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This document describes the choices made when implementing the iCalendar Standard. It identifies ambiguities and implementer choices and indicates the approach taken in the implementation. The details of the implementation itself are described in the specifications for the relevant protocols or data structures, not in this document.
### Revision Summary

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1 Introduction

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

1.1 Glossary

This document uses the following terms:

**Augmented Backus-Naur Form (ABNF)**: A modified version of Backus-Naur Form (BNF), commonly used by Internet specifications. ABNF notation balances compactness and simplicity with reasonable representational power. ABNF differs from standard BNF in its definitions and uses of naming rules, repetition, alternatives, order-independence, and value ranges. For more information, see [RFC5234].

**base64 encoding**: A binary-to-text encoding scheme whereby an arbitrary sequence of bytes is converted to a sequence of printable ASCII characters, as described in [RFC4648].

**blind carbon copy (Bcc) recipient**: An addressee on a Message object that is not visible to recipients of the Message object.

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

**MIME entity**: An entity that is as described in [RFC2045], [RFC2046], and [RFC2047].

**MIME message**: A message that is as described in [RFC2045], [RFC2046], and [RFC2047].

**MIME part**: A message part that is as described in [RFC2045], [RFC2046], and [RFC2047].

**Multipurpose Internet Mail Extensions (MIME)**: A set of extensions that redefines and expands support for various types of content in email messages, as described in [RFC2045], [RFC2046], and [RFC2047].

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

**S/MIME (Secure/Multipurpose Internet Mail Extensions)**: A set of cryptographic security services, as described in [RFC5751].

**Uniform Resource Identifier (URI)**: A string that identifies a resource. The URI is an addressing mechanism defined in Internet Engineering Task Force (IETF) Uniform Resource Identifier (URI): Generic Syntax [RFC3986].

**vCard**: A format for storing and exchanging electronic business cards, as described in [RFC2426].

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

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

1.2.1 Normative References

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

[MS-OXCICAL] Microsoft Corporation, "iCalendar to Appointment Object Conversion Algorithm".

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


**1.2.2 Informative References**


**1.3 Microsoft Implementations**

Microsoft Exchange Server 2007
Microsoft Exchange Server 2010
Microsoft Exchange Server 2013
Microsoft Exchange Server 2016
Microsoft Exchange Server 2019

**1.4 Standards Support Requirements**

The conformance requirements for [RFC5545], [RFC5546], and [RFC6047] are 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 [RFC5545] that are considered normative and the sections that are considered informative.

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The following table lists the sections of [RFC5546] that are considered normative and the sections that are considered informative.

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The following table lists the sections of [RFC6047] that are considered normative and the sections that are considered informative.

---

### 1.4.1 Obsolete Standards

The following table lists the obsolete standard specifications that have been replaced by newer specifications. This document applies to the current specifications. The last version of this document that applies to the obsolete specifications can be obtained from the Historical Document Repository ([MSDN-XHistDocRep](#)).

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### 1.5 Notation

The following notations are used to identify clarifications in section 2.2:

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<td>This notation 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.</td>
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<td>This notation 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.</td>
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<tr>
<td>E####</td>
<td>Because the use of extensibility points, such as optional implementation-specific data, could impair interoperability, this notation identifies such points in the target specification.</td>
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2 Standards Support Statements

2.1 Normative Variations

The following subsections detail the normative variations from [RFC5545], [RFC5546], and [RFC6047].

2.1.1 [RFC5545] Section 3.3.8, Valid Range of INTEGER Value Type

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

For Microsoft Exchange Server, the valid range for the INTEGER value type is -2147483647 to 2147483647.

2.1.2 [RFC5545] Section 3.6.1, VEVENT with no End Time does not take up Any Time

The specification states, "For cases where a VEVENT calendar component specifies a DTSTART property with a DATE value type but no DTEND nor DURATION property, the event's duration is taken to be one day. For cases where a VEVENT calendar component specifies a DTSTART property with a DATE-TIME value type but no DTEND property, the event ends on the same calendar date and time of day specified by the DTSTART property."

Microsoft Exchange fails to import VEVENTs that are missing both the DURATION ([MS-OXCICAL] section 2.1.3.1.1.20.12) and DTEND ([MS-OXCICAL] section 2.1.3.1.1.20.8) properties. See section 2.2.67 for more details.

2.1.3 [RFC5545] Section 3.8.2.2, DTEND MUST be Later in Time than DTSTART

The specification states "The value type of this property MUST be the same as the DTSTART property, and its value MUST be later in time than the value of the DTSTART property."

Microsoft Exchange can export iCalendar objects that have the same values for the DTSTART property ([MS-OXCICAL] section 2.1.3.1.1.20.10) and the DTEND property ([MS-OXCICAL] section 2.1.3.1.1.20.8).

2.1.4 [RFC5545] Section 3.8.4.1, 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."

Microsoft Exchange can export a VEVENT without ATTENDEE ([MS-OXCICAL] section 2.1.3.1.1.20.2) properties.

2.1.5 [RFC5545] Section 3.8.4.1, 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, Microsoft Exchange ignores the DELEGATED-TO and DELEGATED-FROM parameters on the ATTENDEE ([MS-OXCICAL] section 2.1.3.1.1.20.2) property. As a result, a delegate's ATTENDEE property inherits no values from the delegator's ATTENDEE property.
2.1.6  [RFC5545] Section 3.8.4.3, 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."

Microsoft Exchange can export VEVENT components that represent meetings without an ORGANIZER ([MS-OXCICAL] section 2.1.3.1.1.20.16).

2.1.7  [RFC5546] Section 3.2.2, VEVENT Components in REQUEST-type iCalendar Objects MUST Contain One or More ATTENDEE Properties

The table in [RFC5546] section 3.2.2 contains a value of "1+" in the Presence column for the ATTENDEE ([MS-OXCICAL] section 2.1.3.1.1.20.2) property within the VEVENT component.

Microsoft Exchange can omit the ATTENDEE properties when exporting a meeting where all attendees are Bcc recipients.

2.1.8  [RFC5546] Section 3.2.3, VEVENT Components in REPLY-type iCalendar Objects MUST Contain an ORGANIZER Property

The table in [RFC5546] section 3.2.3 contains a value of "1" in the Presence column for the ORGANIZER ([MS-OXCICAL] section 2.1.3.1.1.20.16) property within the VEVENT component.

Microsoft Exchange does not export the ORGANIZER property in the VEVENT component on REPLY-type iCalendar objects.

2.1.9  [RFC5546] Section 3.2.7, VEVENT Components in COUNTER-type iCalendar Objects MUST Contain an ORGANIZER Property

The table in [RFC5546] section 3.2.7 contains a value of "1" in the Presence column for the ORGANIZER ([MS-OXCICAL] section 2.1.3.1.1.20.16) property within the VEVENT component.

Microsoft Exchange does not export the ORGANIZER property in the VEVENT component on COUNTER-type iCalendar objects.

2.2  Clarifications

The following subsections identify clarifications relative to [RFC5545], [RFC5546], and [RFC6047].

Unless otherwise stated, the specified products conform to all SHOULD and RECOMMENDED behavior in [RFC5545], [RFC5546], and [RFC6047]. The term "can" is used throughout [RFC5545] and is interpreted to indicate optional behavior.

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

2.2.1  [RFC5545] Section 3.1 Content Lines

V0001:

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

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

V0002:

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."


On export, Microsoft 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, Microsoft 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.

V0003:

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


On import and export, Microsoft Exchange conforms to the ABNF rules specified. On import, Microsoft 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.

2.2.2 [RFC5545] Section 3.1.2 Multiple Values

V0004:

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.


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

2.2.3 [RFC5545] Section 3.1.3 Binary Content

V0005:

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 encoded with base64 encoding and included in the iCalendar entity.

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

When importing iCalendar information, Microsoft Exchange ignores the ATTACH ([MS-OXCICAL] section 2.1.3.1.1.20.1) property. All attachments from the MIME structure of the message are imported.

2.2.4 [RFC5545] Section 3.2 Property Parameters

C0001:
The specification defines a set of parameters but does not specify how to respond to undefined or unrecognized parameters.


On import, Microsoft Exchange ignores any parameters that are undefined or unrecognized. It also ignores recognized parameters in unsupported contexts (for example, a \texttt{FMTTYPE} parameter on an \texttt{ATTENDEE} ([MS-OXCICAL] section 2.1.3.1.1.20.2) property).

\textbf{2.2.5 \texttt{[RFC5545]} Section 3.2.1 Alternate Text Representation}

V0006:

The specification describes the \texttt{ALTREP} parameter.


Microsoft Exchange supports the \texttt{ALTREP} parameter on the \texttt{LOCATION} ([MS-OXCICAL] section 2.1.3.1.1.20.15) and \texttt{CONTACT} ([MS-OXCICAL] section 2.1.3.1.1.20.6) properties. Microsoft Exchange does not import or export the \texttt{ALTREP} parameter on any other properties.

\textbf{2.2.6 \texttt{[RFC5545]} Section 3.2.2 Common Name}

V0007:

The specification describes the optional \texttt{CN} parameter.


On export, Microsoft Exchange only exports a \texttt{CN} parameter for the \texttt{ATTENDEE} ([MS-OXCICAL] section 2.1.3.1.1.20.2), \texttt{ORGANIZER} ([MS-OXCICAL] section 2.1.3.1.1.20.16), and \texttt{X-MS-OLK-SENDER} ([MS-OXCICAL] section 2.1.3.1.1.20.61) properties.

On import, Microsoft Exchange ignores the \texttt{CN} parameter on any properties other than \texttt{ATTENDEE}, \texttt{ORGANIZER}, and \texttt{X-MS-OLK-SENDER}.

\textbf{2.2.7 \texttt{[RFC5545]} Section 3.2.3 Calendar User Type}

V0008:

The specification describes the optional \texttt{CUTYPE} parameter.


On export, Microsoft Exchange only exports a \texttt{CUTYPE} parameter for the \texttt{ATTENDEE} ([MS-OXCICAL] section 2.1.3.1.1.20.2) property. If set, the only possible values are "RESOURCE" or "ROOM".

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

\textbf{2.2.8 \texttt{[RFC5545]} Section 3.2.4 Delegators}

V0009:

The specification describes the optional \texttt{DELEGATED-FROM} parameter.

2.2.9  [RFC5545] Section 3.2.5 Delegatees

V0010:
The specification describes the optional `DELEGATED-TO` parameter.
Microsoft Exchange does not export this parameter and ignores it on import.

2.2.10 [RFC5545] Section 3.2.6 Directory Entry Reference

V0011:
The specification describes the optional `DIR` parameter.
Microsoft Exchange does not export this parameter and ignores it on import.

2.2.11 [RFC5545] Section 3.2.7 Inline Encoding

V0012:
The specification describes the optional `ENCODING` parameter.
Microsoft Exchange does not export this parameter and ignores it on import.

2.2.12 [RFC5545] Section 3.2.8 Format Type

V0013:
The specification describes the optional `FMTTYPE` parameter.
Microsoft Exchange does not export this parameter and ignores it on import.

2.2.13 [RFC5545] Section 3.2.9 Free/Busy Time Type

V0014:
The specification describes the optional `FBYTYPE` parameter.
Microsoft Exchange does not export this parameter and ignores it on import.

2.2.14 [RFC5545] Section 3.2.10 Language

V0015:
The specification describes the optional `LANGUAGE` parameter.
Microsoft Exchange only exports a *LANGUAGE* parameter for the following properties:

- **SUMMARY** ([MS-OXCICAL] section 2.1.3.1.1.20.24)
- **LOCATION** ([MS-OXCICAL] section 2.1.3.1.1.20.15)
- **COMMENT** ([MS-OXCICAL] section 2.1.3.1.1.20.5)
- **DESCRIPTION** ([MS-OXCICAL] section 2.1.3.1.1.20.11)

On import, Microsoft 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.

### 2.2.15 [RFC5545] Section 3.2.11 Group or List Membership

**V0016:**

The specification describes the optional *MEMBER* parameter.


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

### 2.2.16 [RFC5545] Section 3.2.12 Participation Status

**V0017:**

The specification describes the optional *PARTSTAT* parameter.

Exchange 2007

Exchange 2007 only exports the *PARTSTAT* parameter for *ATTENDEE* ([MS-OXCICAL] section 2.1.3.1.1.20.2) properties in iCalendar objects with a *METHOD* ([MS-OXCICAL] section 2.1.3.1.1.1) 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).

### 2.2.17 [RFC5545] Section 3.2.13 Recurrence Identifier Range

**V0018:**

The specification describes the optional *RANGE* parameter.


Microsoft Exchange does not export this parameter. On import Microsoft Exchange fails to import the iCalendar object if *RANGE* is present.
2.2.18 [RFC5545] Section 3.2.14 Alarm Trigger Relationship
V0019:
The specification describes the optional RELATED parameter.
Microsoft Exchange exports the RELATED parameter value as "START". On import, Microsoft Exchange imports "START" or "END", but converts any alarms with a RELATED parameter of "END" to the equivalent "START".

2.2.19 [RFC5545] Section 3.2.15 Relationship Type
V0020:
The specification describes the optional RELTYPE parameter.
Microsoft Exchange does not export this parameter and ignores it on import.

2.2.20 [RFC5545] Section 3.2.16 Participation Role
V0021:
The specification describes the optional ROLE parameter.
Microsoft Exchange only exports a ROLE parameter on the ATTENDEE ([MS-OXICAL] section 2.1.3.1.1.20.2) property. The value of the parameter is "OPT-PARTICIPANT", "REQ-PARTICIPANT", or absent (for attendees with CTYPE of "ROOM" or "RESOURCE"). On import, Microsoft Exchange ignores the ROLE parameter on any property other than ATTENDEE.

2.2.21 [RFC5545] Section 3.2.17 RSVP Expectation
V0022:
The specification describes the optional RSVP parameter.
Microsoft Exchange only exports the RSVP parameter on the ATTENDEE ([MS-OXICAL] section 2.1.3.1.1.20.2) property. The value of this parameter is "TRUE" or "FALSE". On import, Microsoft Exchange ignores the RSVP parameter on any property other than ATTENDEE. Furthermore, all RSVP parameters with values other than "TRUE" (case-insensitive) are ignored.

2.2.22 [RFC5545] Section 3.2.18 Sent By
V0023:
The specification describes the optional SENT-BY parameter.
Microsoft Exchange exports the SENT-BY parameter if the sender is not the organizer for requests or participant for responses. Microsoft Exchange imports the SENT-BY parameter if present.
2.2.23 [RFC5545] Section 3.2.19 Time Zone Identifier

V0024:

The specification describes the TZID parameter.


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

On import, Microsoft 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.

V0025:

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


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


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

2.2.24 [RFC5545] Section 3.2.20 Value Data Types

V0026:

The specification describes the optional VALUE parameter.


On export, Microsoft Exchange only exports the VALUE parameter for the following properties:

- EXDATE ([MS-OXCICAL] section 2.1.3.1.1.20.13)
- RDATE ([MS-OXCICAL] section 2.1.3.1.1.20.18)
- DTSTART ([MS-OXCICAL] section 2.1.3.1.1.20.10)
- DTEND ([MS-OXCICAL] section 2.1.3.1.1.20.8)
- RECURRENCE-ID ([MS-OXCICAL] section 2.1.3.1.1.20.20)

The value is either "DATE" or absent.

On import, Microsoft Exchange parses the VALUE parameter on all properties.
2.2.25 [RFC5545] Section 3.3 Property Value Data Types

V0027:

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 \textit{VALUE} parameter.


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

2.2.26 [RFC5545] Section 3.3.1 Binary

V0028:

The specification describes the \textbf{BINARY} data type.


Microsoft Exchange does not import or export any properties with a \textbf{BINARY} data type.

2.2.27 [RFC5545] Section 3.3.2 Boolean

V0029:

The specification describes the \textbf{BOOLEAN} data type.


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

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

2.2.28 [RFC5545] Section 3.3.3 Calendar User Address

V0030:

The specification describes the \textbf{CAL-ADDRESS} data type.


On export, Microsoft Exchange uses a MAILTO URI, as specified in [RFC2368].

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

2.2.29 [RFC5545] Section 3.3.5 Date-Time

V0031:

The specification describes the \textbf{DATE-TIME} data type.


On import, Microsoft Exchange parses any valid value \textbf{DATE-TIME} format (or \textbf{DATE} format if the \textit{VALUE} parameter is set to "DATE"), as specified in [RFC5545]. Microsoft Exchange fails to import iCalendar objects that have an invalid \textit{DATE} or \textit{DATE-TIME}. 
Microsoft Exchange treats any date before January 1, 1601, and any date after December 31, 4500 as invalid.

V0032:

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


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

2.2.30 [RFC5545] Section 3.3.6 Duration

V0033:

The specification describes the DURATION data type.


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

2.2.31 [RFC5545] Section 3.3.7 Float

V0034:

The specification describes the FLOAT data type.


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

2.2.32 [RFC5545] Section 3.3.8 Integer

V0035:

The specification describes the INTEGER data type.


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

2.2.33 [RFC5545] Section 3.3.9 Period of Time

V0036:

The specification describes the PERIOD data type.


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

2.2.34 [RFC5545] Section 3.3.10 Recurrence Rule

V0037:
The specification describes the **RECUR** data type.


Microsoft Exchange only supports a subset of the recurrences specified in this section. See [MS-OCICAL] section 2.1.3.2 for details of the recurrences supported by Microsoft Exchange.

