[MS-STANXICAL]:

Exchange iCalendar Standards Support Version 2

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

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

Intellectual Property Rights Notice for Open Specifications Documentation

- **Technical Documentation.** Microsoft publishes Open Specifications documentation ("this documentation") for protocols, file formats, data portability, computer languages, and standards support. Additionally, overview documents cover inter-protocol relationships and interactions.
- **Copyrights**. This documentation is covered by Microsoft copyrights. Regardless of any other terms that are contained in the terms of use for the Microsoft website that hosts this documentation, you can make copies of it in order to develop implementations of the technologies that are described in this documentation and can distribute portions of it in your implementations that use these technologies or in your documentation as necessary to properly document the implementation. You can also distribute in your implementation, with or without modification, any schemas, IDLs, or code samples that are included in the documentation. This permission also applies to any documents that are referenced in the Open Specifications documentation.
- **No Trade Secrets**. Microsoft does not claim any trade secret rights in this documentation.
- **Patents**. Microsoft has patents that might cover your implementations of the technologies described in the Open Specifications documentation. Neither this notice nor Microsoft's delivery of this documentation grants any licenses under those patents or any other Microsoft patents. However, a given Open Specifications document might be covered by the Microsoft Open Specifications Promise or the Microsoft Community Promise. If you would prefer a written license, or if the technologies described in this documentation are not covered by the Open Specifications Promise or Community Promise, as applicable, patent licenses are available by contacting iplg@microsoft.com.
- **License Programs**. To see all of the protocols in scope under a specific license program and the associated patents, visit the Patent Map.
- **Trademarks**. The names of companies and products contained in this documentation might be covered by trademarks or similar intellectual property rights. This notice does not grant any licenses under those rights. For a list of Microsoft trademarks, visit www.microsoft.com/trademarks.
- **Fictitious Names**. The example companies, organizations, products, domain names, email addresses, logos, people, places, and events that are depicted in this documentation are fictitious. No association with any real company, organization, product, domain name, email address, logo, person, place, or event is intended or should be inferred.

Reservation of Rights. All other rights are reserved, and this notice does not grant any rights other than as specifically described above, whether by implication, estoppel, or otherwise.

Tools. The Open Specifications documentation does not require the use of Microsoft programming tools or programming environments in order for you to develop an implementation. If you have access to Microsoft programming tools and environments, you are free to take advantage of them. Certain Open Specifications documents are intended for use in conjunction with publicly available standards

specifications and network programming art and, as such, assume that the reader either is familiar with the aforementioned material or has immediate access to it.

Support. For questions and support, please contact dochelp@microsoft.com.

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.

Copyright © 2019 Microsoft Corporation

Revision Summary

Date	Revision History	Revision Class	Comments
7/15/2009	1.0.0	Major	Initial Availability.
10/1/2008	1.1.0	Minor	Updated IP notice.
4/10/2009	2.0.0	Major	Updated applicable product releases.
7/15/2009	3.0.0	Major	Revised and edited technical content.
11/4/2009	3.1.0	Minor	Updated the technical content.
2/10/2010	3.1.0	None	Version 3.1.0 release
8/4/2010	3.2	Minor	Clarified the meaning of the technical content.
11/3/2010	3.3	Minor	Clarified the meaning of the technical content.
3/18/2011	3.4	Minor	Clarified the meaning of the technical content.
8/5/2011	3.5	Minor	Clarified the meaning of the technical content.
10/7/2011	4.0	Major	Significantly changed the technical content.
1/20/2012	5.0	Major	Significantly changed the technical content.
4/27/2012	6.0	Major	Significantly changed the technical content.
7/16/2012	6.0	None	No changes to the meaning, language, or formatting of the technical content.
10/8/2012	6.0	None	No changes to the meaning, language, or formatting of the technical content.
2/11/2013	7.0	Major	Significantly changed the technical content.
7/26/2013	7.0	None	No changes to the meaning, language, or formatting of the technical content.
11/18/2013	7.0	None	No changes to the meaning, language, or formatting of the technical content.
2/10/2014	7.0	None	No changes to the meaning, language, or formatting of the technical content.
4/30/2014	7.0	None	No changes to the meaning, language, or formatting of the technical content.
7/31/2014	7.0	None	No changes to the meaning, language, or formatting of the technical content.
10/30/2014	7.0	None	No changes to the meaning, language, or formatting of the technical content.
5/26/2015	8.0	Major	Significantly changed the technical content.
9/14/2015	8.0	None	No changes to the meaning, language, or formatting of the technical content.
6/13/2016	8.0	None	No changes to the meaning, language, or formatting of the technical content.

