[MS-STANXICAL]:
Exchange iCalendar Standards Compliance

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Revision Summary

Date	Revision History	Revision Class	Comments
07/15/2009	1.0.0	Major	Initial Availability.
10/01/2008	1.1.0	Minor	Updated IP notice.
04/10/2009	2.0.0	Major	Updated applicable product releases.
07/15/2009	3.0.0	Major	Revised and edited technical content.
11/04/2009	3.1.0	Minor	Updated the technical content.

Table of Contents

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 terms are specific to this document:

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

1.2 Normative References

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

[MS-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.

1.3 Informative References

None.

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
charset	This parameter is honored on import and is set to the appropriate character set on export.
method	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 *method* parameter with any other value, or if the *method* parameter is not present, the MIME part is not imported as an iCalendar entity.
component	This parameter is ignored on import. It is not set on export.
optinfo	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 Consideration	Mitigation
SPOOFING	The only anti-spoofing measures implemented by Exchange are digital signatures. However, Exchange accepts and processes unsigned mail, including "text/calendar"

Security Consideration	Mitigation
	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 Delegatees

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 *FBYTPE* 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 iCalender 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 VTODO component.

Exchange 2007, Exchange 2010

Exchange does not export VTODO 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 VTODO 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 VTODO 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 VTODO 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.

V0069:

The specification states that an alarm in a VTODO 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 VTODO 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, PRODID, 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 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, VTODO, 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, VTODO, 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, VTODO, 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, VTODO, 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, VTODO, 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, VTODO, 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, VTODO, 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* parameters 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 DAYLIGHT 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 VEVENTs 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, VTODO, 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 VTODO 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 VTODO 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 ignores 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 **PidNameCalendarTransparent** property directly to the TRANSP property. On import, Exchange imports the value of the TRANSP property directly to the **PidNameCalendarTransparent** 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, VTODO, 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 an 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 EXDATE 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, VTODO, 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 2.2.90 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, VTODO, 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 VTODO 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 VTODO 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 2010Exchange 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 VTODO, 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 [RFC2446] 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	Notes
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	Notes
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	

Component/Property	Presence	Notes
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+	
•DAYLIGHT	0-1	
••COMMENT	0	
••DTSTART	1	
••RDATE	0	
••RRULE	1	
••TZNAME	0	
••TZOFFSETFROM	1	
••TZOFFSETTO	1	
••X-PROPERTY	0	

Component/Property	Number of instances exported	Notes
•LAST-MODIFIED	0	
•STANDARD	1	
••COMMENT	0	
••DTSTART	1	
••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	

Component/Property	Number of instances imported	Notes
•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	Notes
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	Notes
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

Component/Property	Presence	Notes
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+	

Component/Property	Presence	Notes
VFREEBUSY	0	
VJOURNAL	0	
VTODO	0	

Exchange 2007, Exchange 2010The 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	0-1	
DTSTART	0-1	
ORGANIZER	0-1	
SEQUENCE	0-1	Can be 0.
SUMMARY	0-1	Can be an empty string.
UID	0-1	
ATTACH	0+	
CATEGORIES	0+	Can be a list.
CLASS	0-1	
COMMENT	0	
CONTACT	0+	
CREATED	0	
DESCRIPTION	0-1	Can be an empty string.
DTEND	0-1	
DURATION	0-1	
EXDATE	0+	
EXRULE	0	
GEO	0	
LAST-MODIFIED	0	
LOCATION	0-1	

Component/Property	Number of instances exported	Notes
PRIORITY	0-1	
RDATE	0+	
RECURRENCE-ID	0-1	
RELATED-TO	0	
REQUEST-STATUS	0	
RESOURCES	0	
RRULE	0-1	
STATUS	0-1	
TRANSP	0-1	
URL	0	
X-PROPERTY	0+	
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	1	
DTSTART	1	
ORGANIZER	1	
SEQUENCE	0-1	Can import 0.

Component/Property	Number of instances exported	Notes
SUMMARY	1	Can import an empty string.
UID	1	
ATTACH	0+	
CATEGORIES	0-1	Can import a list.
CLASS	0-1	
COMMENT	0	
CONTACT	0+	
CREATED	0-1	
DESCRIPTION	0-1	Can import an empty string.
DTEND	1	If DTEND and DURATION are present, DTEND is used.
DURATION	0	If DTEND and DURATION are present, DTEND is used.
EXDATE	0-1	
EXRULE	0	
GEO	0	
LAST-MODIFIED	0-1	
LOCATION	0-1	
PRIORITY	0-1	
RDATE	0-2	
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	Can import "TENTATIVE" or "CONFIRMED".
TRANSP	0-1	
URL	0	
X-PROPERTY	0-34	

Component/Property	Number of instances exported	Notes
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	Notes
METHOD	1	MUST be "REPLY"
VEVENT	1+	All components MUST have the same UID
•ATTENDEE	1	MUST be the address of the Attendee replying.