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

### 2.2.35 [RFC5545] Section 3.3.11 Text

**V0038:**

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


On import, Microsoft Exchange interprets the data as specified in [RFC5545] section 3.3.11, 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 (as specified in [RFC5545] section 3.3.11) are parsed literally (U+005C).

### 2.2.36 [RFC5545] Section 3.3.12 Time

**V0039:**

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


On import, Microsoft Exchange parses any valid value in **TIME** format, as specified in [RFC5545]. Microsoft Exchange fails to import iCalendar objects with an invalid **TIME**.

**V0040:**

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


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

### 2.2.37 [RFC5545] Section 3.3.13 URI

**V0041:**

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

The only type of **URI** that Microsoft Exchange exports is the “cid:” type URI, as specified in [RFC2392].

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

### 2.2.38 [RFC5545] Section 3.3.14 UTC Offset

V0042:

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


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

### 2.2.39 [RFC5545] Section 3.4 iCalendar Object

V0043:

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


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

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

### 2.2.40 [RFC5545] Section 3.5 Property

V0044:

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


On export, Microsoft Exchange orders properties before sub-components.

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

V0045:

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


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

### 2.2.41 [RFC5545] Section 3.6 Calendar Components

V0046:

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


On export, Microsoft Exchange exports **VTIMEZONE** components before **VEVENT** components.
On import, Microsoft Exchange parses any ordering of components within an iCalendar object.

2.2.42 [RFC5545] Section 3.6.2 To-do Component
V0047:
The specification describes the VTODO component.
Microsoft Exchange does not export VTODO components and ignores them on import.

2.2.43 [RFC5545] Section 3.6.3 Journal Component
V0048:
The specification describes the VJOURNAL component.
Microsoft Exchange does not export VJOURNAL components and ignores them on import.

2.2.44 [RFC5545] Section 3.6.4 Free/Busy Component
V0049:
The specification describes the VFREEBUSY component.
Microsoft Exchange does not export VFREEBUSY components and ignores them on import.

2.2.45 [RFC5545] Section 3.6.5 Time Zone Component
V0050:
The specification describes the VTIMEZONE component.
On import, Microsoft 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 2.1.3.1.1.19. Only the following properties are used to approximate a VTIMEZONE, all other properties are ignored:

- **TZID** ([MS-OXCICAL] section 2.1.3.1.1.19.1) in VTIMEZONE components.
- **DTSTART** ([MS-OXCICAL] section 2.1.3.1.1.19.2.1) in DAYLIGHT or STANDARD components.
- **RRULE** ([MS-OXCICAL] section 2.1.3.1.1.19.2.2) in DAYLIGHT or STANDARD components.
- **TZOFFSETFROM** ([MS-OXCICAL] section 2.1.3.1.1.19.2.4) in DAYLIGHT or STANDARD components.
- **TZOFFSETTO** ([MS-OXCICAL] section 2.1.3.1.1.19.2.5) in DAYLIGHT or STANDARD components.
If a time zone cannot be approximated or parsed, Microsoft Exchange fails to import the iCalendar object.

**2.2.46 [RFC5545] Section 3.6.6 Alarm Component**

V0051:

The specification states that the **ACTION** ([MS-OXCICAL] section 2.1.3.1.1.20.62.2) 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.


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

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

V0052:

The specification states that the **TRIGGER** ([MS-OXCICAL] section 2.1.3.1.1.20.62.1) property is required on **VALARM** components.


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

V0053:

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


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

V0054:

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".


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

V0055:

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

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

**V0056:**

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".


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

**V0057:**

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".


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

**V0058:**

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


Microsoft 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, Microsoft 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.


This is interpreted as a recommendation, not a requirement. Microsoft 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.


This is interpreted as a recommendation, not a requirement. On import, Microsoft 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.


This is interpreted as a recommendation, not a requirement. On import, Microsoft Exchange ignores the DESCRIPTION, SUMMARY, ATTENDEE, and ATTACH properties. Microsoft Exchange does not send e-mail 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.


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

V0059:

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


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

V0060:

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


Microsoft Exchange only exports at most one VALARM component per VEVENT component. On import, Microsoft 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.

V0061:

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.


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

V0062:

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


Microsoft Exchange does not export the VALUE parameter of the TRIGGER property.

V0063:
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**.


Microsoft Exchange does not export or import **VTODO** components.

**V0064:**

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


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

**V0065:**

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


On import, Microsoft Exchange ignores the **ACTION** property on **VALARM** components. All **VALARM** components are treated as a reminder, as specified in [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.


This is interpreted as a recommendation, not a requirement. On import, Microsoft 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.


This is interpreted as a recommendation, not a requirement. On import, Microsoft 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".


This is interpreted as a recommendation, not a requirement. On import, Microsoft Exchange ignores the **ATTACH** properties in the **VALARM** calendar component.
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.


This is interpreted as a recommendation, not a requirement. On import, Microsoft Exchange ignores the DESCRIPTION, SUMMARY, ATTENDEE, and ATTACH properties. Microsoft Exchange does not send e-mail 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.


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

2.2.47 [RFC5545] Section 3.7 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.


This statement is interpreted as applying to sub-components of the VCALENDAR, and not the VCALENDAR itself. On export, Microsoft 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, Microsoft Exchange ignores any of these properties outside of the VCALENDAR component.

2.2.48 [RFC5545] Section 3.7.1 Calendar Scale

V0066:

The specification describes the CALSCALE property.


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

2.2.49 [RFC5545] Section 3.7.2 Method

V0067:
The specification states that non-standard property parameters can be specified on the METHOD property.


Microsoft Exchange exports no non-standard property parameters on the METHOD [MS-OXCICAL] section 2.1.3.1.1.1) property, and ignores any non-standard property parameters on the METHOD property on import.

V0068:

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


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

V0069:

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.


On export, Microsoft 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), Microsoft Exchange fails to import the iCalendar object.

V0070:

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."


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

V0071:

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


Microsoft Exchange only implements the following values of the METHOD property: "PUBLISH", "REQUEST", "REPLY", "CANCEL", and "COUNTER", as specified in [RFC5546]. Microsoft Exchange only exports these values for the METHOD property. On import, if the METHOD property is missing or set to an unimplemented value, Microsoft Exchange fails to import the iCalendar object.
2.2.50 [RFC5545] Section 3.7.3 Product Identifier

V0072:

The specification states that non-standard property parameters can be specified on the PRODID ([MS-OXICAL] section 2.1.3.1.2) property.


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

V0073:

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


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

V0074:

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

Exchange 2007


2.2.51 [RFC5545] Section 3.7.4 Version

V0075:

The specification states that non-standard property parameters can be specified on the VERSION ([MS-OXICAL] section 2.1.3.1.3) property.


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

V0076:

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


On import, Microsoft Exchange ignores the VERSION property.

V0077:

The specification states that a value of "2.0" for the VERSION property corresponds to [RFC5545].

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

**2.2.52 [RFC5545] Section 3.8.1.1 Attachment**

V0078:

The specification states that the default value type for the ATTACH ([MS-OXCICAL] section 2.1.3.1.1.20.1) property is "URI", and that the value type can be set to BINARY to indicate inline binary encoded content information.


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

V0079:

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


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

V0080:

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


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

**2.2.53 [RFC5545] Section 3.8.1.2 Categories**

V0081:

The specification states that non-standard and language property parameters can be specified on the CATEGORIES ([MS-OXCICAL] section 2.1.3.1.1.20.3) property.


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

V0082:

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


Microsoft Exchange only exports the CATEGORIES property within VEVENT components. On import, CATEGORIES properties in any component other than a VEVENT component are ignored.
V0083:
The specification states that multiple categories can be specified as a list of categories separated by the COMMA character (US-ASCII decimal 44).


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

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

**2.2.54 [RFC5545] Section 3.8.1.3 Classification**

V0084:
The specification states that non-standard property parameters can be specified on the CLASS ([MS-OXICAL] section 2.1.3.1.1.20.4) property.


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

V0085:
The specification states that the CLASS property can be specified within the VEVENT, VTODO, or VJOURNAL components.


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

V0086:
The specification lists the possible values for the CLASS property as "PUBLIC", "PRIVATE", "CONFIDENTIAL", IANA-token, or x-name.


On export, Microsoft Exchange can set the following values of the CLASS property: "PUBLIC", "PRIVATE", "CONFIDENTIAL", and "PERSONAL". On import, Microsoft 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, Microsoft Exchange treats the value of CLASS as "PUBLIC".

**2.2.55 [RFC5545] Section 3.8.1.4 Comment**

V0087:
The specification states that non-standard, alternate text representation, and language property parameters can be specified on the COMMENT ([MS-OXICAL] section 2.1.3.1.1.20.5) property.

Microsoft Exchange exports no parameters except LANGUAGE on the COMMENT property. On import, Microsoft Exchange uses the first LANGUAGE parameter found in the following properties of a VEVENT component:

- SUMMARY ([MS-OXCICAL] section 2.1.3.1.1.20.24)
- LOCATION ([MS-OXCICAL] section 2.1.3.1.1.20.15)
- COMMENT
- DESCRIPTION ([MS-OXCICAL] section 2.1.3.1.1.20.11)

In all other cases, parameters on the DESCRIPTION property are ignored.

V0088:

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

Exchange 2007, Exchange 2010, Microsoft Exchange Server 2010 Service Pack 1 (SP1)

Microsoft Exchange only exports the COMMENT property within VEVENT components, and only if the METHOD ([MS-OXCICAL] section 2.1.3.1.1.1) 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.


Exchange 2010 SP2, Exchange 2013, Exchange 2016, and Exchange 2019 behave identically to Exchange 2010 SP1, except that on import, if the METHOD property for the iCalendar object is equal to "REPLY" or "COUNTER", the COMMENT property is parsed and used as the DESCRIPTION property if no DESCRIPTION property exists in the iCalendar object.

V0089:

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


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

2.2.56 [RFC5545] Section 3.8.1.5 Description

V0090:

The specification states that non-standard, alternate text representation, and language property parameters can be specified on the DESCRIPTION ([MS-OXCICAL] section 2.1.3.1.1.20.11) property.


Microsoft Exchange exports no parameters except LANGUAGE on the DESCRIPTION property. On import, Microsoft Exchange uses the first LANGUAGE parameter found in the following properties of a VEVENT component:

- SUMMARY ([MS-OXCICAL] section 2.1.3.1.1.20.24)
- LOCATION ([MS-OXCICAL] section 2.1.3.1.1.20.15)
**COMMENT** ([MS-OXCICAL] section 2.1.3.1.20.5)

**DESCRIPTION**

In all other cases, parameters on the **DESCRIPTION** property are ignored.

V0091:

The specification states that the **DESCRIPTION** property can be specified within the **VEVENT**, **VTOD0**, **VJOURNAL**, or **VALARM** components, and may be specified multiple times in a **VJOURNAL** component.


Microsoft Exchange can export at most one **DESCRIPTION** property on a **VEVENT** component.

Microsoft Exchange exports exactly one **DESCRIPTION** property on a **VALARM** component, and the value is "Reminder". Microsoft 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, Microsoft Exchange ignores all but the first. Microsoft Exchange ignores **DESCRIPTION** properties on any component other than a **VEVENT**.

2.2.57 [RFC5545] Section 3.8.1.6 Geographic Position

V0092:

The specification describes the **GEO** property.


Microsoft Exchange does not implement the **GEO** property. Microsoft 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 "VTOD0" 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."


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.

2.2.58 [RFC5545] Section 3.8.1.7 Location

V0093:

The specification states that non-standard, alternate text representation, and language property parameters can be specified on the **LOCATION** ([MS-OXCICAL] section 2.1.3.1.1.20.15) property.


Microsoft Exchange exports no parameters except **LANGUAGE** on the **LOCATION** property. On import, Microsoft Exchange uses the first **LANGUAGE** parameter found in the following properties of a **VEVENT** component:
**SUMMARY** ([MS-OXCICAL] section 2.1.3.1.1.20.24)

**LOCATION**

**COMMENT** ([MS-OXCICAL] section 2.1.3.1.1.20.5)

**DESCRIPTION** ([MS-OXCICAL] section 2.1.3.1.1.20.11)

In all other cases, parameters on the **LOCATION** property are ignored.

V0094:

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


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

V0095:

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


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

### 2.2.59 [RFC5545] Section 3.8.1.8 Percent Complete

V0096:

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


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

### 2.2.60 [RFC5545] Section 3.8.1.9 Priority

V0097:

The specification states that non-standard property parameters can be specified on the **PRIORITY** ([MS-OXCICAL] section 2.1.3.1.1.20.17) property.


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

V0098:

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


Microsoft Exchange exports **PRIORITY** only on **VEVENT** components. On import, Microsoft Exchange ignores **PRIORITY** outside of **VEVENT** components.
V0099:
The specification states that the value of \textbf{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.

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

V0100:
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".

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

V0101:

Microsoft Exchange does not implement this priority scheme.

\textbf{2.2.61 [RFC5545] Section 3.8.1.10 Resources}

V0102:
The specification describes the \textbf{RESOURCES} ([MS-OXCICAL] section 2.1.3.1.1.20.21) property.

Microsoft Exchange does not implement the \textbf{RESOURCES} property. Microsoft Exchange does not export or import the \textbf{RESOURCES} property.

\textbf{2.2.62 [RFC5545] Section 3.8.1.11 Status}

V0103:
The specification states that non-standard property parameters can be specified on the \textbf{STATUS} ([MS-OXCICAL] section 2.1.3.1.1.20.23) property.

Microsoft Exchange does not export any non-standard parameters on the \textbf{STATUS} property. On import, Microsoft Exchange ignores all parameters on the \textbf{STATUS} property.

V0104:
The specification states that the \textbf{STATUS} property can be specified within the \textbf{VEVENT}, \textbf{VTODO}, or \textbf{VJOURNAL} components.

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

2.2.63 [RFC5545] Section 3.8.1.12 Summary
V0105:
The specification states that non-standard, alternate text representation, and language property parameters can be specified on the SUMMARY ([MS-OXCICAL] section 2.1.3.1.1.20.24) property.


Microsoft Exchange exports the LANGUAGE parameter on the SUMMARY property. On import, Microsoft Exchange uses the first LANGUAGE parameter found in the following properties of a VEVENT component:

- SUMMARY
- LOCATION ([MS-OXCICAL] section 2.1.3.1.1.20.15)
- DESCRIPTION ([MS-OXCICAL] section 2.1.3.1.1.20.11)

In all other cases, parameters on the SUMMARY property are ignored.

V0106:
The specification states that the SUMMARY property can be specified within the VEVENT, VTODO, VJOURNAL, or VALARM components.


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

2.2.64 [RFC5545] Section 3.8.2.1 Date-Time Completed
V0107:
The specification describes the COMPLETED property.


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

2.2.65 [RFC5545] Section 3.8.2.2 Date-Time End
V0108:
The specification states that the default value type for DTEND ([MS-OXCICAL] section 2.1.3.1.1.20.8) is DATE-TIME, but it can be set to a DATE type.


Microsoft 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, Microsoft Exchange fails to import the iCalendar object.

V0109:
The specification states that the value type of this property MUST be the same as the DTSTART property.


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

**Note**  Microsoft 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 component 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.

V0110:

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


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

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

V0111:

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


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

V0112:

The specification states that on VEVENT components, the value of DTEND must be later than the value of DTSTART ([MS-OXCICAL] section 2.1.3.1.20.10).


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

For export behavior, see section 2.1.3.

### 2.2.66 [RFC5545] Section 3.8.2.3 Date-Time Due

V0113:

The specification describes the DUE property.


Microsoft Exchange does not import or export the DUE property.
2.2.67 [RFC5545] Section 3.8.2.4 Date-Time Start

V0114:

The specification states that the default value type for **DTSTART** ([MS-OXCICAL] section 2.1.3.1.1.20.10) is **DATE-TIME**, but it can be set to a **DATE** type.


Microsoft 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**, Microsoft 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 **DTSTART** property.


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

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

V0116:

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


Microsoft 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.

V0117:

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, Microsoft Exchange fails to import iCalendar objects with **VEVENTs** that are missing a **DTSTART** property. The following table lists the import behavior when the **DTSTART** property, the **DTEND** ([MS-OXCICAL] section 2.1.3.1.1.20.8) property, the **DURATION** ([MS-OXCICAL] section 2.1.3.1.1.20.12) property, or any combination of these three are missing:

<table>
<thead>
<tr>
<th>Missing Properties</th>
<th>Start</th>
<th>End</th>
</tr>
</thead>
<tbody>
<tr>
<td>None</td>
<td>DTSTART</td>
<td>DTEND</td>
</tr>
<tr>
<td>DTSTART</td>
<td>Fail to import</td>
<td>Fail to import</td>
</tr>
<tr>
<td>DTEND</td>
<td>DTSTART</td>
<td>DTSTART + DURATION</td>
</tr>
<tr>
<td>DURATION</td>
<td>DTSTART</td>
<td>DTEND</td>
</tr>
<tr>
<td>DTEND, DURATION</td>
<td>Fail to import</td>
<td>Fail to import</td>
</tr>
</tbody>
</table>
Exchange 2010 SP1

On import, Exchange 2010 SP1 behaves the same as Exchange 2010, with one exception: In the case where \texttt{DTEND} and \texttt{DURATION} are missing, if \texttt{DTSTART} has a \texttt{VALUE} parameter set to \texttt{DATE}, Exchange 2010 SP1 imports the iCalendar object as an all-day appointment.