Copyright © 2019 Microsoft Corporation

Date	Revision History	Revision Class	Comments
9/14/2016	8.0	None	No changes to the meaning, language, or formatting of the technical content.
2/24/2017	8.0	None	No changes to the meaning, language, or formatting of the technical content.
7/24/2018	9.0	Major	Significantly changed the technical content.
10/1/2018	10.0	Major	Significantly changed the technical content.
6/18/2019	10.0	None	No changes to the meaning, language, or formatting of the technical content.

Copyright © 2019 Microsoft Corporation

Table of Contents

1 Introduction 9
1.1 Glossary 9
1.2 References 10
1.2.1 Normative References 10
1.2.2 Informative References 11
1.3 Microsoft Implementations 11
1.4 Standards Support Requirements 11
1.4.1 Obsolete Standards 12
1.5 Notation 12

2 Standards Support Statements 13
2.1 Normative Variations 13
2.1.1 [RFC5545] Section 3.3.8, Valid Range of INTEGER Value Type 13
2.1.2 [RFC5545] Section 3.6.1, VEVENT with no End Time does not take up Any Time 13
2.1.3 [RFC5545] Section 3.8.2.2, DTEND MUST be Later in Time than DTSTART 13
2.1.4 [RFC5545] Section 3.8.4.1, ATTENDEE MUST be Present on Group Scheduled Calendar Entities 13
2.1.5 [RFC5545] Section 3.8.4.1, Delegate MUST Inherit RSVP and ROLE from Delegator 13
2.1.6 [RFC5545] Section 3.8.4.3, ORGANIZER MUST be Present on Group Scheduled Calendar Entities 14
2.1.7 [RFC5546] Section 3.2.2, VEVENT Components in REQUEST-type iCalendar Objects MUST Contain One or More ATTENDEE Properties 14
2.1.8 [RFC5546] Section 3.2.3, VEVENT Components in REPLY-type iCalendar Objects MUST Contain an ORGANIZER Property 14
2.1.9 [RFC5546] Section 3.2.7, VEVENT Components in COUNTER-type iCalendar Objects MUST Contain an ORGANIZER Property 14
2.2 Clarifications 14
2.2.1 [RFC5545] Section 3.1 Content Lines 14
2.2.2 [RFC5545] Section 3.1.2 Multiple Values 15
2.2.3 [RFC5545] Section 3.1.3 Binary Content 15
2.2.4 [RFC5545] Section 3.2 Property Parameters 15
2.2.5 [RFC5545] Section 3.2.1 Alternate Text Representation 16
2.2.6 [RFC5545] Section 3.2.2 Common Name 16
2.2.7 [RFC5545] Section 3.2.3 Calendar User Type 16
2.2.8 [RFC5545] Section 3.2.4 Delegators 16
2.2.9 [RFC5545] Section 3.2.5 Delegatees 17
2.2.10 [RFC5545] Section 3.2.6 Directory Entry Reference 17
2.2.11 [RFC5545] Section 3.2.7 Inline Encoding 17
2.2.12 [RFC5545] Section 3.2.8 Format Type 17
2.2.13 [RFC5545] Section 3.2.9 Free/Busy Time Type 17
2.2.14 [RFC5545] Section 3.2.10 Language 17
2.2.15 [RFC5545] Section 3.2.11 Group or List Membership 18
2.2.16 [RFC5545] Section 3.2.12 Participation Status 18
2.2.17 [RFC5545] Section 3.2.13 Recurrence Identifier Range 18
2.2.18 [RFC5545] Section 3.2.14 Alarm Trigger Relationship 19
2.2.19 [RFC5545] Section 3.2.15 Relationship Type 19
2.2.20 [RFC5545] Section 3.2.16 Participation Role 19
2.2.21 [RFC5545] Section 3.2.17 RSVP Expectation 19
2.2.22 [RFC5545] Section 3.2.18 Sent By 19
2.2.23 [RFC5545] Section 3.2.19 Time Zone Identifier 20
2.2.24 [RFC5545] Section 3.2.20 Value Data Types 20
2.2.25 [RFC5545] Section 3.3 Property Value Data Types 21
2.2.26 [RFC5545] Section 3.3.1 Binary 21
2.2.27 [RFC5545] Section 3.3.2 Boolean 21