Component/Property	Presence	Notes
•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	

Component/Property	Presence	Notes
•URL	0 or 1	
•X-PROPERTY	0+	
VTIMEZONE	0 or 1	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	Presence	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	only if referring to an instance of a recurring calendar component. Otherwise it must NOT be present.
•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	

Component/Property	Presence	Notes
•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 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 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.

Component/Property	Number of instances imported	Notes
•ATTENDEE	1+	Exactly one ATTENDEE property MUST have the PARTSTAT 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	

Component/Property	Number of instances imported	Notes
•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:

- 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).

- 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	Notes
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

Component/Property	Presence	Notes
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	

Component/Property	Number of instances exported	Notes
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+	

Component/Property	Number of instances imported	Notes
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 *TZID* parameter references an undefined VTIMEZONE, a default time zone is used.
X-COMPONENT	0	
VTODO	0	
VJOURNAL	0	

Component/Property	Number of instances imported	Notes
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	Notes
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

Component/Property	Presence	Notes
•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+	

Component/Property	Presence	Notes
VTIMEZONE	0+	MUST be present if any date/time refers to 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
•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	

Component/Property	Number of instances exported	Notes
•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	

Component/Property	Number of instances imported	Notes
•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 *PARTSTAT* 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	

Component/Property	Number of instances imported	Notes
•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 VTODO Components

V0252:

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

Exchange 2007, Exchange 2010

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

2.2.128 [RFC2446] Section 3.4.1 PUBLISH

V0253:

The specification describes the use of PUBLISH with VTODO components.

Exchange 2007, Exchange 2010

Exchange does not export VTODO components. Exchange ignores VTODO 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 VTODO components.

Exchange 2007, Exchange 2010

Exchange does not export VTODO components. Exchange ignores VTODO 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 VTODO components.

Exchange 2007, Exchange 2010

Exchange does not export VTODO components. Exchange ignores VTODO 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 VTODO components.

Exchange 2007, Exchange 2010

Exchange does not export VTODO components. Exchange ignores VTODO 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 VTODO components.

Exchange 2007, Exchange 2010

Exchange does not export VTODO components. Exchange ignores VTODO 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 VTODO components.

Exchange 2007, Exchange 2010

Exchange does not export VTODO components. Exchange ignores VTODO 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 VTODO components.

Exchange 2007, Exchange 2010

Exchange does not export VTODO components. Exchange ignores VTODO 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 VTODO components.

Exchange 2007, Exchange 2010

Exchange does not export VTODO components. Exchange ignores VTODO 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

Method	Fallback
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
PRODID	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".
PRODID	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

Component Property	Fallback
	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

Component Property	Fallback
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 VTODO components.

Exchange 2007, Exchange 2010

Exchange does not export or import VTODO 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 uses 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:

- 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:

- multipart/alternative

  1. text/plain

  2. 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:

- multipart/related

  1. text/calendar

  2. 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:

- 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:

- multipart/mixed

  1. text/calendar

  2. 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:

- multipart/related
  1. multipart/alternative
     1. text/plain
     2. text/calendar
  2. Attachment MIME part

Exchange exports iMIP data with attachments using the following MIME structure:

- multipart/mixed
  1. multipart/alternative
     1. text/plain
     2. text/html
     3. text/calendar
  2. 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.

3 Change Tracking Page

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

Major changes affect protocol interoperability or implementation. Examples of major changes are:

- A document revision that incorporates changes to interoperability requirements or functionality.
- An extensive rewrite, addition, or deletion of major portions of content.
- A protocol is deprecated.
- The removal of a document from the documentation set.
- Changes made for template compliance.

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

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

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

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

- New content added.
- Content update.
- Content removed.
- New product behavior note added.
- Product behavior note updated.
- Product behavior note removed.
- New protocol syntax added.
- Protocol syntax updated.
- Protocol syntax removed.
- New content added due to protocol revision.
- Content updated due to protocol revision.
- Content removed due to protocol revision.
- New protocol syntax added due to protocol revision.
- Protocol syntax updated due to protocol revision.
- Protocol syntax removed due to protocol revision.
- New content added for template compliance.
- Content updated for template compliance.

- Content removed for template compliance.
- Obsolete document removed.

Editorial changes always have the revision type "Editorially updated."

Some important terms used in revision type descriptions are defined as follows:

Protocol syntax refers to data elements (such as packets, structures, enumerations, and methods) as well as interfaces.

Protocol revision refers to changes made to a protocol that affect the bits that are sent over the wire.

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

Section	Tracking number (if applicable) and description	Major change (Y or N)	Revision Type
2.2.51 [RFC2445] Section 4.6.6 Alarm Component	52947 Updated description of handling of "TRIGGER" value type.	N	Content updated due to protocol revision.

4 Index