On import, Exchange 2010 SP2, Exchange 2013, Exchange 2016, and Exchange 2019 behave the same as Exchange 2010 SP1, with one exception: In the case where \texttt{DTEND} and \texttt{DURATION} are missing, if \texttt{DTSTART} has a \texttt{VALUE} parameter set to \texttt{DATE-TIME}, Exchange 2010 SP2, Exchange 2013, Exchange 2016, and Exchange 2019 import the iCalendar object with \texttt{DTEND} property value equal to the \texttt{DTSTART} property value.

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 \cite{RFC5545} section 3.8.2.5, it states that the \texttt{DURATION} property may be used instead of an explicit date/time to specify the duration of the event. These statements are contradictory.


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

V0118:

The specification describes the usage of \texttt{DTSTART} in \texttt{VFREEBUSY} components.


Microsoft Exchange does not import or export \texttt{VFREEBUSY} components.

V0119:

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


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

2.2.68 \cite{RFC5545} Section 3.8.2.5 Duration

V0120:

The specification states that non-standard property parameters can be specified on the \texttt{DURATION} (\cite{MS-OXCICAL} section 2.1.3.1.120.12) property.


Microsoft Exchange does not export the \texttt{DURATION} property. On import, Microsoft Exchange ignores all parameters on the \texttt{DURATION} property.

V0121:
The specification states that the **DURATION** property can be specified within **VEVENT**, **VTODO**, **VFREEBUSY**, or **VALARM** components.


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

V0122:

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


Microsoft Exchange does not export the **DURATION** property. On import, Microsoft Exchange can import the **DURATION** property if the **DTEND** ([MS-OXCICAL] section 2.1.3.1.1.20.8) property is missing. See section 2.2.67 for more details.

V0123:

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


Microsoft Exchange does not import or export **VTODO** components.

V0124:

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


Microsoft Exchange does not import or export **VFREEBUSY** components.

V0125:

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


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

V0126:

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


Microsoft 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 ([RFC5545] section 3.8.2.5) is ignored.

### 2.2.69 [RFC5545] Section 3.8.2.6 Free/Busy Time

V0127:
The specification describes the **FREEBUSY** property.


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

### 2.2.70 [RFC5545] Section 3.8.2.7 Time Transparency

V0128:

The specification states that non-standard property parameters can be specified on the **TRANSP** ([MS-OXCICAL] section 2.1.3.1.20.25) property.


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

V0129:

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


Microsoft 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, Microsoft Exchange imports the last valid value and ignores the rest.

V0130:

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."


Microsoft Exchange exports the value of the **PidNameCalendarTransparent** ([MS-OXPROPS] section 2.405) property directly to the **TRANSP** property. On import, Microsoft Exchange imports the value of the **TRANSP** property directly to the **PidNameCalendarTransparent** property. For more details, see [MS-OXCICAL] section 2.1.3.1.1.20.25.

### 2.2.71 [RFC5545] Section 3.8.3.1 Time Zone Identifier

V0131:

The specification states that non-standard property parameters can be specified on the **TZID** ([MS-OXCICAL] section 2.1.3.1.19.1) property.


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

V0132:

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

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

V0133:

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.


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

V0134:

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."


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

**2.2.72 [RFC5545] Section 3.8.3.2 Time Zone Name**

V0135:

The specification describes the **TZNAME** ([MS-OXCICAL] section 2.1.3.1.19.3.3) property.


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

**2.2.73 [RFC5545] Section 3.8.3.3 Time Zone Offset From**

V0136:

The specification states that non-standard property parameters can be specified on the **TZOFFSETFROM** ([MS-OXCICAL] section 2.1.3.1.19.2.4) property.


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

V0137:

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

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

V0138:

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


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

2.2.74 [RFC5545] Section 3.8.3.4 Time Zone Offset To

V0139:

The specification states that non-standard property parameters can be specified on the `TZOFFSETTO` ([MS-OXCICAL] section 2.1.3.1.19.2.5) property.


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

V0140:

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


Microsoft 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, Microsoft Exchange fails to import the iCalendar object.

V0141:

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


On import, Microsoft Exchange attempts to approximate the value of `TZOFFSETTO` properties that do not conform to the `ABNF`, as specified in [RFC5545] section 3.8.3.4. If the value cannot be approximated, Microsoft Exchange fails to import the iCalendar object.

2.2.75 [RFC5545] Section 3.8.3.5 Time Zone URL

V0142:

The specification describes the `TZURL` property.


Microsoft Exchange does not implement the `TZURL` property. Microsoft Exchange does not import or export the `TZURL` property.
2.2.76 [RFC5545] Section 3.8.4.1 Attendee

V0143:

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 ([MS-OXCICAL] section 2.1.3.1.1.20.2) property.


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

V0144:

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


Microsoft Exchange can import a VEVENT representing a meeting request that has no ATTENDEE properties and does not declare the user as the ORGANIZER ([MS-OXCICAL] section 2.1.3.1.1.20.16).

V0145:

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


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

V0146:

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.


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

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

V0147:

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.


Microsoft Exchange exports the ATTENDEE property for participants and non-participants. On import, all ATTENDEE properties are treated as participants or non-participants.
V0148:
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.


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

V0149:
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**, **VTTODO**, or **VJOURNAL** components, and that they MUST NOT be specified on **ATTENDEE** properties within a **VFREEBUSY** or **VALARM** component.


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

V0150:
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.


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

V0151:
The specification states that multiple attendees can be specified by including multiple **ATTENDEE** properties with the calendar component.


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

**2.2.77 [RFC5545] Section 3.8.4.2 Contact**

V0152:
The specification states that non-standard, alternate text representation, and language property parameters can be specified on the **CONTACT** (**[MS-OXICAL]** section 2.1.3.1.1.20.6) property.


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

V0153:
The specification states that the **CONTACT** property can be specified in **VEVENT**, **VTTODO**, **VJOURNAL**, or **VFREEBUSY** components.

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

V0154:

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.  


Microsoft Exchange can import and export the **ALTREP** parameter.

2.2.78 [RFC5545] Section 3.8.4.3 Organizer

V0155:

The specification states that non-standard, language, common name, directory entry reference, and sent by property parameters can be specified on the **ORGANIZER** ([MS-OXCICAL] section 2.1.3.1.1.20.16) property.


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

V0156:

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


Microsoft 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."


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

2.2.79 [RFC5545] Section 3.8.4.4 Recurrence ID

V0157:

The specification states that the default value type for **RECURRENCE-ID** ([MS-OXCICAL] section 2.1.3.1.1.20.20) is **DATE-TIME**, but it can be set to a **DATE** type.


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

V0158:
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.


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

V0159:

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


Microsoft Exchange exports **RECURRENCE-ID** on **VEVENT** components that represent exceptions to a recurring appointment/meeting. On import, Microsoft 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.


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

Microsoft 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).

V0160:

The specification states that when the definition of the recurrence set for a calendar component changes, and hence the **SEQUENCE** ([IM-OXCICAL] section 2.1.3.1.20.22) property value changes, the **RECURRENCE-ID** for a given recurrence instance might also change.


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

V0161:

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.


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

2.2.80 [RFC5545] Section 3.8.4.5 Related To

V0162:
The specification describes the `RELATED-TO` property.


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

2.2.81 [RFC5545] Section 3.8.4.6 Uniform Resource Locator

V0163:

The specification describes the `URL` property.


Microsoft Exchange does not implement the `URL` property. Microsoft Exchange does not import or export the `URL` property.

2.2.82 [RFC5545] Section 3.8.4.7 Unique Identifier

V0164:

The specification states that non-standard property parameters can be specified on the `UID` ([MS-STANICAL] section 2.1.3.1.1.20.26) property.


Microsoft Exchange exports no parameters on the `UID` property. Microsoft Exchange ignores all parameters on the `UID` property.

V0165:

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.


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

On import, Microsoft 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, Microsoft Exchange fails to import the iCalendar object.

V0166:

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.


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

V0167:

The specification states that it is recommended that the identifier's right-hand side contain some domain identifier.

On export, Microsoft Exchange exports any UID property that the calendar user agent sets. On import, Microsoft Exchange can import any valid UID value.

V0168:
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.


On export, Microsoft Exchange exports any UID property that the calendar user agent sets. On import, Microsoft Exchange can import any valid UID.

2.2.83 [RFC5545] Section 3.8.5.1 Exception Date-Times

V0169:
The specification states that the default value type of EXDATE ([MS-OCXICAL] section 2.1.3.1.1.20.13) is DATE-TIME, but it can be set to a DATE type.


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

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

V0170:
The specification states that non-standard, value data type, and time zone identifier property parameters can be specified on the EXDATE property.


Microsoft Exchange exports the TZID parameter.

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

V0171:
The specification states that the EXDATE property can be specified in an iCalendar object that includes a recurring calendar appointment.


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

V0172:
The specification states that multiple instances of the RRULE and EXDATE properties can be specified to define more sophisticated recurrence sets.


See section 2.2.89 and section 2.2.84 for information regarding this statement.

V0173:
The specification states that the **EXDATE** property can be used to exclude the value specified in **DTSTART** ([MS-OXCICAL] section 2.1.3.1.1.20.10). 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.


Microsoft Exchange can export **EXDATE** properties that correspond to the first instance of a recurrence. On import, Microsoft 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.

### 2.2.84 [RFC5545] Section 3.8.5.2 Recurrence Date-Times

V0174:

The specification states that the default value type of **RDATE** ([MS-OXCICAL] section 2.1.3.1.1.20.18) is **DATE-TIME**, but it can be set to a **DATE** or **PERIOD** type.


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

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

Microsoft Exchange does not support the arbitrary creation of instances in recurrences. Microsoft Exchange attempts to match **RDATE** values to **EXDATE** ([MS-OXCICAL] section 2.1.3.1.1.20.13) values and treat these pairs as moved instances conforming to the rules specified in [MS-OXCICAL] section 2.1.3.1.1.20.18. If an **RDATE** cannot be paired with an **EXDATE**, Microsoft Exchange fails to import the iCalendar object.

V0175:

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


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

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

V0176:

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


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

V0177:

The specification states that multiple instances of the **RRULE** ([MS-OXCICAL] section 2.1.3.1.1.20.19) and **EXRULE** properties can be specified to define more sophisticated recurrence sets.

See section 2.2.89 and section 2.2.84 for information regarding this statement.

2.2.85 [RFC5545] Section 3.8.5.3 Recurrence Rule

V0178:

The specification states that non-standard property parameters can be specified on the **RRULE** ([MS-OXCICAL] section 2.1.3.1.1.20.19) property.


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

V0179:

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


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

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.


Microsoft Exchange exports **DTSTART** ([MS-OXCICAL] section 2.1.3.1.1.20.10) and **DTEND** ([MS-OXCICAL] section 2.1.3.1.1.20.8) as floating time for all-day recurring meetings or appointments. Microsoft Exchange does not export **VTIMEZONE** components if the **DTSTART** and **DTEND** properties are expressed in floating time.

On import, Microsoft 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, Microsoft 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, "The duration of a specific recurrence may be modified in an exception component or simply by using an **RDATE** property of **PERIOD** value type."


Microsoft Exchange does not export **PERIOD** values in the **RDATE** property. Instead, Microsoft Exchange represents changes in the duration of an exception using a separate **VEVENT** component with the **RECURRANCE-ID** property. See section 2.1.7 for import behavior.

V0180:

The specification uses **ABNF** notation to describe the format of the **RRULE** property.
On export, Microsoft Exchange conforms to the ABNF, as specified in [RFC5545] section 3.8.5.3.

On import, Microsoft Exchange only supports a subset of RECUR values. This subset is specified in [MS-OXCICAL] section 2.1.3.2 (and all subsections). Microsoft Exchange attempts to convert unsupported RECUR values into a finite number of supported recurrences. If it cannot convert, Microsoft Exchange fails to import the iCalendar object.

V0181:

The specification states, "The BYSECOND, BYMINUTE and BYHOUR rule parts MUST NOT be specified when the associated DTSTART property has a DATE value type. These rule parts MUST be ignored in RECUR values that violate the above requirement."


On import, Microsoft Exchange will fail to import the iCalendar object if the BYSECOND rule part is present and not 0.

2.2.86 [RFC5545] Section 3.8.6.1 Action

V0182:

The specification states that non-standard property parameters can be specified on the ACTION ([MS-OXCICAL] section 2.1.3.1.1.20.62.2) property.


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

V0183:

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


Microsoft Exchange ignores the ACTION property on import.

2.2.87 [RFC5545] Section 3.8.6.2 Repeat Count

V0184:

The specification describes the REPEAT property.


Microsoft Exchange does not implement the REPEAT property. Microsoft 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."


The MUST in this statement is interpreted as being contingent on the alarm triggering more than once. Microsoft Exchange does not export VALARM components that trigger more than once.
2.2.88 [RFC5545] Section 3.8.6.3 Trigger

V0185:

The specification states that the default value type of the `TRIGGER` ([MS-OXCICAL] section 2.1.3.1.1.20.62.1) property is `DURATION` ([MS-OXCICAL] section 2.1.3.1.1.20.12), but that it can be set to `DATE-TIME`.


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

V0186:

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


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

V0187:

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


On import, Microsoft 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.

V0188:

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.


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

V0189:

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.


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

V0190:

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

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

### 2.2.89 [RFC5545] Section 3.8.7.1 Date-Time Created

**V0191:**

The specification describes the **CREATED** ([MS-OXICAL] section 2.1.3.1.1.20.7) property.


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

### 2.2.90 [RFC5545] Section 3.8.7.2 Date-Time Stamp

**V0192:**

The specification states that non-standard property parameters can be specified on the **DTSTAMP** ([MS-OXICAL] section 2.1.3.1.1.20.9) property.


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

**V0193:**

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


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

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

**V0194:**

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


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

### 2.2.91 [RFC5545] Section 3.8.7.3 Last Modified

**V0195:**

The specification describes the **LAST-MODIFIED** ([MS-OXICAL] section 2.1.3.1.1.20.14) property.


Microsoft Exchange does not implement the **LAST-MODIFIED** property. Microsoft Exchange does not import or export the **LAST-MODIFIED** property.
2.2.92 [RFC5545] Section 3.8.7.4 Sequence Number

V0196:

The specification states that non-standard property parameters can be specified on the SEQUENCE ([MS-OXCICAL] section 2.1.3.1.1.20.22) property.


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

V0197:

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


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

On import, Microsoft 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 [RFC5545] section 3.8.7.4, 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."


Microsoft Exchange exports the PidLidAppointmentSequence ([MS-OXPROPS] section 2.25) property to the SEQUENCE property. Clients are responsible for incrementing this value as necessary. For more details, see [MS-OXICAL] section 2.1.3.1.1.20.22.

Microsoft Exchange imports the SEQUENCE property to the PidLidAppointmentSequence property. Clients are responsible for handling out-of-order receipt of meeting updates. For more details, see [MS-OXCICAL] section 2.1.3.1.1.20.22.

2.2.93 [RFC5545] Section 3.8.8.2 Non-standard Properties

V0198:

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


Microsoft 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-OXICAL] section 2.1.3.1 (and all subsections).

V0199:

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

Microsoft 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 2.1.3.1 (and all subsections).

Microsoft Exchange ignores all non-standard properties outside of VEVENT or VCALENDAR components.

V0200:

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.


Microsoft Exchange exports several non-standard properties. Not all of them follow this recommendation. On import, Microsoft Exchange ignores all unrecognized properties, whether or not they follow this recommendation. Microsoft 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 2.1.3.1 (and all subsections).

V0201:

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


Microsoft 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 2.1.3.1 (and all subsections).

2.2.94 [RFC5545] Section 3.8.8.3 Request Status

V0202:

The specification describes the REQUEST-STATUS property.


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

2.2.95 [RFC5545] Section 5 Recommended Practices

V0203:

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


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

V0204:

The specification states when the combination of the RRULE ([MS-OXCICAL] section 2.1.3.1.1.20.19) and RDATE ([MS-OXCICAL] section 2.1.3.1.1.20.18) properties on an iCalendar object produces multiple instances having the same start date/time, they should be collapsed to and considered as one instance.
On export, Microsoft Exchange can export an RDATE property that has the same start date/time as an instance of the recurrence.

On import, Microsoft Exchange does not follow this recommendation. Microsoft Exchange's handling of the RDATE property is documented in section 2.2.84 and [MS-OXCICAL] section 2.1.3.1.1.20.18.

V0205:

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 ([MS-OXCICAL] section 2.1.3.1.1.20.2) 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.

Microsoft Exchange does not enforce this behavior, leaving it to the calendar user agent. Microsoft Exchange does not export the MEMBER parameter, and ignores it on import.

V0206:

The specification states that an implementation can truncate a SUMMARY ([MS-OXCICAL] section 2.1.3.1.1.20.24) property value to 255 characters.

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

V0207:

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.

Microsoft Exchange can export nonzero seconds in DATE-TIME properties. On import, Microsoft Exchange supports nonzero seconds.

V0208:

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

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

V0209:

The specification lists possible English values for the CATEGORIES ([MS-OXCICAL] section 2.1.3.1.1.20.3) property and states that categories can be specified in any registered language.

On export, Microsoft Exchange allows the user to define categories with arbitrary names. Microsoft Exchange can import any value for the CATEGORIES property. However, some processing is performed on the strings during import ([MS-OXCICAL] section 2.1.3.1.1.20.3).
V0210:
The specification lists possible English values for the RESOURCES ([MS-OXCICAL] section 2.1.3.1.1.20.21) property and states that categories can be specified in any registered language.


