transfer-Encoding value of "7bit" if the text is comprised solely of US-ASCII characters, and "8bit" otherwise.

On import, Exchange ignores the Content-Transfer-Encoding header and assumes that the iMIP data is encoded in UTF-8.

2.2.163 [RFC2447] Section 2.6 Content-Disposition

V0300:

The specification states that implementations may wish to include a "Content-Disposition" property to define a file name.

Exchange 2007, Exchange 2010

Exchange does not export a Content-Disposition property on iMIP data.

On import, if the Content-Disposition property is set to "attachment" (case-insensitive) on iMIP data, Exchange treats it as an attachment and does not process it as iMIP data.

2.2.164 [RFC2447] Section 3 Security Considerations

V0301:

The specification states that implementations MAY provide a means for users to disable signing and encrypting.

Exchange 2007, Exchange 2010

Exchange by default sends email without signing or encrypting, and cannot sign or encrypt iMIP messages. Exchange has no means to disable receipt of signed or encrypted messages.

2.2.165 [RFC2447] Section 4.1 Single Component with an ATTACH Property

C0034:

The specification provides a sample message to show how an iCalendar object references an attachment.

Exchange 2007, Exchange 2010

It is assumed this section is about iMIP messages with the following MIME structure:

1. text/calendar

Exchange can import and export iMIP messages with this MIME structure.

2.2.166 [RFC2447] Section 4.2 Using Multipart Alternative for Low Fidelity Clients

C0035:

The specification provides a sample message to show how a client can emit a multipart message that includes both a plain text version as well as the full iCalendar object.

Exchange 2007, Exchange 2010

It is assumed this section is about iMIP messages with the following structure:

1. multipart/alternative
 - a. text/plain
 - b. text/calendar

Exchange does not export messages with this MIME structure. Exchange can import messages with this MIME structure.

2.2.167 [RFC2447] Section 4.3 Single Component With An ATTACH Property and Inline Attachment

C0036:

The specification provides a sample message to show how a message containing an iCalendar object references an attached document.

Exchange 2007, Exchange 2010

It is assumed this section is about iMIP messages with the following structure:

1. multipart/related
 - a. text/calendar
 - b. Attachment MIME part

Exchange does not export iMIP data with this MIME structure. Exchange can import messages with this MIME structure. However, since the text/calendar part has a Content-Disposition of "attachment", the part is treated as an attachment and is not be treated as an iMIP message.

2.2.168 [RFC2447] Section 4.4 Multiple Similar Components

C0037:

The specification provides a sample message to show how multiple iCalendar components of the same type can be included in the iCalendar object when the **METHOD** is the same for each component.

Exchange 2007, Exchange 2010

It is assumed this section is about iMIP messages with the following structure:

1. text/calendar (with multiple VEVENT components)

Exchange does not export multiple VEVENT components in an iMIP message, and does not export the PUBLISH method in iMIP messages.

Exchange fails to import this iCalendar object because it has multiple VEVENT components.

2.2.169 [RFC2447] Section 4.5 Multiple Mixed Components

C0038:

The specification provides a sample message to show how different component types must be encapsulated in separate iCalendar objects.

Exchange 2007, Exchange 2010

It is assumed this section is about iMIP messages with the following structure:

1. multipart/mixed
 - a. text/calendar

b. text/calendar

Exchange does not export multiple iMIP parts in the same MIME message.

On import, Exchange only searches for iMIP parts in the first child (and its descendants) of a multipart/mixed MIME part. The second text/calendar part of this message would be treated as an attachment. Furthermore, since Content-Disposition is set to "attachment" on the first text/calendar part, it is also treated as an attachment.

2.2.170 [RFC2447] Section 4.6 Multiple Mixed Components

C0039:

The specification provides a sample message that shows the format of a message using multipart/related encapsulation to contain an iCalendar object that contains an **ATTACH** property with a CID reference.

Exchange 2007, Exchange 2010

It is assumed this section is about iMIP messages with the following structure:

1. multipart/related
 - a. multipart/alternative
 - i. text/plain
 - ii. text/calendar
 - b. Attachment MIME part

Exchange exports iMIP data with attachments using the following MIME structure:

1. multipart/mixed
 - a. multipart/alternative
 - i. text/plain
 - ii. text/html
 - iii. text/calendar
 - b. Attachment MIME part

Exchange can import iMIP messages with the MIME structure shown by the sample. However, since the text/calendar part has a Content-Disposition of "attachment", the part is treated as an attachment and is not treated as an iMIP message.

2.2.171 [RFC2447] Section 5.1 Use of Content and Message IDs

V0302:

The specification states that it is strongly recommended that iMIP implementations include all referenced messages and body parts in a single MIME entity.

Exchange 2007, Exchange 2010

Exchange does not export MID URIs. Exchange only exports CID URIs for attachments that are included in the same MIME message as the iCalendar object.

On import, Exchange ignores all MID and CID URIs. Attachments in the same MIME message as an iMIP message are attached to the resulting meeting request, response, cancellation, or counter-proposal.

2.3 Error Handling

Unless otherwise specified above, on import Exchange creates an .ics file attachment containing the iCalendar text for any components that it fails to import.

2.4 Security

There are no additional security considerations beyond what are discussed in section 2.2.4 , section 2.2.152 , section 2.2.153 , section 2.2.154 , and section 2.2.164 .

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