

# [MS-STANOICAL]: Outlook iCalendar Standards Compliance

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Revision Summary			
Author	Date	Version	Comments
Microsoft Corporation	October 1, 2008	1.0	Initial Release.
Microsoft Corporation	December 3, 2008	1.01	Updated IP notice.
Microsoft Corporation	April 10, 2009	2.0	Updated applicable product releases.

**Product:** Microsoft Outlook 2010  
**Component:** iCalendar  
**Standards:** [RFC2445], [RFC2446], [RFC2447]

## 1 Overview

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

## 2 Support Details

The use of the words “Required,” “Recommended,” and “Optional” in the titles of the sections below are to be interpreted as described in [RFC2119].

### 2.1 *Required Portions*

#### 2.1.1 [RFC2445] Required Portions

The Outlook iCalendar component implements all of the required portions of [RFC2445].

#### 2.1.2 [RFC2446] Required Portions

The Outlook iCalendar component implements all of the required portions of [RFC2446].

#### 2.1.3 [RFC2447] Required Portions

The Outlook iCalendar component implements all of the required portions of [RFC2447].

### 2.2 *Recommended Portions*

#### 2.2.1 [RFC2445] Recommended Portions

The Outlook iCalendar component implements all of the recommended portions of [RFC2445].

#### 2.2.2 [RFC2446] Recommended Portions

The Outlook iCalendar component implements all of the recommended portions of [RFC2446].

#### 2.2.3 [RFC2447] Recommended Portions

The Outlook iCalendar component implements all of the recommended portions of [RFC2447].

## **2.3 Optional Portions**

### **2.3.1 [RFC2445] Optional Portions**

The Outlook iCalendar component implements all optional portions of [RFC 2445], except for deviations shown in the following subsections.

#### **2.3.1.1 RFC Section: 4.2.1. Alternate Text Representation**

The *ALTREP* parameter is not supported.

#### **2.3.1.2 RFC Section: 4.2.3. Calendar User Type**

In the *CUTYPE* type, Outlook imports only the *RESOURCE* and *ROOM* values, with all other values imported as *INDIVIDUAL*. On export, Outlook only uses the *RESOURCE* value.

#### **2.3.1.3 RFC Section: 4.2.4. Delegators**

The *DELEGATED-FROM* parameter is not supported.

#### **2.3.1.4 RFC Section: 4.2.5. Delegates**

The *DELEGATED-TO* parameter is not supported.

#### **2.3.1.5 RFC Section: 4.2.6. Directory Entry Reference**

The *DIR* parameter is not supported.

#### **2.3.1.6 RFC Section: 4.2.8. Format Type**

In the *FMTTYPE* type, only the *text/html* format type is supported. It is only supported for the *X-ALT-DESC* property.

#### **2.3.1.7 RFC Section: 4.2.9. Free/Busy Time Type**

The *FBTYPE* type is not supported.

#### **2.3.1.8 RFC Section: 4.2.10. Language**

The *LANGUAGE* parameter is stored as an *LCID* and is mapped to a per-appointment property (for example, if the iCalendar sets a German body with a French subject, then Outlook treats the entire appointment as either French or German, depending on which property came first). Outlook only supports *iMultiLanguage2* values.

#### **2.3.1.9 RFC Section: 4.2.11. Group or List Membership**

The *MEMBER* parameter is not supported.

### **2.3.1.10 RFC Section: 4.2.12. Participation Status**

Outlook supports ACCEPTED, DECLINED, and TENTATIVE. Outlook does not support NEEDS-ACTION, DELEGATED, COMPLETED, IN-PROCESS.

### **2.3.1.11 RFC Section: 4.2.13. Recurrence Identifier Range**

The *RANGE* parameter is not supported.

### **2.3.1.12 RFC Section: 4.2.14. Alarm Trigger Relationship**

The *RELATED* parameter is not supported.

### **2.3.1.13 RFC Section: 4.2.15. Relationship Type**

The *RELTYPE* parameter is not supported.

### **2.3.1.14 RFC Section: 4.2.16. Participation Role**

The *ROLE* parameter value CHAIR is not supported. REQ-PARTICIPANT, OPT-PARTICIPANT, and NON-PARTICIPANT are supported.