Copyright © 2019 Microsoft Corporation

2.2.28 [RFC5545] Section 3.3.3 Calendar User Address 21
2.2.29 [RFC5545] Section 3.3.5 Date-Time 21
2.2.30 [RFC5545] Section 3.3.6 Duration 22
2.2.31 [RFC5545] Section 3.3.7 Float 22
2.2.32 [RFC5545] Section 3.3.8 Integer 22
2.2.33 [RFC5545] Section 3.3.9 Period of Time 22
2.2.34 [RFC5545] Section 3.3.10 Recurrence Rule 22
2.2.35 [RFC5545] Section 3.3.11 Text 23
2.2.36 [RFC5545] Section 3.3.12 Time 23
2.2.37 [RFC5545] Section 3.3.13 URI 23
2.2.38 [RFC5545] Section 3.3.14 UTC Offset 24
2.2.39 [RFC5545] Section 3.4 iCalendar Object 24
2.2.40 [RFC5545] Section 3.5 Property 24
2.2.41 [RFC5545] Section 3.6 Calendar Components 24
2.2.42 [RFC5545] Section 3.6.2 To-do Component 25
2.2.43 [RFC5545] Section 3.6.3 Journal Component 25
2.2.44 [RFC5545] Section 3.6.4 Free/Busy Component 25
2.2.45 [RFC5545] Section 3.6.5 Time Zone Component 25
2.2.46 [RFC5545] Section 3.6.6 Alarm Component 26
2.2.47 [RFC5545] Section 3.7 Calendar Properties 30
2.2.48 [RFC5545] Section 3.7.1 Calendar Scale 30
2.2.49 [RFC5545] Section 3.7.2 Method 30
2.2.50 [RFC5545] Section 3.7.3 Product Identifier 32
2.2.51 [RFC5545] Section 3.7.4 Version 32
2.2.52 [RFC5545] Section 3.8.1.1 Attachment 33
2.2.53 [RFC5545] Section 3.8.1.2 Categories 33
2.2.54 [RFC5545] Section 3.8.1.3 Classification 34
2.2.55 [RFC5545] Section 3.8.1.4 Comment 34
2.2.56 [RFC5545] Section 3.8.1.5 Description 35
2.2.57 [RFC5545] Section 3.8.1.6 Geographic Position 36
2.2.58 [RFC5545] Section 3.8.1.7 Location 36
2.2.59 [RFC5545] Section 3.8.1.8 Percent Complete 37
2.2.60 [RFC5545] Section 3.8.1.9 Priority 37
2.2.61 [RFC5545] Section 3.8.1.10 Resources 38
2.2.62 [RFC5545] Section 3.8.1.11 Status 38
2.2.63 [RFC5545] Section 3.8.1.12 Summary 39
2.2.64 [RFC5545] Section 3.8.2.1 Date-Time Completed 39
2.2.65 [RFC5545] Section 3.8.2.2 Date-Time End 39
2.2.66 [RFC5545] Section 3.8.2.3 Date-Time Due 40
2.2.67 [RFC5545] Section 3.8.2.4 Date-Time Start 41
2.2.68 [RFC5545] Section 3.8.2.5 Duration 42
2.2.69 [RFC5545] Section 3.8.2.6 Free/Busy Time 43
2.2.70 [RFC5545] Section 3.8.2.7 Time Transparency 44
2.2.71 [RFC5545] Section 3.8.3.1 Time Zone Identifier 44
2.2.72 [RFC5545] Section 3.8.3.2 Time Zone Name 45
2.2.73 [RFC5545] Section 3.8.3.3 Time Zone Offset From 45
2.2.74 [RFC5545] Section 3.8.3.4 Time Zone Offset To 46
2.2.75 [RFC5545] Section 3.8.3.5 Time Zone URL 46
2.2.76 [RFC5545] Section 3.8.4.1 Attendee 47
2.2.77 [RFC5545] Section 3.8.4.2 Contact 48
2.2.78 [RFC5545] Section 3.8.4.3 Organizer 49
2.2.79 [RFC5545] Section 3.8.4.4 Recurrence ID 49
2.2.80 [RFC5545] Section 3.8.4.5 Related To 50
2.2.81 [RFC5545] Section 3.8.4.6 Uniform Resource Locator 51
2.2.82 [RFC5545] Section 3.8.4.7 Unique Identifier 51
2.2.83 [RFC5545] Section 3.8.5.1 Exception Date-Times 52
2.2.84 [RFC5545] Section 3.8.5.2 Recurrence Date-Times 53
2.2.85 [RFC5545] Section 3.8.5.3 Recurrence Rule 54