Microsoft Exchange does not import or export the RESOURCES property.

2.2.96 [RFC5545] Section 8.1 iCalendar Media Type Registration

V0211:
The specification states that the charset, method, component, and optinfo parameters are optional.


<table>
<thead>
<tr>
<th>Parameter</th>
<th>Behavior</th>
</tr>
</thead>
<tbody>
<tr>
<td>charset</td>
<td>This parameter is honored on import and is set to the appropriate character set on export.</td>
</tr>
<tr>
<td>method</td>
<td>For both import and export, only the following values are supported: &quot;REQUEST&quot;, &quot;REPLY&quot;, &quot;CANCEL&quot;, and &quot;COUNTER&quot; (case-insensitive). &quot;PUBLISH&quot; is treated the same as &quot;REQUEST&quot;. On import, if a &quot;text/calendar&quot; 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.</td>
</tr>
<tr>
<td>component</td>
<td>This parameter is ignored on import. It is not set on export.</td>
</tr>
<tr>
<td>optinfo</td>
<td>This parameter is ignored on import. It is not set on export.</td>
</tr>
</tbody>
</table>

V0212:
The specification states, "This media 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 escapement technique. This means that content values can end up encoded twice."


Microsoft Exchange can import "text/calendar" MIME parts that are encoded with base64 encoding. On export, Microsoft Exchange does not encode "text/calendar" MIME parts with base64 encoding.

V0213:
The specification describes the .ics and .ifb file extensions.


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

V0214:
The specification describes the Macintosh file type codes "iCal" and "iFBf".


Microsoft Exchange does not import or export files with the Macintosh file type codes "iCal" or "iFBf".
2.2.97 [RFC5546] Section 2 Interoperability Models

V0215: 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.


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

<table>
<thead>
<tr>
<th>iTIP Method</th>
<th>MIME Part</th>
</tr>
</thead>
<tbody>
<tr>
<td>PUBLISH</td>
<td>Cannot export</td>
</tr>
<tr>
<td>REQUEST</td>
<td>Can export</td>
</tr>
<tr>
<td>REPLY</td>
<td>Can export</td>
</tr>
<tr>
<td>ADD</td>
<td>Cannot export</td>
</tr>
<tr>
<td>CANCEL</td>
<td>Can export</td>
</tr>
<tr>
<td>REFRESH</td>
<td>Cannot export</td>
</tr>
<tr>
<td>COUNTER</td>
<td>Can export</td>
</tr>
<tr>
<td>DECLINE-COUNTER</td>
<td>Cannot export</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>iTIP Method</th>
<th>MIME Part</th>
</tr>
</thead>
<tbody>
<tr>
<td>PUBLISH</td>
<td>Can import (Treated as a REQUEST)</td>
</tr>
<tr>
<td>REQUEST</td>
<td>Can import</td>
</tr>
<tr>
<td>REPLY</td>
<td>Can import</td>
</tr>
<tr>
<td>ADD</td>
<td>Cannot import (rendered as raw content lines in message body)</td>
</tr>
<tr>
<td>CANCEL</td>
<td>Can import</td>
</tr>
<tr>
<td>REFRESH</td>
<td>Cannot import (rendered as raw content lines in message body)</td>
</tr>
<tr>
<td>COUNTER</td>
<td>Can import</td>
</tr>
<tr>
<td>DECLINE-COUNTER</td>
<td>Cannot import (rendered as raw content lines in message body)</td>
</tr>
</tbody>
</table>

2.2.98 [RFC5546] Section 2.1.3 Acting on Behalf of Other Calendar Users

V0216:

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.

Microsoft Exchange does not support the role of "CHAIR", and does not export an ATTENDEE ([MS-OXCICAL] section 2.1.3.1.1.20.2) property with a ROLE of "CHAIR". On import, Microsoft Exchange treats ATTENDEE properties with a ROLE of "CHAIR" as if ROLE were "REQ-PARTICIPANT".

V0217:

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.


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

2.2.99 [RFC5546] Section 2.1.4 Component Revisions

C0020:

The specification describes rules for incrementing the SEQUENCE ([MS-OXCICAL] section 2.1.3.1.1.20.22) property.


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

2.2.100 [RFC5546] Section 2.1.5 Message Sequencing

C0021:

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


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

2.2.101 [RFC5546] Section 3 Application Protocol Elements

V0218:

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


Microsoft Exchange does not export VTODO, VJOURNAL, or VFREEBUSY components, and ignores them on import. Microsoft Exchange's support for each method is specified in section 2.2.97.

2.2.102 [RFC5546] Section 3.1.1 VCALENDAR

V0219:

The specification specifies the allowed number of instances of components and properties in the following table.
<table>
<thead>
<tr>
<th>Component/property</th>
<th>Presence</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>CALSCALE</td>
<td>0 or 1</td>
<td></td>
</tr>
<tr>
<td>PRODID</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>VERSION</td>
<td>1</td>
<td>Value MUST be &quot;2.0&quot;</td>
</tr>
<tr>
<td>IANA-PROPERTY</td>
<td>0+</td>
<td></td>
</tr>
<tr>
<td>X-PROPERTY</td>
<td>0+</td>
<td></td>
</tr>
</tbody>
</table>


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

<table>
<thead>
<tr>
<th>Component/property</th>
<th>Number of instances exported</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>CALSCALE</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>PRODID</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>VERSION</td>
<td>1</td>
<td>Value is &quot;2.0&quot;</td>
</tr>
<tr>
<td>IANA-PROPERTY</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>X-PROPERTY</td>
<td>0-19</td>
<td></td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Component/property</th>
<th>Number of instances imported</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>CALSCALE</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>PRODID</td>
<td>0-1</td>
<td></td>
</tr>
<tr>
<td>VERSION</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>IANA-PROPERTY</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>X-PROPERTY</td>
<td>0</td>
<td></td>
</tr>
</tbody>
</table>

2.2.103 [RFC5546] Section 3.1.2 VTIMEZONE

V0220:

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

<table>
<thead>
<tr>
<th>Component/property</th>
<th>Presence</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>VTIMEZONE</td>
<td>0+</td>
<td>MUST be present if any date/time refers to time zone.</td>
</tr>
<tr>
<td>+DAYLIGHT</td>
<td>0+</td>
<td>MUST be one or more of either STANDARD or DAYLIGHT.</td>
</tr>
<tr>
<td>Component/property</td>
<td>Presence</td>
<td>Notes</td>
</tr>
<tr>
<td>--------------------</td>
<td>----------</td>
<td>-------</td>
</tr>
<tr>
<td>••COMMENT</td>
<td>0 or 1</td>
<td></td>
</tr>
<tr>
<td>••DTSTART</td>
<td>1</td>
<td>MUST be local time format.</td>
</tr>
<tr>
<td>••RDATE</td>
<td>0+</td>
<td>If present, RRULE MUST NOT be present.</td>
</tr>
<tr>
<td>••RRULE</td>
<td>0+</td>
<td>If present, RDATE MUST NOT be present.</td>
</tr>
<tr>
<td>••TZNAME</td>
<td>0 or 1</td>
<td></td>
</tr>
<tr>
<td>••TZOFFSETFROM</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>••TZOFFSETTO</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>••IANA-PROPERTY</td>
<td>0+</td>
<td></td>
</tr>
<tr>
<td>••X-PROPERTY</td>
<td>0+</td>
<td></td>
</tr>
<tr>
<td>•LAST-MODIFIED</td>
<td>0 or 1</td>
<td></td>
</tr>
<tr>
<td>••STANDARD</td>
<td>0+</td>
<td>MUST be one or more of either STANDARD or DAYLIGHT.</td>
</tr>
<tr>
<td>••COMMENT</td>
<td>0 or 1</td>
<td></td>
</tr>
<tr>
<td>••DTSTART</td>
<td>1</td>
<td>MUST be local time format.</td>
</tr>
<tr>
<td>••RDATE</td>
<td>0+</td>
<td>If present, RRULE MUST NOT be present.</td>
</tr>
<tr>
<td>••RRULE</td>
<td>0+</td>
<td>If present, RDATE MUST NOT be present.</td>
</tr>
<tr>
<td>••TZNAME</td>
<td>0 or 1</td>
<td></td>
</tr>
<tr>
<td>••TZOFFSETFROM</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>••TZOFFSETTO</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>••IANA-PROPERTY</td>
<td>0+</td>
<td></td>
</tr>
<tr>
<td>••X-PROPERTY</td>
<td>0+</td>
<td></td>
</tr>
<tr>
<td>•TZID</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>•TZURL</td>
<td>0 or 1</td>
<td></td>
</tr>
<tr>
<td>••IANA-PROPERTY</td>
<td>0+</td>
<td></td>
</tr>
<tr>
<td>••X-PROPERTY</td>
<td>0+</td>
<td></td>
</tr>
</tbody>
</table>

Exchange 2007, Exchange 2010

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

<table>
<thead>
<tr>
<th>Component/property</th>
<th>Number of instances exported</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>VTIMEZONE</td>
<td>0+</td>
<td></td>
</tr>
<tr>
<td>•DAYLIGHT</td>
<td>0-1</td>
<td></td>
</tr>
<tr>
<td>••COMMENT</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>••DTSTART</td>
<td>1</td>
<td></td>
</tr>
</tbody>
</table>
The following table specifies the number of instances Microsoft Exchange imports for these components and properties in a VTIMEZONE component. If more instances are found, Microsoft Exchange fails to import the iCalendar object. If fewer instances than required are found, Microsoft Exchange fails to import the iCalendar object.

<table>
<thead>
<tr>
<th>Component/property</th>
<th>Number of instances imported</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>VTZNAME</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>TZOFFSETFROM</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>TZOFFSETTO</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>IANA-PROPERTY</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>X-PROPERTY</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>LAST-MODIFIED</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>STANDARD</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>COMMENT</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>DTSTART</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>RDATE</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>RRULE</td>
<td>0-1</td>
<td></td>
</tr>
<tr>
<td>TZNAME</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>TZOFFSETFROM</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>TZOFFSETTO</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>IANA-PROPERTY</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>X-PROPERTY</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>TZID</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>TZURL</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>IANA-PROPERTY</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>X-PROPERTY</td>
<td>0</td>
<td></td>
</tr>
</tbody>
</table>

VTIMEZONE components that contain no STANDARD or DAYLIGHT components are ignored.

Values in UTC are treated as local time.
Exchange 2010 SP1, Exchange 2013, Exchange 2016, Exchange 2019

Exchange 2010 SP1, Exchange 2013, Exchange 2016, and Exchange 2019 import and export **VTIMEZONE** components in the same manner as Exchange 2010, except for the **DAYLIGHT** and **STANDARD** properties. The following table specifies the number of instances that Exchange 2010 SP1, Exchange 2013, Exchange 2016, and Exchange 2019 import for the **DAYLIGHT** and **STANDARD** components.

<table>
<thead>
<tr>
<th>Component/property</th>
<th>Number of instances imported</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>•DAYLIGHT</td>
<td>0+</td>
<td>VTIMEZONE components that contain no <strong>STANDARD</strong> or <strong>DAYLIGHT</strong> components are ignored.</td>
</tr>
<tr>
<td>•STANDARD</td>
<td>0+</td>
<td>VTIMEZONE components that contain no <strong>STANDARD</strong> or <strong>DAYLIGHT</strong> components are ignored.</td>
</tr>
</tbody>
</table>

Exchange 2010 SP1, Exchange 2013, Exchange 2016, Exchange 2019

Exchange 2010 SP1, Exchange 2013, Exchange 2016, and Exchange 2019 import and export **VTIMEZONE** components in the same manner as Exchange 2010, except for the **DAYLIGHT** and **STANDARD** properties. The following table specifies the number of instances that Exchange 2010 SP1, Exchange 2013, Exchange 2016, and Exchange 2019 import for the **DAYLIGHT** and **STANDARD** components.

<table>
<thead>
<tr>
<th>Component/property</th>
<th>Number of instances imported</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>•DAYLIGHT</td>
<td>0+</td>
<td>VTIMEZONE components that contain no <strong>STANDARD</strong> or <strong>DAYLIGHT</strong> components are ignored.</td>
</tr>
<tr>
<td>•STANDARD</td>
<td>0+</td>
<td>VTIMEZONE components that contain no <strong>STANDARD</strong> or <strong>DAYLIGHT</strong> components are ignored.</td>
</tr>
</tbody>
</table>
2.2.104  [RFC5546] Section 3.1.3 VALARM

V0221:

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

<table>
<thead>
<tr>
<th>Component/property</th>
<th>Presence</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>VALARM</td>
<td>0+</td>
<td></td>
</tr>
<tr>
<td>• ACTION</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>• ATTACH</td>
<td>0+</td>
<td></td>
</tr>
<tr>
<td>• ATTENDEE</td>
<td>0+</td>
<td></td>
</tr>
<tr>
<td>• DESCRIPTION</td>
<td>0 or 1</td>
<td>If present, REPEAT MUST be present.</td>
</tr>
<tr>
<td>• DURATION</td>
<td>0 or 1</td>
<td>If present, DURATION MUST be present.</td>
</tr>
<tr>
<td>• REPEAT</td>
<td>0 or 1</td>
<td></td>
</tr>
<tr>
<td>• SUMMARY</td>
<td>0 or 1</td>
<td></td>
</tr>
<tr>
<td>• TRIGGER</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>• IANA-PROPERTY</td>
<td>0+</td>
<td></td>
</tr>
<tr>
<td>• X-PROPERTY</td>
<td>0+</td>
<td></td>
</tr>
</tbody>
</table>


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

<table>
<thead>
<tr>
<th>Component/property</th>
<th>Number of instances exported</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>VALARM</td>
<td>0-1</td>
<td></td>
</tr>
<tr>
<td>• ACTION</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>• ATTACH</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>• ATTENDEE</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>• DESCRIPTION</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>• DURATION</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>• REPEAT</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>• SUMMARY</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>• TRIGGER</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>• IANA-PROPERTY</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>• X-PROPERTY</td>
<td>0</td>
<td></td>
</tr>
</tbody>
</table>
The following table specifies the number of instances Microsoft Exchange imports for these components and properties in a VALARM component. If more instances are found, Microsoft Exchange fails to import the iCalendar object. If fewer instances than required are found, Microsoft Exchange fails to import the iCalendar object.

<table>
<thead>
<tr>
<th>Component/property</th>
<th>Number of instances imported</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>VALARM</td>
<td>0-1</td>
<td></td>
</tr>
<tr>
<td>•ACTION</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>•ATTACH</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>•ATTENDEE</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>•DESCRIPTION</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>•DURATION</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>•REPEAT</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>•SUMMARY</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>•TRIGGER</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>•IANA-PROPERTY</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>•X-PROPERTY</td>
<td>0</td>
<td></td>
</tr>
</tbody>
</table>

2.2.105 [RFC5546] Section 3.2 Methods for VEVENT Calendar Components

V0222:

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


Microsoft Exchange support for the listed methods are specified in section 2.2.97.

2.2.106 [RFC5546] Section 3.2.1 PUBLISH

V0223:

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


Microsoft Exchange imports and exports PUBLISH-type iCalendar objects as REQUEST-type iCalendar objects. See section 2.2.107 for details.

2.2.107 [RFC5546] Section 3.2.2 REQUEST

V0224:

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 ([MS-OXCICAL] section 2.1.3.1.1.20.26) property.
On import, Microsoft 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** ([MS-OXCICAL] section 2.1.3.1.1.20.19) property and no **RECURRERSSE-ID** ([MS-OXCICAL] section 2.1.3.1.1.20.20) property.

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

C0022:

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.