### **2.3.1.15 RFC Section: 4.2.17. RSVP Expectation**

Outlook implemented this to merge the values into a per-appointment property, rather than as a per-attendee property.

### **2.3.1.16 RFC Section: 4.2.18. Sent By**

The *SENT-BY* parameter is not supported.

### **2.3.1.17 RFC Section: 4.3. Property Value Data Types**

In general, Outlook does not support the override of a property's default type using the *VALUE* parameter. The main exception here is the use of VALUE=DATE to override a **DATE-TIME** property. Outlook 2007 and Outlook 2010 also permit the VALUE=BINARY case for the **ATTACH** property.

### **2.3.1.18 RFC Section: 4.3.3. Calendar User Address**

The CAL-ADDRESS type is not supported.

### **2.3.1.19 RFC Section: 4.3.5. Date-Time**

In the **DATE-TIME** data type, Outlook does not support floating appointments. When importing these items, Outlook sets these items to times in the local time zone.

### **2.3.1.20 RFC Section: 4.3.6. Duration**

Outlook does not support dur-second rules in DURATION types.

### **2.3.1.21 RFC Section: 4.3.7. Float**

The FLOAT type is not supported.

### **2.3.1.22 RFC Section: 4.3.9. Period of Time**

The PERIOD type is not supported.

### **2.3.1.23 RFC Section: 4.3.10. Recurrence Rule**

The following elements of the RECUR type are not supported:

- Specifying the time of a recurrence with BYWEEKNO or BYYEARDAY.
- Specifying recurrences with multiple instances of BYMONTH, BYMONTHDAY, BYHOUR, MYMINUTE, BYSECOND, or BYSETPOS.
- Recurrences with a FREQ of SECONDLY, MINUTELY, and HOURLY.
- BYDAY is only allowed to be a single day of the week, all days of the week, "SA, SU", or "MO,TU,WE,TH,FR."
- The duration of a recurring appointment cannot be longer than the frequency multiplied by the interval.
- Outlook recurrences cannot occur more than once a day.
- In Outlook, a monthly meeting on the 30<sup>th</sup> will be treated as the last day of a month if the month has fewer days. In [RFC2445], a monthly meeting on the 30<sup>th</sup> will skip over months with fewer days.

### **2.3.1.24 RFC Section: 4.3.11. Text**

All fields are assumed to be the TEXT type unless otherwise defined as either the BINARY type or the DATE type.

### **2.3.1.25 RFC Section: 4.6.1. Event Component**

When parsing incoming MIME, Outlook only supports the first VEVENT entry and ignores all others.

### **2.3.1.26 RFC Section: 4.6.2. To-do Component**

The VTODO component is not supported.

### **2.3.1.27 RFC Section: 4.6.3. Journal Component**

The VJOURNAL component is not supported.

### **2.3.1.28 RFC Section: 4.6.4. Free/Busy Component**

The VFREEBUSY component is not supported.

### **2.3.1.29 RFC Section: 4.6.5. Time Zone Component**

The VTIMEZONE component allows only single standardc/daylightc rules.

### **2.3.1.30 RFC Section: 4.6.6. Alarm Component**

The VALARM component does not support the following:

- ACTION-AUDIO, EMAIL, or PROCEDURE
- TRIGGER-END
- Multiple VALARMS

### **2.3.1.31 RFC Section: 4.7.2. Method**

Outlook only supports REQUEST, REPLY, CANCEL, and PUBLISH. Outlook 2007 and Outlook 2010 also support COUNTER.

### **2.3.1.32 RFC Section: 4.8.1.1. Attachment**

In the **ATTACH** property, the *FMTTYPE* parameter is ignored (the shell uses the file extension to determine how to open the file); URL attachments are turned into .url files which are then blocked by attachment security. On export, these url files are not converted back into URL attachments, they are exported as .url files in base64.

### **2.3.1.33 RFC Section: 4.8.1.5. Description**

The **DESCRIPTION** property is ignored if a MIME HTML body is present.

### **2.3.1.34 RFC Section: 4.8.1.6. Geographic Position**

The **GEO** property is not supported.