Copyright © 2019 Microsoft Corporation

2.2.86 [RFC5545] Section 3.8.6.1 Action 55
2.2.87 [RFC5545] Section 3.8.6.2 Repeat Count 55
2.2.88 [RFC5545] Section 3.8.6.3 Trigger 56
2.2.89 [RFC5545] Section 3.8.7.1 Date-Time Created 57
2.2.90 [RFC5545] Section 3.8.7.2 Date-Time Stamp 57
2.2.91 [RFC5545] Section 3.8.7.3 Last Modified 57
2.2.92 [RFC5545] Section 3.8.7.4 Sequence Number 58
2.2.93 [RFC5545] Section 3.8.8.2 Non-standard Properties 58
2.2.94 [RFC5545] Section 3.8.8.3 Request Status 59
2.2.95 [RFC5545] Section 5 Recommended Practices 59
2.2.96 [RFC5545] Section 8.1 iCalendar Media Type Registration 61
2.2.97 [RFC5546] Section 2 Interoperability Models 62
2.2.98 [RFC5546] Section 2.1.3 Acting on Behalf of Other Calendar Users 62
2.2.99 [RFC5546] Section 2.1.4 Component Revisions 63
2.2.100 [RFC5546] Section 2.1.5 Message Sequencing 63
2.2.101 [RFC5546] Section 3 Application Protocol Elements 63
2.2.102 [RFC5546] Section 3.1.1 VCALENDAR 63
2.2.103 [RFC5546] Section 3.1.2 VTIMEZONE 64
2.2.104 [RFC5546] Section 3.1.3 VALARM 68
2.2.105 [RFC5546] Section 3.2 Methods for VEVENT Calendar Components 69
2.2.106 [RFC5546] Section 3.2.1 PUBLISH 69
2.2.107 [RFC5546] Section 3.2.2 REQUEST 69
2.2.108 [RFC5546] Section 3.2.2.1 Rescheduling an Event 74
2.2.109 [RFC5546] Section 3.2.2.2 Updating or Reconfirmation of an Event 75
2.2.110 [RFC5546] Section 3.2.2.3 Delegating an Event to Another CU 75
2.2.111 [RFC5546] Section 3.2.2.5 Sending on Behalf of the Organizer 75
2.2.112 [RFC5546] Section 3.2.2.6 Forwarding to an Uninvited CU 75
2.2.113 [RFC5546] Section 3.2.2.7 Updating Attendee Status 76
2.2.114 [RFC5546] Section 3.2.3 REPLY 76
2.2.115 [RFC5546] Section 3.2.4 ADD 81
2.2.116 [RFC5546] Section 3.2.5 CANCEL 81
2.2.117 [RFC5546] Section 3.2.6 REFRESH 87
2.2.118 [RFC5546] Section 3.2.8 DECLINECOUNTER 92
2.2.119 [RFC5546] Section 3.3 Methods for VFREEBUSY Components 92
2.2.120 [RFC5546] Section 3.3.1 PUBLISH 92
2.2.121 [RFC5546] Section 3.3.2 REQUEST 93
2.2.122 [RFC5546] Section 3.3.3 REPLY 93
2.2.123 [RFC5546] Section 3.4 Methods for VTODO Components 93
2.2.124 [RFC5546] Section 3.4.1 PUBLISH 93
2.2.125 [RFC5546] Section 3.4.2 REQUEST 93
2.2.126 [RFC5546] Section 3.4.3 REPLY 94
2.2.127 [RFC5546] Section 3.4.4 ADD 94
2.2.128 [RFC5546] Section 3.4.5 CANCEL 94
2.2.129 [RFC5546] Section 3.4.6 REFRESH 94
2.2.130 [RFC5546] Section 3.4.7 COUNTER 94
2.2.131 [RFC5546] Section 3.4.8 DECLINECOUNTER 94
2.2.132 [RFC5546] Section 3.5 Methods for VJOURNAL Components 95
2.2.133 [RFC5546] Section 3.5.1 PUBLISH 95
2.2.134 [RFC5546] Section 3.5.2 ADD 95
2.2.135 [RFC5546] Section 3.5.3 CANCEL 95
2.2.136 [RFC5546] Section 3.6 Status Replies 95
2.2.137 [RFC5546] Section 3.7.1 Working with Recurrence Instances 96
2.2.138 [RFC5546] Section 3.7.2 Attendee Property Considerations 96
2.2.139 [RFC5546] Section 3.7.3 Extension Tokens 96
2.2.140 [RFC5546] Section 5.1 Partial Implementation 97
2.2.141 [RFC5546] Section 5.1.1 Event-Related Fallbacks 97
2.2.142 [RFC5546] Section 5.1.2 Free/Busy-Related Fallbacks 101
2.2.143 [RFC5546] Section 5.1.2 To-Do-Related Fallbacks 102