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

V0225:

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

<table>
<thead>
<tr>
<th>Component/Property</th>
<th>Presence</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>METHOD</td>
<td>1</td>
<td>MUST be &quot;REQUEST&quot;.</td>
</tr>
<tr>
<td><strong>VEVENT</strong></td>
<td>1+</td>
<td>All components MUST have the same <strong>UID</strong>.</td>
</tr>
<tr>
<td>•ATTENDEEE</td>
<td>1+</td>
<td></td>
</tr>
<tr>
<td>•DTSTAMP</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>•DTSTART</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>•ORGANIZER</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>•SEQUENCE</td>
<td>0 or 1</td>
<td>MUST be present if value is greater than 0, can be present if 0.</td>
</tr>
<tr>
<td>•SUMMARY</td>
<td>1</td>
<td>Can be null.</td>
</tr>
<tr>
<td>•UID</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>•ATTACH</td>
<td>0+</td>
<td></td>
</tr>
<tr>
<td>•CATEGORIES</td>
<td>0 or 1</td>
<td>This property can contain a list of values.</td>
</tr>
<tr>
<td>•CLASS</td>
<td>0 or 1</td>
<td></td>
</tr>
<tr>
<td>•COMMENT</td>
<td>0 or 1</td>
<td></td>
</tr>
<tr>
<td>•CONTACT</td>
<td>0+</td>
<td></td>
</tr>
<tr>
<td>•CREATED</td>
<td>0 or 1</td>
<td></td>
</tr>
<tr>
<td>•DESCRIPTION</td>
<td>0 or 1</td>
<td>Can be null.</td>
</tr>
<tr>
<td>•DTEND</td>
<td>0 or 1</td>
<td>If present <strong>DURATION</strong> MUST NOT be present.</td>
</tr>
<tr>
<td>Component/Property</td>
<td>Presence</td>
<td>Notes</td>
</tr>
<tr>
<td>--------------------</td>
<td>----------</td>
<td>-------</td>
</tr>
<tr>
<td><strong>DURATION</strong></td>
<td>0 or 1</td>
<td>If present <strong>DTEND</strong> MUST NOT be present.</td>
</tr>
<tr>
<td><strong>EXDATE</strong></td>
<td>0+</td>
<td></td>
</tr>
<tr>
<td><strong>EXRULE</strong></td>
<td>0+</td>
<td></td>
</tr>
<tr>
<td><strong>GEO</strong></td>
<td>0 or 1</td>
<td></td>
</tr>
<tr>
<td><strong>LAST-MODIFIED</strong></td>
<td>0 or 1</td>
<td></td>
</tr>
<tr>
<td><strong>LOCATION</strong></td>
<td>0 or 1</td>
<td></td>
</tr>
<tr>
<td><strong>PRIORITY</strong></td>
<td>0 or 1</td>
<td></td>
</tr>
<tr>
<td><strong>RDATE</strong></td>
<td>0+</td>
<td></td>
</tr>
<tr>
<td><strong>RECURRENCE-ID</strong></td>
<td>0 or 1</td>
<td>Only if referring to an instance of a recurring calendar component. Otherwise it MUST NOT be present.</td>
</tr>
<tr>
<td><strong>RELATED-TO</strong></td>
<td>0+</td>
<td></td>
</tr>
<tr>
<td><strong>REQUEST-STATUS</strong></td>
<td>0+</td>
<td></td>
</tr>
<tr>
<td><strong>RESOURCES</strong></td>
<td>0 or 1</td>
<td>This property can contain a list of values.</td>
</tr>
<tr>
<td><strong>RRULE</strong></td>
<td>0+</td>
<td></td>
</tr>
<tr>
<td><strong>STATUS</strong></td>
<td>0 or 1</td>
<td>Can be &quot;TENTATIVE&quot; or &quot;CONFIRMED&quot;.</td>
</tr>
<tr>
<td><strong>TRANSP</strong></td>
<td>0 or 1</td>
<td></td>
</tr>
<tr>
<td><strong>URL</strong></td>
<td>0 or 1</td>
<td></td>
</tr>
<tr>
<td><strong>IANA-PROPERTY</strong></td>
<td>0+</td>
<td></td>
</tr>
<tr>
<td><strong>X-PROPERTY</strong></td>
<td>0+</td>
<td></td>
</tr>
<tr>
<td><strong>VALARM</strong></td>
<td>0+</td>
<td></td>
</tr>
<tr>
<td><strong>VTIMEZONE</strong></td>
<td>0+</td>
<td>MUST be present if any date/time refers to a time zone.</td>
</tr>
<tr>
<td><strong>IANA-COMPONENT</strong></td>
<td>0+</td>
<td></td>
</tr>
<tr>
<td><strong>X-COMPONENT</strong></td>
<td>0+</td>
<td></td>
</tr>
<tr>
<td><strong>VFREEBUSY</strong></td>
<td>0</td>
<td></td>
</tr>
<tr>
<td><strong>VJOURNAL</strong></td>
<td>0</td>
<td></td>
</tr>
<tr>
<td><strong>VTTODO</strong></td>
<td>0</td>
<td></td>
</tr>
</tbody>
</table>


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

<table>
<thead>
<tr>
<th>Component/Property</th>
<th>Number of instances exported</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>METHOD</strong></td>
<td>1</td>
<td>Is set to &quot;REQUEST&quot;.</td>
</tr>
<tr>
<td><strong>VEVENT</strong></td>
<td>1+</td>
<td>All components have the same <strong>UID</strong> value.</td>
</tr>
<tr>
<td>Component/Property</td>
<td>Number of instances exported</td>
<td>Notes</td>
</tr>
<tr>
<td>--------------------</td>
<td>-----------------------------</td>
<td>-------</td>
</tr>
<tr>
<td>•ATTENDEE</td>
<td>0+</td>
<td>See section 2.1.7.</td>
</tr>
<tr>
<td>•DTSTAMP</td>
<td>0-1</td>
<td></td>
</tr>
<tr>
<td>•DTSTART</td>
<td>0-1</td>
<td></td>
</tr>
<tr>
<td>•ORGANIZER</td>
<td>0-1</td>
<td></td>
</tr>
<tr>
<td>•SEQUENCE</td>
<td>0-1</td>
<td>Can be 0.</td>
</tr>
<tr>
<td>•SUMMARY</td>
<td>0-1</td>
<td>Can be an empty string.</td>
</tr>
<tr>
<td>•UID</td>
<td>0-1</td>
<td></td>
</tr>
<tr>
<td>•ATTACH</td>
<td>0+</td>
<td></td>
</tr>
<tr>
<td>•CATEGORIES</td>
<td>0+</td>
<td>Can be a list.</td>
</tr>
<tr>
<td>•CLASS</td>
<td>0-1</td>
<td></td>
</tr>
<tr>
<td>•COMMENT</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>•CONTACT</td>
<td>0+</td>
<td></td>
</tr>
<tr>
<td>•CREATED</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>•DESCRIPTION</td>
<td>0-1</td>
<td>Can be an empty string.</td>
</tr>
<tr>
<td>•DTEND</td>
<td>0-1</td>
<td></td>
</tr>
<tr>
<td>•DURATION</td>
<td>0-1</td>
<td></td>
</tr>
<tr>
<td>•EXDATE</td>
<td>0+</td>
<td></td>
</tr>
<tr>
<td>•EXRULE</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>•GEO</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>•LAST-MODIFIED</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>•LOCATION</td>
<td>0-1</td>
<td></td>
</tr>
<tr>
<td>•PRIORITY</td>
<td>0-1</td>
<td></td>
</tr>
<tr>
<td>•RDATE</td>
<td>0+</td>
<td></td>
</tr>
<tr>
<td>•RECURRENCE-ID</td>
<td>0-1</td>
<td></td>
</tr>
<tr>
<td>•RELATED-TO</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>•REQUEST-STATUS</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>•RESOURCES</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>•RRULE</td>
<td>0-1</td>
<td></td>
</tr>
<tr>
<td>•STATUS</td>
<td>0-1</td>
<td></td>
</tr>
<tr>
<td>•TRANSPIP</td>
<td>0-1</td>
<td></td>
</tr>
<tr>
<td>•URL</td>
<td>0</td>
<td></td>
</tr>
</tbody>
</table>
The following table specifies the number of instances Microsoft Exchange imports for these components and properties in a REQUEST-type iCalendar object. If more instances are found, Microsoft Exchange fails to import the iCalendar object. If fewer instances than required are found, Microsoft Exchange fails to import the iCalendar object.

<table>
<thead>
<tr>
<th>Component/Property</th>
<th>Number of instances exported</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>METHOD</td>
<td>1</td>
<td>MUST be set to &quot;REQUEST&quot;.</td>
</tr>
<tr>
<td>VEVENT</td>
<td>1+</td>
<td>All components MUST have the same UID value.</td>
</tr>
<tr>
<td>•ATTENDEE</td>
<td>0+</td>
<td></td>
</tr>
<tr>
<td>•DTSTAMP</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>•DTSTART</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>•ORGANIZER</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>•SEQUENCE</td>
<td>0-1</td>
<td>Can import 0.</td>
</tr>
<tr>
<td>•SUMMARY</td>
<td>1</td>
<td>Can import an empty string.</td>
</tr>
<tr>
<td>•UID</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>•ATTACH</td>
<td>0+</td>
<td></td>
</tr>
<tr>
<td>•CATEGORIES</td>
<td>0-1</td>
<td>Can import a list.</td>
</tr>
<tr>
<td>•CLASS</td>
<td>0-1</td>
<td></td>
</tr>
<tr>
<td>•COMMENT</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>•CONTACT</td>
<td>0+</td>
<td></td>
</tr>
<tr>
<td>•CREATED</td>
<td>0-1</td>
<td></td>
</tr>
<tr>
<td>•DESCRIPTION</td>
<td>0-1</td>
<td>Can import an empty string.</td>
</tr>
<tr>
<td>•DTEND</td>
<td>1</td>
<td>If DTEND and DURATION are present, DTEND is used.</td>
</tr>
<tr>
<td>Component/Property</td>
<td>Number of instances exported</td>
<td>Notes</td>
</tr>
<tr>
<td>------------------------</td>
<td>------------------------------</td>
<td>----------------------------------------------------------------------</td>
</tr>
<tr>
<td>• DURATION</td>
<td>0</td>
<td>If DTEND and DURATION are present, DTEND is used.</td>
</tr>
<tr>
<td>• EXDATE</td>
<td>0-1</td>
<td></td>
</tr>
<tr>
<td>• EXRULE</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>• GEO</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>• LAST-MODIFIED</td>
<td>0-1</td>
<td></td>
</tr>
<tr>
<td>• LOCATION</td>
<td>0-1</td>
<td></td>
</tr>
<tr>
<td>• PRIORITY</td>
<td>0-1</td>
<td></td>
</tr>
<tr>
<td>• RDATE</td>
<td>0-2</td>
<td></td>
</tr>
<tr>
<td>• RECURRENCE-ID</td>
<td>0-1</td>
<td>Assumed to refer to an instance of a recurring appointment.</td>
</tr>
<tr>
<td>• RELATED-TO</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>• REQUEST-STATUS</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>• RESOURCES</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>• RRULE</td>
<td>0-1</td>
<td></td>
</tr>
<tr>
<td>• STATUS</td>
<td>0</td>
<td>Can import &quot;TENTATIVE&quot; or &quot;CONFIRMED&quot;.</td>
</tr>
<tr>
<td>• TRANSP</td>
<td>0-1</td>
<td></td>
</tr>
<tr>
<td>• URL</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>• IANA-PROPERTY</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>• X-PROPERTY</td>
<td>0-34</td>
<td></td>
</tr>
<tr>
<td>• VALARM</td>
<td>0-1</td>
<td></td>
</tr>
<tr>
<td>VTIMEZONE</td>
<td>0+</td>
<td>If a TZID references an undeclared VTIMEZONE, a default time zone is used.</td>
</tr>
<tr>
<td>IANA-COMPONENT</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>X-COMPONENT</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>VFREEBUSY</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>VJOURNAL</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>VTTODO</td>
<td>0</td>
<td></td>
</tr>
</tbody>
</table>

2.2.108 [RFC5546] Section 3.2.2.1 Rescheduling an Event

V0226:

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

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

2.2.109 [RFC5546] Section 3.2.2.2 Updating or Reconfirmation of an Event

V0227:

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


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

2.2.110 [RFC5546] Section 3.2.2.3 Delegating an Event to Another CU

C0023:

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


It is assumed that the "MUST" statements in this section are contingent on the implementation choosing to support delegation. Microsoft Exchange does not implement the type of delegation specified in [RFC5546] section 3.2.2.3.

V0228:

The specification states that the delegator MUST send a REPLY method to the organizer with the delegator’s ATTENDEE ([MS-OXICAL] section 2.1.3.1.1.20.2) property PARTSTAT parameter set to "delegated". In addition, the DELEGATED-TO parameter MUST be included with the calendar address of the delegate.


Microsoft Exchange does not implement the type of delegation specified in [RFC5546] section 3.2.2.3. On import, Microsoft 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.

2.2.111 [RFC5546] Section 3.2.2.5 Sending on Behalf of the Organizer

V0229:

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.


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

2.2.112 [RFC5546] Section 3.2.2.6 Forwarding to an Uninvited CU

C0024:
The specification describes an attendee forwarding a meeting invitation to another calendar user.


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

2.2.113 [RFC5546] Section 3.2.2.7 Updating Attendee Status

C0025:

The specification describes rules methods of updating attendee status.


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

2.2.114 [RFC5546] Section 3.2.3 REPLY

V0230:

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.


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

V0231:

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


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

V0232:

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


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

V0233:

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

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

C0026:

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.


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

V0234:

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

<table>
<thead>
<tr>
<th>Component/Property</th>
<th>Presence</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>METHOD</td>
<td>1</td>
<td>MUST be “REPLY”</td>
</tr>
<tr>
<td>VEVENT</td>
<td>1+</td>
<td>All components MUST have the same UID</td>
</tr>
<tr>
<td>•ATTENDEE</td>
<td>1</td>
<td>MUST be the address of the attendee replying.</td>
</tr>
<tr>
<td>•DTSTAMP</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>•ORGANIZER</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>•RECURRENCE-ID</td>
<td>0 or 1</td>
<td>Only if referring to an instance of a recurring calendar component. Otherwise it MUST NOT be present.</td>
</tr>
<tr>
<td>•UID</td>
<td>1</td>
<td>MUST be the UID of the original REQUEST</td>
</tr>
<tr>
<td>•SEQUENCE</td>
<td>0 or 1</td>
<td>MUST if non-zero, MUST be the sequence number of the original REQUEST. Can be present if 0.</td>
</tr>
<tr>
<td>•ATTACH</td>
<td>0+</td>
<td></td>
</tr>
<tr>
<td>•CATEGORIES</td>
<td>0 or 1</td>
<td>This property can contain a list of values</td>
</tr>
<tr>
<td>•CLASS</td>
<td>0 or 1</td>
<td></td>
</tr>
<tr>
<td>•COMMENT</td>
<td>0 or 1</td>
<td></td>
</tr>
<tr>
<td>•CONTACT</td>
<td>0+</td>
<td></td>
</tr>
<tr>
<td>•CREATED</td>
<td>0 or 1</td>
<td></td>
</tr>
<tr>
<td>•DESCRIPTION</td>
<td>0 or 1</td>
<td></td>
</tr>
<tr>
<td>•DTEND</td>
<td>0 or 1</td>
<td>If present, DURATION MUST NOT be present.</td>
</tr>
<tr>
<td>•DTSTART</td>
<td>0 or 1</td>
<td></td>
</tr>
<tr>
<td>•DURATION</td>
<td>0 or 1</td>
<td>If present, DTEND MUST NOT be present.</td>
</tr>
<tr>
<td>•EXDATE</td>
<td>0+</td>
<td></td>
</tr>
<tr>
<td>•EXRULE</td>
<td>0+</td>
<td></td>
</tr>
<tr>
<td>•GEO</td>
<td>0 or 1</td>
<td></td>
</tr>
</tbody>
</table>
### Component/Property Presence Notes

- **LAST-MODIFIED** 0 or 1
- **LOCATION** 0 or 1
- **PRIORITY** 0 or 1
- **RDATE** 0+
- **RELATED-TO** 0+
- **RESOURCES** 0 or 1 This property can contain a list of values.
- **REQUEST-STATUS** 0+
- **RRULE** 0+
- **STATUS** 0 or 1
- **SUMMARY** 0 or 1
- **TRANSP** 0 or 1
- **URL** 0 or 1
- **IANA-PROPERTY** 0+
- **X-PROPERTY** 0+
- **VTIMEZONE** 0 or 1 1 MUST be present if any date/time refers to a time zone.
- **IANA-COMPONENT** 0+
- **X-COMPONENT** 0+
- **VALARM** 0
- **VFREEBUSY** 0
- **VJOURNAL** 0
- **VTODO** 0

---


The following table specifies the number of instances Microsoft 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 Microsoft Exchange only exports one VEVENT in a REPLY.
- **ATTENDEE** 1 Is set to the address of the sender.
- **DTSTAMP** 1
- **ORGANIZER** 0 See section 2.1.8.
- **RECURRENCE-ID** 0-1 Only if referring to an instance of a recurring calendar component. Otherwise it MUST NOT be present.
<table>
<thead>
<tr>
<th>Component/Property</th>
<th>Presence</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>•UID</td>
<td>1</td>
<td>Same value as the original REQUEST.</td>
</tr>
<tr>
<td>•SEQUENCE</td>
<td>0-1</td>
<td>Used to resolve out-of-order delivery of messages.</td>
</tr>
<tr>
<td>•ATTACH</td>
<td>0+</td>
<td></td>
</tr>
<tr>
<td>•CATEGORIES</td>
<td>0-1</td>
<td>Can be a list.</td>
</tr>
<tr>
<td>•CLASS</td>
<td>0-1</td>
<td></td>
</tr>
<tr>
<td>•COMMENT</td>
<td>0-1</td>
<td></td>
</tr>
<tr>
<td>•CONTACT</td>
<td>0-1</td>
<td></td>
</tr>
<tr>
<td>•CREATED</td>
<td>0-1</td>
<td></td>
</tr>
<tr>
<td>•DESCRIPTION</td>
<td>0-1</td>
<td></td>
</tr>
<tr>
<td>•DTEND</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>•DTSTART</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>•DURATION</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>•EXDATE</td>
<td>0-1</td>
<td></td>
</tr>
<tr>
<td>•EXRULE</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>•GEO</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>•LAST-MODIFIED</td>
<td>0-1</td>
<td></td>
</tr>
<tr>
<td>•LOCATION</td>
<td>0-1</td>
<td></td>
</tr>
<tr>
<td>•PRIORITY</td>
<td>0-1</td>
<td></td>
</tr>
<tr>
<td>•RDATE</td>
<td>0-2</td>
<td></td>
</tr>
<tr>
<td>•RELATED-TO</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>•RESOURCES</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>•REQUEST-STATUS</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>•RRULE</td>
<td>0-1</td>
<td></td>
</tr>
<tr>
<td>•STATUS</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>•TRANSP</td>
<td>0-1</td>
<td></td>
</tr>
<tr>
<td>•URL</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>•IANA-PROPERTY</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>•X-PROPERTY</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>•VALARM</td>
<td>0-1</td>
<td></td>
</tr>
<tr>
<td>VTIMEZONE</td>
<td>0-1</td>
<td>A VTIMEZONE is exported for each unique TZID parameter in the iCalendar object.</td>
</tr>
<tr>
<td>IANA-COMPONENT</td>
<td>0</td>
<td></td>
</tr>
</tbody>
</table>
The following table specifies the number of instances Microsoft Exchange imports for these components and properties in a REPLY-type iCalendar object. If more instances are found, Microsoft Exchange fails to import the iCalendar object. If fewer instances than required are found, Microsoft Exchange fails to import the iCalendar object.