### **2.3.1.35 RFC Section: 4.8.1.7. Location**

In the **LOCATION** property, Outlook limits locations to 255 characters. In addition, the *ALTREP* parameter is not supported for **LOCATION** (it is ignored).

### **2.3.1.36 RFC Section: 4.8.1.8. Percent Complete**

The **PERCENT-COMPLETE** property is not supported.

### **2.3.1.37 RFC Section: 4.8.1.11. Status**

Outlook does not export the **STATUS** property. Outlook may import the **STATUS** property as a busy status if no alternative busy status is available.

### **2.3.1.38 RFC Section: 4.8.2.1. Date/Time Completed**

The **COMPLETED** property is not supported.

### **2.3.2 RFC Section: 4.8.2.3. Date/Time Due**

The **DUE** property is not supported.

#### **2.3.2.1 RFC Section: 4.8.2.5. Duration**

In the **VEVENT** component, Outlook supports the **DURATION** property during import, but does not export **DURATION**. Outlook skips over the decimal part of the seconds. Outlook later rounds to the next minute.

#### **2.3.2.2 RFC Section: 4.8.2.6. Free/Busy Time**

The **FREEBUSY** property is not supported.

#### **2.3.2.3 RFC Section: 4.8.3.5. Time Zone URL**

The **TZURL** property is not supported.

#### **2.3.2.4 RFC Section: 4.8.4.2. Contact**

The following are deviations for the **CONTACT** property:

- The parser limits a **CONTACT** property to 500 characters.
- The *ALTREP* parameter is not supported for the **CONTACT** property.

#### **2.3.2.5 RFC Section: 4.8.4.5. Related To**

The **RELATED-TO** property is not supported.

#### **2.3.2.6 RFC Section: 4.8.4.6. Uniform Resource Locator**

The **URL** property is not supported.

#### **2.3.2.7 RFC Section: 4.8.5.2. Exception Rule**

The **EXRULE** recurrence property is not supported.

#### **2.3.2.8 RFC Section: 4.8.5.3. Recurrence Date/Times**

The following describe deviations from standard for the **RDATE** recurrence property:

- Outlook does not allow exceptions to be created on the same date as another occurrence of the series.
- Outlook does not allow exceptions to be moved before or after another instance in the series.
- Created exceptions (**RDATE**s) must be move exceptions. which means every **RDATE** needs a corresponding **EXDATE** (however, **EXDATE**s can definitely exist without corresponding **RDATE**s)



### **2.3.2.9 RFC Section: 4.8.5.4. Recurrence Rule**

The **RRULE** recurrence property uses the **RECUR** data type. The following elements of the **RECUR** data type are not supported:

- Specifying the time of a recurrence with **BYWEEKNO** or **BYYEARDAY**.
- Specifying recurrences with multiple instances of **BYMONTH**, **BYMONTHDAY**, **BYHOUR**, **MYMINUTE**, **BYSECOND**, or **BYSETPOS**.
- Recurrences with a **FREQ** of **SECONDLY**, **MINUTELY**, and **HOURLY**.
- **BYDAY** is only allowed to be a single day of the week, all days of the week, "SA, SU", or "MO, TU, WE, TH, FR."
- The duration of a recurring appointment cannot be longer than the frequency multiplied by the interval.
- Outlook recurrences cannot occur more than once a day.
- In Outlook, a monthly meeting on the 30<sup>th</sup> will be treated as the last day of a month if the month has fewer days. In [RFC2445], a monthly meeting on the 30<sup>th</sup> will skip over months with fewer days.

### **2.3.2.10 RFC Section: 4.8.6.1. Action**

Outlook does not support the **ACTION** alarm property values **AUDIO**, **EMAIL**, or **PROCEDURE**.

### **2.3.2.11 RFC Section: 4.8.6.2. Repeat Count**

The **REPEAT** alarm property is not supported.

### **2.3.2.12 RFC Section: 4.8.6.3. Trigger**

For the **TRIGGER** alarm property, Outlook supports firing reminders from the start but not the end of the event.

### **2.3.2.13 RFC Section: 4.8.7.1. Date/Time Created**

The **CREATED** property is only exported.

### **2.3.2.14 RFC Section: 4.8.7.2. Date/Time Stamp**

The **DTSTAMP** property is only exported, with the exception that for meeting requests it is used to ensure appropriate sequencing.