Copyright © 2019 Microsoft Corporation

2.2.144 [RFC5546] Section 5.1.2 Journal-Related Fallbacks 102
2.2.145 [RFC5546] Section 5.2.2 Unexpected Reply from an Unknown Delegate 102
2.2.146 [RFC5546] Section 6.1.6 Unauthorized Refresh Requests....102
2.2.147 [RFC5546] Section 6.2 Recommendations 102
2.2.148 [RFC5546] Section 6.2.1 Securing iTIP Transactions 103
2.2.149 [RFC5546] Section 6.2.2 Implementation Controls....103
2.2.150 [RFC6047] Section 1.1 Related Memos....104
2.2.151 [RFC6047] Section 2.1 MIME Media Type....104
2.2.152 [RFC6047] Section 2.2.1 Authorization....104
2.2.153 [RFC6047] Section 2.2.2 Authentication 105
2.2.154 [RFC6047] Section 2.2.3 Confidentiality 105
2.2.155 [RFC6047] Section 2.3 Email Addresses 105
2.2.156 [RFC6047] Section 2.4 Content Type Header Field 106
2.2.157 [RFC6047] Section 2.5 Content-Transfer-Encoding Header Field 107
2.2.158 [RFC6047] Section 2.6 Content-Disposition Header Field 107
2.2.159 [RFC6047] Section 3 Security Considerations....107
2.2.160 [RFC6047] Section 4.1 Single Component with an ATTACH Property 107
2.2.161 [RFC6047] Section 4.2 Using multipart/alternative for Low-Fidelity Clients 108
2.2.162 [RFC6047] Section 4.3 Single Component With An ATTACH Property and Inline Attachment....108
2.2.163 [RFC6047] Section 4.4 Multiple Similar Components 108
2.2.164 [RFC6047] Section 4.5 Multiple Mixed Components....109
2.2.165 [RFC6047] Section 4.6 Multiple Mixed Components....109
2.2.166 [RFC6047] Section 5.1 Use of Content and Message IDs....110
2.3 Error Handling 110
2.4 Security 110

3 Change Tracking....111

4 Index....112

Copyright © 2019 Microsoft Corporation

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.