<table>
<thead>
<tr>
<th>Component/Property</th>
<th>Number of instances imported</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>X-COMPONENT</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>VFREEBUSY</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>VJOURNAL</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>VTODO</td>
<td>0</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Component/Property</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>METHOD</td>
<td>MUST be set to &quot;REPLY&quot;.</td>
</tr>
<tr>
<td>VEVENT</td>
<td>Microsoft Exchange only imports the first VEVENT.</td>
</tr>
<tr>
<td>•ATTENDEE</td>
<td>Exactly one ATTENDEE property MUST have the PARTSTAT parameter set or the import fails.</td>
</tr>
<tr>
<td>•DTSTAMP</td>
<td>0-1</td>
</tr>
<tr>
<td>•ORGANIZER</td>
<td>0-1</td>
</tr>
<tr>
<td>•RECURRENCE-ID</td>
<td>0-1</td>
</tr>
<tr>
<td>•UID</td>
<td>1</td>
</tr>
<tr>
<td>•SEQUENCE</td>
<td>0-1</td>
</tr>
<tr>
<td>•ATTACH</td>
<td>0+</td>
</tr>
<tr>
<td>•CATEGORIES</td>
<td>0+</td>
</tr>
<tr>
<td>•CLASS</td>
<td>0-1</td>
</tr>
<tr>
<td>•COMMENT</td>
<td>0-1</td>
</tr>
<tr>
<td>•CONTACT</td>
<td>0+</td>
</tr>
<tr>
<td>•CREATED</td>
<td>0</td>
</tr>
<tr>
<td>•DESCRIPTION</td>
<td>0-1</td>
</tr>
<tr>
<td>•DTEND</td>
<td>0-1</td>
</tr>
<tr>
<td>•DTSTART</td>
<td>1</td>
</tr>
<tr>
<td>•DURATION</td>
<td>0-1</td>
</tr>
<tr>
<td>•EXDATE</td>
<td>0+</td>
</tr>
<tr>
<td>•EXRULE</td>
<td>0</td>
</tr>
<tr>
<td>•GEO</td>
<td>0</td>
</tr>
<tr>
<td>•LAST-MODIFIED</td>
<td>0</td>
</tr>
<tr>
<td>Component/Property</td>
<td>Number of instances imported</td>
</tr>
<tr>
<td>--------------------</td>
<td>-----------------------------</td>
</tr>
<tr>
<td>LOCATION</td>
<td>0-1</td>
</tr>
<tr>
<td>PRIORITY</td>
<td>0-1</td>
</tr>
<tr>
<td>RDATE</td>
<td>0+</td>
</tr>
<tr>
<td>RELATED-TO</td>
<td>0</td>
</tr>
<tr>
<td>RESOURCES</td>
<td>0</td>
</tr>
<tr>
<td>REQUEST-STATUS</td>
<td>0</td>
</tr>
<tr>
<td>RRULE</td>
<td>0-1</td>
</tr>
<tr>
<td>STATUS</td>
<td>0-1</td>
</tr>
<tr>
<td>TRANSP</td>
<td>0-1</td>
</tr>
<tr>
<td>URL</td>
<td>0</td>
</tr>
<tr>
<td>IANA-PROPERTY</td>
<td>0</td>
</tr>
<tr>
<td>X-PROPERTY</td>
<td>0+</td>
</tr>
<tr>
<td>VALARM</td>
<td>0-1</td>
</tr>
<tr>
<td>VTIMEZONE</td>
<td>0+</td>
</tr>
<tr>
<td>IANA-COMPONENT</td>
<td>0</td>
</tr>
<tr>
<td>X-COMPONENT</td>
<td>0</td>
</tr>
<tr>
<td>VFREEBUSY</td>
<td>0</td>
</tr>
<tr>
<td>VJOURNAL</td>
<td>0</td>
</tr>
<tr>
<td>VTTODO</td>
<td>0</td>
</tr>
</tbody>
</table>

2.2.115 [RFC5546] Section 3.2.4 ADD

V0235:
The specification describes the "ADD" value for the METHOD parameter.

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

2.2.116 [RFC5546] Section 3.2.5 CANCEL

C0027:
The specification describes an option for cancelling a sequence of instances of a recurring VEVENT calendar component by specifying multiple RECURRENCE-ID ([MS-OXCICAL] section
2.1.3.1.1.20.20) properties. This contradicts the table of allowed components and properties specified in [RFC5546] section 3.2.5. The table specifies a value of "0 or 1" in the Presence column.


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

V0236:

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 can be cancelled by specifying multiple RECURRENCE-ID properties corresponding to the instances to be cancelled.


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

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

C0028:

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.


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

V0237:

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

<table>
<thead>
<tr>
<th>Component/Property</th>
<th>Presence</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>METHOD</td>
<td>1</td>
<td>MUST be &quot;CANCEL&quot;.</td>
</tr>
<tr>
<td>VEVENT</td>
<td>1+</td>
<td>All MUST have the same UID.</td>
</tr>
<tr>
<td>•ATTENDEE</td>
<td>0+</td>
<td>MUST include all attendees being removed the event. MUST include all attendees if the entire event is cancelled.</td>
</tr>
<tr>
<td>•DTSTAMP</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>•ORGANIZER</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>•SEQUENCE</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>•UID</td>
<td>1</td>
<td>MUST be the UID of the original REQUEST.</td>
</tr>
<tr>
<td>Component/Property</td>
<td>Presence</td>
<td>Notes</td>
</tr>
<tr>
<td>--------------------</td>
<td>---------</td>
<td>-------</td>
</tr>
<tr>
<td>● COMMENT</td>
<td>0 or 1</td>
<td></td>
</tr>
<tr>
<td>● ATTACH</td>
<td>0+</td>
<td></td>
</tr>
<tr>
<td>● CATEGORIES</td>
<td>0 or 1</td>
<td>Can contain a list of values.</td>
</tr>
<tr>
<td>● CLASS</td>
<td>0 or 1</td>
<td></td>
</tr>
<tr>
<td>● CONTACT</td>
<td>0+</td>
<td></td>
</tr>
<tr>
<td>● CREATED</td>
<td>0 or 1</td>
<td></td>
</tr>
<tr>
<td>● DESCRIPTION</td>
<td>0 or 1</td>
<td></td>
</tr>
<tr>
<td>● DTEND</td>
<td>0 or 1</td>
<td>If present, DURATION MUST NOT be present.</td>
</tr>
<tr>
<td>● DTSTART</td>
<td>0 or 1</td>
<td></td>
</tr>
<tr>
<td>● DURATION</td>
<td>0 or 1</td>
<td>If present, DTEND MUST NOT be present.</td>
</tr>
<tr>
<td>● EXDATE</td>
<td>0+</td>
<td></td>
</tr>
<tr>
<td>● EXRULE</td>
<td>0+</td>
<td></td>
</tr>
<tr>
<td>● GEO</td>
<td>0 or 1</td>
<td></td>
</tr>
<tr>
<td>● LAST-MODIFIED</td>
<td>0 or 1</td>
<td></td>
</tr>
<tr>
<td>● LOCATION</td>
<td>0 or 1</td>
<td></td>
</tr>
<tr>
<td>● PRIORITY</td>
<td>0 or 1</td>
<td></td>
</tr>
<tr>
<td>● RDATE</td>
<td>0+</td>
<td></td>
</tr>
<tr>
<td>● RECURRENCE-ID</td>
<td>0 or 1</td>
<td>MUST be present if referring to one or more or more recurring instances. Otherwise, it MUST NOT be present.</td>
</tr>
<tr>
<td>● RELATED-TO</td>
<td>0+</td>
<td></td>
</tr>
<tr>
<td>● RESOURCES</td>
<td>0 or 1</td>
<td></td>
</tr>
<tr>
<td>● RRULE</td>
<td>0+</td>
<td></td>
</tr>
<tr>
<td>● STATUS</td>
<td>0 or 1</td>
<td>MUST be set to &quot;CANCELLED&quot;. If uninviting specific attendees, MUST NOT be included.</td>
</tr>
<tr>
<td>● SUMMARY</td>
<td>0 or 1</td>
<td></td>
</tr>
<tr>
<td>● TRANSP</td>
<td>0 or 1</td>
<td></td>
</tr>
<tr>
<td>● URL</td>
<td>0 or 1</td>
<td></td>
</tr>
<tr>
<td>● IANA-PROPERTY</td>
<td>0+</td>
<td></td>
</tr>
<tr>
<td>● X-PROPERTY</td>
<td>0+</td>
<td></td>
</tr>
<tr>
<td>● REQUEST-STATUS</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>● VTIMEZONE</td>
<td>0+</td>
<td>MUST be present if any date/time refers to a time zone.</td>
</tr>
<tr>
<td>● IANA-COMPONENT</td>
<td>0+</td>
<td></td>
</tr>
<tr>
<td>● X-COMPONENT</td>
<td>0+</td>
<td></td>
</tr>
</tbody>
</table>
The following table specifies the number of instances Microsoft Exchange exports for these components and properties in a CANCEL-type iCalendar object:

<table>
<thead>
<tr>
<th>Component/Property</th>
<th>Number of instances exported</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>METHOD</td>
<td>1</td>
<td>Is set to &quot;CANCEL&quot;.</td>
</tr>
<tr>
<td>VEVENT</td>
<td>1</td>
<td>Microsoft Exchange only exports one VEVENT in a CANCEL.</td>
</tr>
<tr>
<td>ATTENDEE</td>
<td>1+</td>
<td>One ATTENDEE property is exported for each recipient of the cancellation.</td>
</tr>
<tr>
<td>DTSTAMP</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>ORGANIZER</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>SEQUENCE</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>UID</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>COMMENT</td>
<td>0-1</td>
<td></td>
</tr>
<tr>
<td>ATTACH</td>
<td>0+</td>
<td></td>
</tr>
<tr>
<td>CATEGORIES</td>
<td>0-1</td>
<td>Can be a list.</td>
</tr>
<tr>
<td>CLASS</td>
<td>0-1</td>
<td></td>
</tr>
<tr>
<td>CONTACT</td>
<td>0+</td>
<td></td>
</tr>
<tr>
<td>CREATED</td>
<td>0-1</td>
<td></td>
</tr>
<tr>
<td>DESCRIPTION</td>
<td>0-1</td>
<td></td>
</tr>
<tr>
<td>DTEND</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>DTSTART</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>DURATION</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>EXDATE</td>
<td>0-1</td>
<td></td>
</tr>
<tr>
<td>EXRULE</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>GEO</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>LAST-MODIFIED</td>
<td>0-1</td>
<td></td>
</tr>
<tr>
<td>LOCATION</td>
<td>0-1</td>
<td></td>
</tr>
</tbody>
</table>
The following table specifies the number of instances Microsoft Exchange imports for these components and properties in a CANCEL-type iCalendar object. If more instances are found, Microsoft Exchange fails to import the iCalendar object. If fewer instances than required are found, Microsoft Exchange fails to import the iCalendar object.

<table>
<thead>
<tr>
<th>Component/Property</th>
<th>Number of instances imported</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>METHOD</td>
<td>1</td>
<td>MUST be set to &quot;CANCEL&quot;.</td>
</tr>
<tr>
<td>VEVENT</td>
<td>1</td>
<td>Microsoft Exchange only imports the first VEVENT in a CANCEL.</td>
</tr>
<tr>
<td>ATTENDEE</td>
<td>0+</td>
<td>ATTENDEE is only used in rendering the message to the user, it does not affect scheduling logic.</td>
</tr>
<tr>
<td>DTSTAMP</td>
<td>0-1</td>
<td></td>
</tr>
<tr>
<td>ORGANIZER</td>
<td>0-1</td>
<td></td>
</tr>
<tr>
<td>Component/Property</td>
<td>Number of instances imported</td>
<td>Notes</td>
</tr>
<tr>
<td>--------------------</td>
<td>-----------------------------</td>
<td>-------</td>
</tr>
<tr>
<td>•SEQUENCE</td>
<td>0-1</td>
<td></td>
</tr>
<tr>
<td>•UID</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>•COMMENT</td>
<td>0-1</td>
<td></td>
</tr>
<tr>
<td>•ATTACH</td>
<td>0+</td>
<td></td>
</tr>
<tr>
<td>•CATEGORIES</td>
<td>0+</td>
<td>Can import a list.</td>
</tr>
<tr>
<td>•CLASS</td>
<td>0-1</td>
<td></td>
</tr>
<tr>
<td>•CONTACT</td>
<td>0+</td>
<td></td>
</tr>
<tr>
<td>•CREATED</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>•DESCRIPTION</td>
<td>0-1</td>
<td></td>
</tr>
<tr>
<td>•DTEND</td>
<td>0-1</td>
<td>If both DTEND and DURATION are specified, DTEND is used.</td>
</tr>
<tr>
<td>•DTSTART</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>•DURATION</td>
<td>0-1</td>
<td>If both DTEND and DURATION are specified, DTEND is used.</td>
</tr>
<tr>
<td>•EXDATE</td>
<td>0+</td>
<td></td>
</tr>
<tr>
<td>•EXRULE</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>•GEO</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>•LAST-MODIFIED</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>•LOCATION</td>
<td>0-1</td>
<td></td>
</tr>
<tr>
<td>•PRIORITY</td>
<td>0-1</td>
<td></td>
</tr>
<tr>
<td>•RDATE</td>
<td>0+</td>
<td></td>
</tr>
<tr>
<td>•RECURRENCE-ID</td>
<td>0-1</td>
<td></td>
</tr>
<tr>
<td>•RELATED-TO</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>•RESOURCES</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>•RRULE</td>
<td>0-1</td>
<td></td>
</tr>
<tr>
<td>•STATUS</td>
<td>0-1</td>
<td>STATUS is only used in rendering the message to the user. It does not affect scheduling logic.</td>
</tr>
<tr>
<td>•SUMMARY</td>
<td>0-1</td>
<td></td>
</tr>
<tr>
<td>•TRANSP</td>
<td>0-1</td>
<td></td>
</tr>
<tr>
<td>•URL</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>•IANA-PROPERTY</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>•X-PROPERTY</td>
<td>0+</td>
<td></td>
</tr>
<tr>
<td>•REQUEST-STATUS</td>
<td>0</td>
<td></td>
</tr>
</tbody>
</table>
### 2.2.117 [RFC5546] Section 3.2.6 REFRESH

**V0238:**

The specification describes the "REFRESH" value for the \textit{METHOD} parameter.


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

**C0029:**

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


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

**C0030:**

The table in [RFC5546] section 3.2.7 contains a value of "1" for the \textit{SEQUENCE} property in the \textit{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, can be present if 0."