### **2.3.2.15 RFC Section: 4.8.7.3. Last Modified**

The **LAST-MODIFIED** property is only exported.

### **2.3.2.16 RFC Section: 4.8.8.2. Request Status**

The **REQUEST-STATUS** property is not supported.

### **2.3.3 [RFC2446] Optional Portions**

The Outlook iCalendar component implements all optional portions of [RFC2446], except for deviations shown in the following subsections.

### **2.3.4 RFC Section: 3.2.2.3. Delegating an Event to another CU**

The REQUEST for delegating VEVENT is not supported.

### **2.3.5 RFC Section: 3.2.2.4. Changing the Organizer**

The REQUEST to change VEVENT organizer is not supported.

#### **2.3.5.1 RFC Section: 3.2.2.5. Sending on Behalf of the Organizer**

In REQUEST on behalf of organizer, the Sent-By attribute of organizer is not updated by Outlook.

#### **2.3.5.2 RFC Section: 3.2.4. ADD**

The ADD method for VEVENT is not supported.

#### **2.3.5.3 RFC Section: 3.2.6. REFRESH**

The REFRESH method for VEVENT is not supported.

#### **2.3.5.4 RFC Section: 3.2.7. COUNTER**

In the COUNTER method for VEVENT, Outlook supports sending counter-proposals, but Outlook only counter-proposes the time of a single instance of a meeting. Outlook does not support counter-proposing other event properties (like location), nor does Outlook support counter-proposing times for a recurring series as a whole (only single instances within that series).

#### **2.3.5.5 RFC Section: 3.2.8. DECLINECOUNTER**

The DECLINECOUNTER method for VEVENT is not supported.

#### **2.3.5.6 RFC Section: 3.3.1. PUBLISH**

The PUBLISH method for VFREEBUSY is not supported.

#### **2.3.5.7 RFC Section: 3.3.2. REQUEST**

The REQUEST method for VFREEBUSY is not supported.

#### **2.3.5.8 RFC Section: 3.3.3. REPLY**

The RESPONSE method for VFREEBUSY is not supported.

### **2.3.5.9 RFC Section: 3.4. METHODS FOR VTODD COMPONENTS**

The **METHOD** property for VTODD is not supported.

### **2.3.5.10 RFC Section: 3.5. METHODS FOR VJOURNAL COMPONENTS**

The **METHOD** property for VJOURNAL is not supported.

### **2.3.5.11 RFC Section: 3.6. STATUS REPLIES**

The **REQUEST-STATUS** property is not supported.

### **2.3.6 [RFC2447] Optional Portions**

The Outlook iCalendar component implements all optional portions of [RFC2447], except for deviations shown in the following subsections.

#### **2.3.7 RFC Section: 2.2.1. Authorization**

Authorization is not supported.

#### **2.3.8 RFC Section: 2.2.2. Authentication**

Authentication is not supported.

#### **2.3.9 RFC Section: 2.2.3. Confidentiality**

Confidentiality is not supported.

#### **2.3.10 RFC Section: 2.4. CONTENT TYPE**

Outlook ignores the *component* parameter for Content-Type.

#### **2.3.11 RFC Section: 2.6. CONTENT-DISPOSITION**

Content-Disposition is not supported. Outlook doesn't export a disposition. Furthermore, if Outlook receives a MIME part with a Content-Disposition of "attachment," it will be treated as an attachment even if the Content-Type is "text/calendar."

## **3 Extensions**

iCalendar component extensions to [RFC 2445], [RFC 2446], and [RFC 2447] are as specified in [MS-OXICAL].

## 4 Related Standards

Additional documentation for related standards can be found under the Open Protocol Specification section on MSDN at:

[MS-OXCMAIL] Microsoft Corporation, "RFC2822 and MIME to E-mail Object Conversion Protocol Specification", June 2008.

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

[MS-OXOCAL] Microsoft Corporation, "Appointment and Meeting Object Protocol Specification", June 2008.

[MS-OXCMSG] Microsoft Corporation, "Message and Attachment Object Protocol Specification", June 2008.

[MS-OXOMSG] Microsoft Corporation, "E-mail Object Protocol Specification", June 2008.

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

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

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

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