Copyright © 2019 Microsoft Corporation

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".

[MS-OXPROPS] Microsoft Corporation, "Exchange Server Protocols Master Property List".

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

[RFC2045] Freed, N., and Borenstein, N., "Multipurpose Internet Mail Extensions (MIME) Part One: Format of Internet Message Bodies", RFC 2045, November 1996, https://www.rfc-editor.org/info/rfc2045

[RFC2119] Bradner, S., "Key words for use in RFCs to Indicate Requirement Levels", BCP 14, RFC 2119, March 1997, https://www.rfc-editor.org/info/rfc2119

[RFC2368] Hoffman, P., Masinter, L., and Zawinski, J., "The mailto URL scheme", RFC 2368, July 1998, http://www.rfc-editor.org/rfc/rfc2368.txt

[RFC2392] Levinson, E., "Content-ID and Message-ID Uniform Resource Locators", RFC 2392, August 1998, http://www.rfc-editor.org/rfc/rfc2392.txt

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

[RFC2446] Silverberg, S., Mansour, S., Dawson, F., and Hopson, R., "iCalendar Transport-Independent Interoperability Protocol (iTIP) Scheduling Events, BusyTime, To-Dos, and Journal Entries", 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.rfc-editor.org/rfc/rfc2447.txt

[RFC5545] Desruisseaux, B., Ed., "Internet Calendaring and Scheduling Core Object Specification (iCalendar)", RFC 5545, September 2009, http://www.rfc-editor.org/rfc/rfc5545.txt

[RFC5546] Daboo, C., Ed., "iCalendar Transport-Independent Interoperability Protocol (iTIP)", RFC 5546, December 2009, http://www.rfc-editor.org/rfc/rfc5546.txt

[RFC5750] Ramsdell, B., and Turner, S., "Secure/Multipurpose Internet Mail Extensions (S/MIME) Version 3.2 Certificate Handling", RFC 5750, January 2010, http://www.rfc-editor.org/rfc/rfc5750.txt

[RFC5751] Ramsdell, B., and Turner, S., "Secure/Multipurpose Internet Mail Extensions (S/MIME) Version 3.2 Message Specification", RFC 5751, January 2010, http://www.rfc-editor.org/rfc/rfc5751.txt

Copyright © 2019 Microsoft Corporation

[RFC6047] Melnikov, A., Ed., "iCalendar Message-Based Interoperability Protocol (iMIP)", RFC 6047, December 2010, http://www.rfc-editor.org/rfc/rfc6047.txt

1.2.2 Informative References

[MSDN-XHistDocRep] Microsoft Corporation, "Exchange Server Protocols", http://msdn.microsoft.com/en-us/library/jj633113.aspx

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.

Section(s)	Normative/informative
1 – 3	Informative
3.1 – 3.8.8.3	Normative
4	Informative
5 – 8.3.12	Normative
9 – A.3	Informative

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

Section(s)	Normative/informative
1 – 1.4	Informative
2 – 3.7.3	Normative
4 – 4.7.2	Informative
5 – 6.2.3	Normative
6.3 – 9.2	Informative

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

Copyright © 2019 Microsoft Corporation

Section(s)	Normative/informative
1 – 1.1	Informative
1.2 – 5.1	Normative
6 – Appendix B	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]).

Obsolete specification	Current specification
[RFC2445]	[RFC5545]
[RFC2446]	[RFC5546]
[RFC2447]	[RFC6047]

1.5 Notation

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

Notation	Explanation
C####	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.
V####	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.
E####	Because the use of extensibility points, such as optional implementation-specific data, could impair interoperability, this notation identifies such points in the target specification.