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

**V0239:**

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

<table>
<thead>
<tr>
<th>Component/Property</th>
<th>Presence</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>METHOD</td>
<td>1</td>
<td>MUST be &quot;COUNTER&quot;.</td>
</tr>
</tbody>
</table>

---

[MS-STANXICAL] - v20190618
Exchange iCalendar Standards Support Version 2
Copyright © 2019 Microsoft Corporation
Release: June 18, 2019
<table>
<thead>
<tr>
<th>Component/Property</th>
<th>Presence</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>VEVENT</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>•DTSTAMP</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>•DTSTART</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>•ORGANIZER</td>
<td>1</td>
<td>MUST be the organizer of the original event.</td>
</tr>
<tr>
<td>•SEQUENCE</td>
<td>1</td>
<td>MUST be present if value is greater than 0, can be present if 0.</td>
</tr>
<tr>
<td>•SUMMARY</td>
<td>1</td>
<td>Can be null.</td>
</tr>
<tr>
<td>•UID</td>
<td>1</td>
<td>MUST be the UID associated with the REQUEST being countered.</td>
</tr>
<tr>
<td>•ATTACH</td>
<td>0+</td>
<td></td>
</tr>
<tr>
<td>•ATTENDEE</td>
<td>0+</td>
<td>Can also be used to propose other attendees.</td>
</tr>
<tr>
<td>•CATEGORIES</td>
<td>0 or 1</td>
<td>Can contain a list of values.</td>
</tr>
<tr>
<td>•CLASS</td>
<td>0 or 1</td>
<td></td>
</tr>
<tr>
<td>•COMMENT</td>
<td>0 or 1</td>
<td></td>
</tr>
<tr>
<td>•CONTACT</td>
<td>0+</td>
<td></td>
</tr>
<tr>
<td>•CREATED</td>
<td>0 or 1</td>
<td></td>
</tr>
<tr>
<td>•DESCRIPTION</td>
<td>0 or 1</td>
<td></td>
</tr>
<tr>
<td>•DTEND</td>
<td>0 or 1</td>
<td>If present, DURATION MUST NOT be present.</td>
</tr>
<tr>
<td>•DURATION</td>
<td>0 or 1</td>
<td>If present, DTEND MUST NOT be present.</td>
</tr>
<tr>
<td>•EXDATE</td>
<td>0+</td>
<td></td>
</tr>
<tr>
<td>•EXRULE</td>
<td>0+</td>
<td></td>
</tr>
<tr>
<td>•GEO</td>
<td>0 or 1</td>
<td></td>
</tr>
<tr>
<td>•LAST-MODIFIED</td>
<td>0 or 1</td>
<td></td>
</tr>
<tr>
<td>•LOCATION</td>
<td>0 or 1</td>
<td></td>
</tr>
<tr>
<td>•PRIORITY</td>
<td>0 or 1</td>
<td></td>
</tr>
<tr>
<td>•RDATE</td>
<td>0+</td>
<td></td>
</tr>
<tr>
<td>•RECURRENCE-ID</td>
<td>0 or 1</td>
<td>MUST only if referring to an instance of a recurring calendar component. Otherwise it MUST NOT be present.</td>
</tr>
<tr>
<td>•RELATED-TO</td>
<td>0+</td>
<td></td>
</tr>
<tr>
<td>•REQUEST-STATUS</td>
<td>0+</td>
<td></td>
</tr>
<tr>
<td>•RESOURCES</td>
<td>0 or 1</td>
<td>Can contain a list of values.</td>
</tr>
<tr>
<td>•RRULE</td>
<td>0+</td>
<td></td>
</tr>
<tr>
<td>•STATUS</td>
<td>0 or 1</td>
<td>Value MUST be &quot;CONFIRMED&quot;, &quot;TENATIVE&quot;, or &quot;CANCELLED&quot;.</td>
</tr>
<tr>
<td>•TRANSP</td>
<td>0 or 1</td>
<td></td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Component/Property</th>
<th>Number of instances exported</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>METHOD</td>
<td>1</td>
<td>Is set to &quot;COUNTER&quot;.</td>
</tr>
<tr>
<td>VEVENT</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>DTSTAMP</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>DTSTART</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>ORGANIZER</td>
<td>0</td>
<td>See section 2.1.9.</td>
</tr>
<tr>
<td>SEQUENCE</td>
<td>0-1</td>
<td></td>
</tr>
<tr>
<td>SUMMARY</td>
<td>0-1</td>
<td>Can be an empty string.</td>
</tr>
<tr>
<td>UID</td>
<td>1</td>
<td>Set to the same value as the UID in the original REQUEST.</td>
</tr>
<tr>
<td>ATTACH</td>
<td>0+</td>
<td></td>
</tr>
<tr>
<td>ATTENDEE</td>
<td>1</td>
<td>Set to the address of the sender. Microsoft Exchange does not support counter-proposal of new attendees.</td>
</tr>
<tr>
<td>CATEGORIES</td>
<td>0-1</td>
<td>Can be a list.</td>
</tr>
<tr>
<td>CLASS</td>
<td>0-1</td>
<td></td>
</tr>
<tr>
<td>COMMENT</td>
<td>0-1</td>
<td></td>
</tr>
<tr>
<td>CONTACT</td>
<td>0-1</td>
<td></td>
</tr>
<tr>
<td>CREATED</td>
<td>0-1</td>
<td></td>
</tr>
<tr>
<td>DESCRIPTION</td>
<td>0-1</td>
<td></td>
</tr>
<tr>
<td>DTEND</td>
<td>1</td>
<td></td>
</tr>
</tbody>
</table>
## Component/Property

<table>
<thead>
<tr>
<th>Component/Property</th>
<th>Number of instances exported</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>• DURATION</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>• EXDATE</td>
<td>0-1</td>
<td></td>
</tr>
<tr>
<td>• EXRULE</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>• GEO</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>• LAST-MODIFIED</td>
<td>0-1</td>
<td></td>
</tr>
<tr>
<td>• LOCATION</td>
<td>0-1</td>
<td></td>
</tr>
<tr>
<td>• PRIORITY</td>
<td>0-1</td>
<td></td>
</tr>
<tr>
<td>• RDATE</td>
<td>0-2</td>
<td></td>
</tr>
<tr>
<td>• RECURRENCERULE</td>
<td>0-1</td>
<td></td>
</tr>
<tr>
<td>• RELATED-TO</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>• REQUEST-STATUS</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>• RESOURCES</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>• RRULE</td>
<td>0-1</td>
<td></td>
</tr>
<tr>
<td>• STATUS</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>• TRANSP</td>
<td>0-1</td>
<td></td>
</tr>
<tr>
<td>• URL</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>• IANA-PROPERTY</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>• X-PROPERTY</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>• VALARM</td>
<td>0-1</td>
<td></td>
</tr>
<tr>
<td>• VTIMEZONE</td>
<td>0-1</td>
<td>A <strong>VTIMEZONE</strong> is exported for each unique TZID parameter in the iCalendar object.</td>
</tr>
<tr>
<td>• IANA-COMPONENT</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>• X-COMPONENT</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>• VTODO</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>• VJOURNAL</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>• VFREEBUSY</td>
<td>0</td>
<td></td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Component/Property</th>
<th>Number of instances imported</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>METHOD</td>
<td>1</td>
<td>MUST be set to &quot;COUNTER&quot;.</td>
</tr>
<tr>
<td>Component/Property</td>
<td>Number of instances imported</td>
<td>Notes</td>
</tr>
<tr>
<td>--------------------</td>
<td>-----------------------------</td>
<td>-------</td>
</tr>
<tr>
<td>VEVENT</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>• DTSTAMP</td>
<td>0-1</td>
<td></td>
</tr>
<tr>
<td>• DTSTART</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>• ORGANIZER</td>
<td>0-1</td>
<td>ORGANIZER is only used to render the message.</td>
</tr>
<tr>
<td>• SEQUENCE</td>
<td>0-1</td>
<td></td>
</tr>
<tr>
<td>• SUMMARY</td>
<td>0-1</td>
<td>Can be an empty string.</td>
</tr>
<tr>
<td>• UID</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>• ATTACH</td>
<td>0+</td>
<td></td>
</tr>
<tr>
<td>• ATTENDEE</td>
<td>1+</td>
<td>Exactly one ATTENDEE property MUST have the PARTSTAT parameter set, or the import fails. All other attendees are ignored.</td>
</tr>
<tr>
<td>• CATEGORIES</td>
<td>0+</td>
<td>Can import a list.</td>
</tr>
<tr>
<td>• CLASS</td>
<td>0-1</td>
<td></td>
</tr>
<tr>
<td>• COMMENT</td>
<td>0-1</td>
<td></td>
</tr>
<tr>
<td>• CONTACT</td>
<td>0+</td>
<td></td>
</tr>
<tr>
<td>• CREATED</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>• DESCRIPTION</td>
<td>0-1</td>
<td></td>
</tr>
<tr>
<td>• DTEND</td>
<td>0-1</td>
<td>If both DTEND and DURATION are specified, DTEND is used.</td>
</tr>
<tr>
<td>• DURATION</td>
<td>0-1</td>
<td>If both DTEND and DURATION are specified, DTEND is used.</td>
</tr>
<tr>
<td>• EXDATE</td>
<td>0+</td>
<td></td>
</tr>
<tr>
<td>• EXRULE</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>• GEO</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>• LAST-MODIFIED</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>• LOCATION</td>
<td>0-1</td>
<td></td>
</tr>
<tr>
<td>• PRIORITY</td>
<td>0-1</td>
<td></td>
</tr>
<tr>
<td>• RDATE</td>
<td>0+</td>
<td></td>
</tr>
<tr>
<td>• RECURRENCE-ID</td>
<td>0-1</td>
<td></td>
</tr>
<tr>
<td>• RELATED-TO</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>• REQUEST-STATUS</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>• RESOURCES</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>• RRULE</td>
<td>0-1</td>
<td></td>
</tr>
<tr>
<td>• STATUS</td>
<td>0-1</td>
<td>STATUS is only used to render the message.</td>
</tr>
<tr>
<td>Component/Property</td>
<td>Number of instances imported</td>
<td>Notes</td>
</tr>
<tr>
<td>--------------------</td>
<td>-----------------------------</td>
<td>-------</td>
</tr>
<tr>
<td>•TRANSP</td>
<td>0-1</td>
<td></td>
</tr>
<tr>
<td>•URL</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>•IANA-PROPERTY</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>•X-PROPERTY</td>
<td>0+</td>
<td></td>
</tr>
<tr>
<td>•VALARM</td>
<td>0-1</td>
<td></td>
</tr>
<tr>
<td>VTIMEZONE</td>
<td>0+</td>
<td>If a TZID references an undeclared VTIMEZONE, a default time zone is used.</td>
</tr>
<tr>
<td>IANA-COMPONENT</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>X-COMPONENT</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>VTODO</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>VJOURNAL</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>VFREEBUSY</td>
<td>0</td>
<td></td>
</tr>
</tbody>
</table>

2.2.118  [RFC5546] Section 3.2.8 DECLINECOUNTER

V0240:

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


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

2.2.119  [RFC5546] Section 3.3 Methods for VFREEBUSY Components

V0241:

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


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

2.2.120  [RFC5546] Section 3.3.1 PUBLISH

V0242:

The specification describes the use of PUBLISH with VFREEBUSY components.

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

2.2.121 \small\textbf{[RFC5546] Section 3.3.2 REQUEST}

\texttt{V0243}:

The specification describes the use of \texttt{REQUEST} with \texttt{VFREEBUSY} components.


Microsoft Exchange does not export \texttt{VFREEBUSY} components. Microsoft Exchange ignores \texttt{VFREEBUSY} components on import. For REQUEST-type iCalendar objects, the import fails.

2.2.122 \small\textbf{[RFC5546] Section 3.3.3 REPLY}

\texttt{V0244}:

The specification describes the use of \texttt{REPLY} with \texttt{VFREEBUSY} components.


Microsoft Exchange does not export \texttt{VFREEBUSY} components. Microsoft Exchange ignores \texttt{VFREEBUSY} components on import. For REPLY-type iCalendar objects, the import fails.

2.2.123 \small\textbf{[RFC5546] Section 3.4 Methods for VTODO Components}

\texttt{V0245}:

The specification defines property sets for the methods that are applicable to \texttt{VTODO} components.


Microsoft Exchange does not export \texttt{VTODO} components. Microsoft Exchange ignores \texttt{VTODO} components on import.

2.2.124 \small\textbf{[RFC5546] Section 3.4.1 PUBLISH}

\texttt{V0246}:

The specification describes the use of \texttt{PUBLISH} with \texttt{VTODO} components.


Microsoft Exchange does not export \texttt{VTODO} components. Microsoft Exchange ignores \texttt{VTODO} components on import. For PUBLISH-type iCalendars objects, this is imported as an empty calendar.

2.2.125 \small\textbf{[RFC5546] Section 3.4.2 REQUEST}

\texttt{V0247}:

The specification describes the use of \texttt{REQUEST} with \texttt{VTODO} components.


Microsoft Exchange does not export \texttt{VTODO} components. Microsoft Exchange ignores \texttt{VTODO} components on import. For REQUEST-type iCalendar objects, the import fails.
2.2.126 [RFC5546] Section 3.4.3 REPLY

V0248:
The specification describes the use of REPLY with VTODO components.


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

2.2.127 [RFC5546] Section 3.4.4 ADD

V0249:
The specification describes the use of ADD with VTODO components.


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

2.2.128 [RFC5546] Section 3.4.5 CANCEL

V0250:
The specification describes the use of CANCEL with VTODO components.


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

2.2.129 [RFC5546] Section 3.4.6 REFRESH

V0251:
The specification describes the use of REFRESH with VTODO components.


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

2.2.130 [RFC5546] Section 3.4.7 COUNTER

V0252:
The specification describes the use of COUNTER with VTODO components.


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

2.2.131 [RFC5546] Section 3.4.8 DECLINECOUNTER

V0253:
The specification describes the use of DECLINECOUNTER with VTODO components.


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

2.2.132 [RFC5546] Section 3.5 Methods for VJOURNAL Components
V0254:
The specification defines property sets for the methods that are applicable to VJOURNAL components.


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

2.2.133 [RFC5546] Section 3.5.1 PUBLISH
V0255:
The specification describes the use of PUBLISH with VJOURNAL components.


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

2.2.134 [RFC5546] Section 3.5.2 ADD
V0256:
The specification describes the use of ADD with VJOURNAL components.


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

2.2.135 [RFC5546] Section 3.5.3 CANCEL
V0257:
The specification describes the use of CANCEL with VJOURNAL components.


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

2.2.136 [RFC5546] Section 3.6 Status Replies
V0258:
The specification lists the possible values of REQUEST-STATUS.
Microsoft Exchange does not export the `REQUEST-STATUS` property. Microsoft Exchange ignores all instances of the `REQUEST-STATUS` property on import.

### 2.2.137 [RFC5546] Section 3.7.1 Working with Recurrence Instances

**V0259:**

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

### 2.2.138 [RFC5546] Section 3.7.2 Attendee Property Considerations

**V0260:**

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 can ignore or accept the request as the calendar user wishes.

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

### 2.2.139 [RFC5546] Section 3.7.3 Extension Tokens

**V0261:**

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

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

**V0262:**

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

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

**V0263:**

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

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

2.2.140  [RFC5546] Section 5.1 Partial Implementation

V0264:

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 can be ignored.


Microsoft Exchange ignores properties not implemented by Microsoft Exchange and not addressed in this section.

2.2.141  [RFC5546] Section 5.1.1 Event-Related Fallbacks

C0031:

The tables in [RFC5546] section 5.1.1 use the term "Required" in the Fallback column. However, the prior section, [RFC5546] section 5.1, states that the tables describe how applications SHOULD fallback.


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

V0265:

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

<table>
<thead>
<tr>
<th>Method</th>
<th>Fallback</th>
</tr>
</thead>
<tbody>
<tr>
<td>PUBLISH</td>
<td>Required</td>
</tr>
<tr>
<td>REQUEST</td>
<td>PUBLISH</td>
</tr>
<tr>
<td>REPLY</td>
<td>Required</td>
</tr>
<tr>
<td>ADD</td>
<td>Required</td>
</tr>
<tr>
<td>CANCEL</td>
<td>Required</td>
</tr>
<tr>
<td>REFRESH</td>
<td>Required</td>
</tr>
<tr>
<td>COUNTER</td>
<td>Reply with Not Supported</td>
</tr>
<tr>
<td>DECLINECOUNTER</td>
<td>Required if EVENT-COUNTER is implemented; otherwise reply with Not Supported.</td>
</tr>
</tbody>
</table>


The following table specifies how Microsoft Exchange falls back when encountering an unimplemented method.
<table>
<thead>
<tr>
<th>Method</th>
<th>Fallback</th>
</tr>
</thead>
<tbody>
<tr>
<td>PUBLISH</td>
<td>Implemented</td>
</tr>
<tr>
<td>REQUEST</td>
<td>Implemented</td>
</tr>
<tr>
<td>REPLY</td>
<td>Implemented</td>
</tr>
<tr>
<td>ADD</td>
<td>Not implemented, fall back to PUBLISH.</td>
</tr>
<tr>
<td>CANCEL</td>
<td>Implemented</td>
</tr>
<tr>
<td>REFRESH</td>
<td>Not implemented, fall back to PUBLISH.</td>
</tr>
<tr>
<td>COUNTER</td>
<td>Implemented</td>
</tr>
<tr>
<td>DECLINECOUNTER</td>
<td>Not implemented, fall back to PUBLISH.</td>
</tr>
</tbody>
</table>

V0266:

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

<table>
<thead>
<tr>
<th>iCalendar Property</th>
<th>Fallback</th>
</tr>
</thead>
<tbody>
<tr>
<td>CALSCALE</td>
<td>Ignore; assume GREGORIAN.</td>
</tr>
<tr>
<td>PRODID</td>
<td>Ignore</td>
</tr>
<tr>
<td>METHOD</td>
<td>Required as described in the Method list above.</td>
</tr>
<tr>
<td>VERSION</td>
<td>Ignore</td>
</tr>
</tbody>
</table>


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

<table>
<thead>
<tr>
<th>Property</th>
<th>Fallback</th>
</tr>
</thead>
<tbody>
<tr>
<td>CALSCALE</td>
<td>Not implemented, treated as &quot;GREGORIAN&quot;.</td>
</tr>
<tr>
<td>PRODID</td>
<td>Some values implemented, others treated as &quot;&quot;.</td>
</tr>
<tr>
<td>METHOD</td>
<td>Some values implemented, others treated as &quot;PUBLISH&quot;.</td>
</tr>
<tr>
<td>VERSION</td>
<td>Some values implemented, others treated as &quot;2.0&quot;.</td>
</tr>
</tbody>
</table>

V0267:

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

<table>
<thead>
<tr>
<th>Event-Related Components</th>
<th>Fallback</th>
</tr>
</thead>
<tbody>
<tr>
<td>VALARM</td>
<td>Reply with Not Supported</td>
</tr>
<tr>
<td>VTIMEZONE</td>
<td>Required if any DateTime value refers to a time zone.</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Component</th>
<th>Fallback</th>
</tr>
</thead>
<tbody>
<tr>
<td>VALARM</td>
<td>Some configurations implemented, others ignored.</td>
</tr>
<tr>
<td>VTIMEZONE</td>
<td>Some configurations implemented, others ignored.</td>
</tr>
</tbody>
</table>

V0268:

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

<table>
<thead>
<tr>
<th>Component Property</th>
<th>Fallback</th>
</tr>
</thead>
<tbody>
<tr>
<td>ATTACH</td>
<td>Ignore</td>
</tr>
<tr>
<td>ATTENDEE</td>
<td>Required if EVENT-REQUEST is not implemented; otherwise reply with Not Supported.</td>
</tr>
<tr>
<td>CATEGORIES</td>
<td>Ignore</td>
</tr>
<tr>
<td>CLASS</td>
<td>Ignore</td>
</tr>
<tr>
<td>COMMENT</td>
<td>Ignore</td>
</tr>
<tr>
<td>COMPLETED</td>
<td>Ignore</td>
</tr>
<tr>
<td>CONTACT</td>
<td>Ignore</td>
</tr>
<tr>
<td>CREATED</td>
<td>Ignore</td>
</tr>
<tr>
<td>DESCRIPTION</td>
<td>Required</td>
</tr>
<tr>
<td>DURATION</td>
<td>Reply with Not Supported</td>
</tr>
<tr>
<td>DTSTAMP</td>
<td>Required</td>
</tr>
<tr>
<td>DTSTART</td>
<td>Required</td>
</tr>
<tr>
<td>DTEND</td>
<td>Required</td>
</tr>
<tr>
<td>EXDATE</td>
<td>Ignore</td>
</tr>
<tr>
<td>EXRULE</td>
<td>Ignore Reply with Not Supported. If implemented, VTIMEZONE MUST also be implemented.</td>
</tr>
<tr>
<td>GEO</td>
<td>Ignore</td>
</tr>
<tr>
<td>LAST-MODIFIED</td>
<td>Ignore</td>
</tr>
<tr>
<td>LOCATION</td>
<td>Required</td>
</tr>
<tr>
<td>ORGANIZER</td>
<td>Ignore</td>
</tr>
<tr>
<td>PRIORITY</td>
<td>Ignore</td>
</tr>
<tr>
<td>RELATED-TO</td>
<td>Ignore</td>
</tr>
<tr>
<td>RDATE</td>
<td>Ignore</td>
</tr>
<tr>
<td>RRULE</td>
<td>Ignore. The first instance occurs on the DTSTART property. If implemented, VTIMEZONE MUST also be implemented.</td>
</tr>
<tr>
<td>Component Property</td>
<td>Fallback</td>
</tr>
<tr>
<td>--------------------</td>
<td>----------</td>
</tr>
<tr>
<td>RECURRENCE-ID</td>
<td>Required if <strong>RRULE</strong> is implemented; otherwise ignore.</td>
</tr>
<tr>
<td>REQUEST-STATUS</td>
<td>Required</td>
</tr>
<tr>
<td>RESOURCES</td>
<td>Ignore</td>
</tr>
<tr>
<td>SEQUENCE</td>
<td>Required</td>
</tr>
<tr>
<td>STATUS</td>
<td>Ignore</td>
</tr>
<tr>
<td>SUMMARY</td>
<td>Ignore</td>
</tr>
<tr>
<td>TRANSP</td>
<td>Required if <strong>FREEBUSY</strong> is implemented; otherwise ignore.</td>
</tr>
<tr>
<td>URL</td>
<td>Ignore</td>
</tr>
<tr>
<td>UID</td>
<td>Required</td>
</tr>
<tr>
<td>X-</td>
<td>Ignore</td>
</tr>
</tbody>
</table>


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

<table>
<thead>
<tr>
<th>Component Property</th>
<th>Fallback</th>
</tr>
</thead>
<tbody>
<tr>
<td>ATTACH ([MS-OXCICAL] section 2.1.3.1.1.20.1)</td>
<td>Not implemented, ignored</td>
</tr>
<tr>
<td>ATTENDEE ([MS-OXCICAL] section 2.1.3.1.1.20.2)</td>
<td>Implemented</td>
</tr>
<tr>
<td>CATEGORIES ([MS-OXCICAL] section 2.1.3.1.1.20.3)</td>
<td>Implemented</td>
</tr>
<tr>
<td>CLASS ([MS-OXCICAL] section 2.1.3.1.1.20.4)</td>
<td>Some values implemented, others treated as &quot;PUBLIC&quot;.</td>
</tr>
<tr>
<td>COMMENT ([MS-OXCICAL] section 2.1.3.1.1.20.5)</td>
<td>Some cases implemented, others ignored.</td>
</tr>
<tr>
<td>COMPLETED</td>
<td>Not implemented, ignored</td>
</tr>
<tr>
<td>CONTACT ([MS-OXCICAL] section 2.1.3.1.1.20.6)</td>
<td>Implemented</td>
</tr>
<tr>
<td>CREATED ([MS-OXCICAL] section 2.1.3.1.1.20.7)</td>
<td>Not implemented, ignored</td>
</tr>
<tr>
<td>DESCRIPTION ([MS-OXCICAL] section 2.1.3.1.1.20.11)</td>
<td>Implemented</td>
</tr>
<tr>
<td>DURATION ([MS-OXCICAL] section 2.1.3.1.1.20.12)</td>
<td>Implemented</td>
</tr>
<tr>
<td>DTSTAMP ([MS-OXCICAL] section 2.1.3.1.1.20.9)</td>
<td>Implemented</td>
</tr>
<tr>
<td>DTSTART ([MS-OXCICAL] section 2.1.3.1.1.20.10)</td>
<td>Implemented</td>
</tr>
</tbody>
</table>
### Component Property

<table>
<thead>
<tr>
<th>Property</th>
<th>Fallback</th>
</tr>
</thead>
<tbody>
<tr>
<td>DTEND</td>
<td>Implemented</td>
</tr>
<tr>
<td>EXDATE</td>
<td>Implemented</td>
</tr>
<tr>
<td>EXRULE</td>
<td>Not implemented, ignored</td>
</tr>
<tr>
<td>GEO</td>
<td>Not implemented, ignored</td>
</tr>
<tr>
<td>LAST-MODIFIED</td>
<td>Not implemented, ignored</td>
</tr>
<tr>
<td>LOCATION</td>
<td>Implemented</td>
</tr>
<tr>
<td>ORGANIZER</td>
<td>Implemented</td>
</tr>
<tr>
<td>PRIORITY</td>
<td>Implemented</td>
</tr>
<tr>
<td>RELATED-TO</td>
<td>Not implemented, ignored</td>
</tr>
<tr>
<td>RDATE</td>
<td>Implemented</td>
</tr>
<tr>
<td>RRULE</td>
<td>Some cases implemented, others cause the VEVENT to be ignored</td>
</tr>
<tr>
<td>RECURRENCE-ID</td>
<td>Implemented</td>
</tr>
<tr>
<td>REQUEST-STATUS</td>
<td>Not implemented, ignored</td>
</tr>
<tr>
<td>RESOURCES</td>
<td>Not implemented, ignored</td>
</tr>
<tr>
<td>SEQUENCE</td>
<td>Implemented</td>
</tr>
<tr>
<td>STATUS</td>
<td>Partially implemented, approximated into the Busy Status property of an appointment or meeting</td>
</tr>
<tr>
<td>SUMMARY</td>
<td>Implemented</td>
</tr>
<tr>
<td>TRANSP</td>
<td>Implemented</td>
</tr>
<tr>
<td>URL</td>
<td>Not implemented, ignored</td>
</tr>
<tr>
<td>X-</td>
<td>Some X-props implemented, others ignored</td>
</tr>
</tbody>
</table>

### 2.2.142  [RFC5546] Section 5.1.2 Free/Busy-Related Fallbacks

V0269:

The specification lists fallbacks for **VFREEBUSY** components.

Microsoft Exchange does not export or import \texttt{VFREEBUSY} components.

**2.2.143 [RFC5546] Section 5.1.2 To-Do-Related Fallbacks**

V0270:

The specification lists fallbacks for \texttt{VTODO} components.


Microsoft Exchange does not export or import \texttt{VTODO} components.

**2.2.144 [RFC5546] Section 5.1.2 Journal-Related Fallbacks**

V0271:

The specification lists fallbacks for \texttt{VJOURNAL} components.


Microsoft Exchange does not export or import \texttt{VJOURNAL} components.

**2.2.145 [RFC5546] Section 5.2.2 Unexpected Reply from an Unknown Delegate**

V0272:

The specification states that when an attendee delegates an item to another calendar user, they MUST send a \texttt{REPLY} method to the organizer using the \texttt{ATTENDEE} ([MS-OXCICAL] section 2.1.3.1.1.20.2) properties to indicate that the request was delegated and to whom.


Microsoft Exchange does not export \texttt{DELEGATED-TO} or \texttt{DELEGATED-FROM}. Microsoft Exchange ignores \texttt{DELEGATED-TO} and \texttt{DELEGATED-FROM} parameters on import.

**2.2.146 [RFC5546] Section 6.1.6 Unauthorized Refresh Requests**

V0273:

The specification states that it is possible for an organizer to receive a \texttt{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 \texttt{REFRESH} requests. Replying to such requests to anyone who is not an attendee can be a security problem.


Microsoft Exchange does not export iCalendar objects with a \texttt{METHOD} of "REFRESH".

On import, Microsoft Exchange does not implement the \texttt{REFRESH} method and treats all such requests as \texttt{PUBLISH}.

**2.2.147 [RFC5546] Section 6.2 Recommendations**

V0274:
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 can be accomplished using public key technology, specifically Security Multiparts for MIME, as specified in [RFC1847], in the iTIP transport binding.


Microsoft Exchange exports iCalendar data in clear text. Sending iTIP messages that are signed or encrypted via S/MIME is not supported. Microsoft Exchange can send an S/MIME e-mail that an .ics attachment.

On import, Microsoft Exchange can receive digitally signed or encrypted S/MIME e-mail, which can contain an .ics attachment. Receiving iTIP messages that are signed or encrypted via S/MIME is not supported.

2.2.148 [RFC5546] Section 6.2.1 Securing iTIP Transactions

V0275:

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


Microsoft Exchange exports iCalendar data in clear text. Sending iTIP messages that are signed or encrypted via S/MIME is not supported. Microsoft Exchange can send an S/MIME e-mail that an .ics attachment.

On import, Microsoft Exchange can receive digitally signed or encrypted S/MIME e-mail, which can contain an .ics attachment. Receiving iTIP messages that are signed or encrypted via S/MIME is not supported.

V0276:

The specification states that implementations MAY provide controls for users to disable the capability to uses S/MIME for authentication and data integrity.


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

2.2.149 [RFC5546] Section 6.2.2 Implementation Controls

V0277:

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.


Microsoft Exchange ignores the ACTION ([MS-OXCICAL] section 2.1.3.1.1.20.62.2) property on import and treats all VALARM components as reminders, as specified in [MS-OXORMDR].

V0278:
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.


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

V0279:
The specification states that an implementation can decide to maintain, for audit or historical purposes, calendar users who were part of an attendee list and who were subsequently uninvited.


Microsoft Exchange does not maintain a list of uninvited attendees.

2.2.150 [RFC6047] Section 1.1 Related Memos

C0032:
The specification describes how iMIP relates to iCal, as specified in [RFC5545] and iTIP, as specified in [RFC5546].


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, [RFC6047] does not imply that there is a difference between iMIP data and iCalendar files attached to an e-mail message. Microsoft Exchange renders these two scenarios differently, as detailed in the following sections.

2.2.151 [RFC6047] Section 2.1 MIME Media Type

V0280:
The specification states that a MIME entity containing content information formatted according to [RFC6047] is referenced as a "text/calendar" content type.


On export, Microsoft 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 Microsoft Exchange to treat them as iMIP data.

2.2.152 [RFC6047] Section 2.2.1 Authorization

V0281:
The specification states that implementations of iMIP SHOULD verify the authenticity of an iCalendar object before taking any action.

Microsoft Exchange processes iMIP messages automatically upon receipt, without verification.

V0282:
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.


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

2.2.153  [RFC6047] Section 2.2.2 Authentication

The specification states that "authentication MUST be performed using S/MIME [RFC5750] [RFC5751]. Authentication is possible only on messages that have been signed."


Microsoft Exchange exports iCalendar data in clear text. Sending iTIP messages that are signed or encrypted via S/MIME is not supported. Microsoft Exchange can send an S/MIME e-mail that contains an .ics attachment.

On import, Microsoft Exchange can receive digitally signed or encrypted S/MIME e-mail, which can contain an .ics attachment. Receiving iTIP messages that are signed or encrypted via S/MIME is not supported.

2.2.154  [RFC6047] Section 2.2.3 Confidentiality

The specification states that to ensure confidentiality using iMIP implementations should utilize encryption specified in S/MIME [RFC5750] [RFC5751].


Microsoft Exchange exports iCalendar data in clear text. Sending iTIP messages that are signed or encrypted via S/MIME is not supported. Microsoft Exchange can send an S/MIME e-mail that contains an .ics attachment.

On import, Microsoft Exchange can receive digitally signed or encrypted S/MIME e-mail, which can contain an .ics attachment. Receiving iTIP messages that are signed or encrypted via S/MIME is not supported.

2.2.155  [RFC6047] Section 2.3 Email Addresses

The specification states that the calendar address specified within the ORGANIZER ([MS-OXCICAL] section 2.1.3.1.1.20.16) and ATTENDEE ([MS-OXCICAL] section 2.1.3.1.1.20.2) properties in an iCalendar object sent using iMIP MUST be a proper mailto: URI specification for the corresponding organizer or attendee.

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

2.2.156 [RFC6047] Section 2.4 Content Type Header Field

V0286:

The specification states that a MIME body part containing content information that conforms to [RFC6047] MUST have a [RFC2045] "Content-Type" value of "text/calendar".


On export, Microsoft 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 Microsoft Exchange to treat them as iMIP data.

V0287:

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 ([MS-OXCICAL] section 2.1.3.1.1.1) calendar property within the iCalendar object.


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.

V0288:

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.


Microsoft Exchange does not export multiple iCalendar objects as iMIP data in one MIME message. In "multipart/mixed" MIME messages, Microsoft 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, Microsoft 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.

V0289:

The specification states that the optional "component" parameter defines the iCalendar component type contained within the iCalendar object.


Microsoft Exchange does not export the "component" parameter of the Content-Type header, and ignores it on import.

V0290:
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.


If the meeting has an attachment, Microsoft 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, Microsoft Exchange uses the first "text/html" child of a "multipart/alternative" parent to replace the DESCRIPTION ([MS-OXICAL] section 2.1.3.1.1.20.11) property of the iMIP data.

2.2.157  [RFC6047] Section 2.5 Content-Transfer-Encoding Header Field

V0291:

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.


Microsoft 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, Microsoft Exchange ignores the Content-Transfer-Encoding header and assumes that the iMIP data is encoded in UTF-8.

2.2.158  [RFC6047] Section 2.6 Content-Disposition Header Field

V0292:

The specification states that implementations may wish to include a "Content-Disposition" property to define a file name.


Microsoft 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, Microsoft Exchange treats it as an attachment and does not process it as iMIP data.

2.2.159  [RFC6047] Section 3 Security Considerations

V0293:

The specification states that implementations can provide a means for users to disable signing and encrypting.


Microsoft Exchange by default sends e-mail without signing or encrypting, and cannot sign or encrypt iMIP messages. Microsoft Exchange has no means to disable receipt of signed or encrypted messages.

2.2.160  [RFC6047] Section 4.1 Single Component with an ATTACH Property

C0033:

The specification provides a sample message to show how an iCalendar object references an attachment.

It is assumed this section is about iMIP messages with the following MIME structure:

- text/calendar

Microsoft Exchange can import and export iMIP messages with this MIME structure.

### 2.2.161 [RFC6047] Section 4.2 Using multipart/alternative for Low-Fidelity Clients

C0034:

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.


It is assumed this section is about iMIP messages with the following structure:

- multipart/alternative
  1. text/plain
  2. text/calendar

Microsoft Exchange does not export messages with this MIME structure. Microsoft Exchange can import messages with this MIME structure.

### 2.2.162 [RFC6047] Section 4.3 Single Component With An ATTACH Property and Inline Attachment

C0035:

The specification provides a sample message to show how a message containing an iCalendar object references an attached document.


It is assumed this section is about iMIP messages with the following structure:

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

Microsoft Exchange does not export iMIP data with this MIME structure. Microsoft 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.

### 2.2.163 [RFC6047] Section 4.4 Multiple Similar Components

C0036:

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 ([MS-OXCICAL] section 2.1.3.1.1) is the same for each component.

It is assumed this section is about iMIP messages with the following structure:

- text/calendar (with multiple VEVENT components)

Microsoft Exchange does not export multiple VEVENT components in an iMIP message, and does not export the PUBLISH method in iMIP messages.

Microsoft Exchange fails to import this iCalendar object because it has multiple VEVENT components.

2.2.164  [RFC6047] Section 4.5 Multiple Mixed Components

C0037:

The specification provides a sample message to show how different component types must be encapsulated in separate iCalendar objects.


It is assumed this section is about iMIP messages with the following structure:

- multipart/mixed
  1. text/calendar
  2. text/calendar

Microsoft Exchange does not export multiple iMIP parts in the same MIME message.

On import, Microsoft 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.

2.2.165  [RFC6047] Section 4.6 Multiple Mixed Components

C0038:

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 ([MS-OXCICAL] section 2.1.3.1.1.20.1) property with a CID reference.


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

Microsoft 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

Microsoft 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.

2.2.166 [RFC6047] Section 5.1 Use of Content and Message IDs

V0294:
The specification states that it is strongly recommended that iMIP implementations include all referenced messages and body parts in a single MIME entity.


Microsoft Exchange does not export MID URIs. Microsoft Exchange only exports CID URIs for attachments that are included in the same MIME message as the iCalendar object.

On import, Microsoft 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, on import Microsoft 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 those discussed in section 2.2.4, section 2.2.147, section 2.2.148, section 2.2.149, and section 2.2.159.
3 Change Tracking

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