Copyright © 2019 Microsoft Corporation

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.

Copyright © 2019 Microsoft Corporation

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.

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

Copyright © 2019 Microsoft Corporation

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."

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

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.

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

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.

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

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:

Copyright © 2019 Microsoft Corporation

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

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

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

2.2.5 [RFC5545] Section 3.2.1 Alternate Text Representation

V0006:

The specification describes the *ALTREP* parameter.

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

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

2.2.6 [RFC5545] Section 3.2.2 Common Name

V0007:

The specification describes the optional *CN* parameter.

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

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

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

2.2.7 [RFC5545] Section 3.2.3 Calendar User Type

V0008:

The specification describes the optional *CUTYPE* parameter.

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

On export, Microsoft Exchange only exports a *CUTYPE* parameter for the **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 *CUTYPE* parameter on any properties other than **ATTENDEE**. Furthermore, values other than "RESOURCE" (case-insensitive) or "ROOM" (case-insensitive) are ignored.

2.2.8 [RFC5545] Section 3.2.4 Delegators

V0009:

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

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

Copyright © 2019 Microsoft Corporation

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

2.2.9 [RFC5545] Section 3.2.5 Delegatees

V0010:

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

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

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.

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

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.

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

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.

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

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 *FBYTPE* parameter.

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

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.

Copyright © 2019 Microsoft Corporation

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

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.

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

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.

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

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

Copyright © 2019 Microsoft Corporation

2.2.18 [RFC5545] Section 3.2.14 Alarm Trigger Relationship

V0019:

The specification describes the optional *RELATED* parameter.

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

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.

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

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.

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

Microsoft Exchange only exports a *ROLE* parameter on the **ATTENDEE** ([MS-OXCICAL] section 2.1.3.1.1.20.2) property. The value of the parameter is "OPT-PARTICIPANT", "REQ-PARTICIPANT", or absent (for attendees with *CUTYPE* 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.

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

Microsoft Exchange only exports the *RSVP* parameter on the **ATTENDEE** ([MS-OXCICAL] 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.

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

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.

Copyright © 2019 Microsoft Corporation

2.2.23 [RFC5545] Section 3.2.19 Time Zone Identifier

V0024:

The specification describes the *TZID* parameter.

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

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.

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

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."

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

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.

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

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.

Copyright © 2019 Microsoft Corporation

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 *VALUE* parameter.

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

On import, Microsoft Exchange ignores the *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 **BINARY** data type.

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

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

2.2.27 [RFC5545] Section 3.3.2 Boolean

V0029:

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

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

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

On import, Microsoft Exchange's handling of illegal values for **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 **CAL-ADDRESS** data type.

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

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

On import, Microsoft Exchange's behavior when encountering illegal values for **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 **DATE-TIME** data type.

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

On import, Microsoft Exchange parses any valid value *DATE-TIME* format (or **DATE** format if the *VALUE* parameter is set to "DATE"), as specified in [RFC5545]. Microsoft Exchange fails to import iCalendar objects that have an invalid **DATE** or **DATE-TIME**.

Copyright © 2019 Microsoft Corporation

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.

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

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.

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

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.

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

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.

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

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.

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

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:

Copyright © 2019 Microsoft Corporation

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

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

Microsoft Exchange only supports a subset of the recurrences specified in this section. See [MS-OXCICAL] 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.

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

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.

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

On import, Microsoft Exchange parses any valid value in **TIME** format, as specified in [RFC5545]. Microsoft Exchange fails to import iCalender 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.

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

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.

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

Copyright © 2019 Microsoft Corporation

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.

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

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.

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

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.

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

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.

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

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.

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

On export, Microsoft Exchange exports **VTIMEZONE** components before **VEVENT** components.

Copyright © 2019 Microsoft Corporation

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.

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

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.

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

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.

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

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.

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

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.

Copyright © 2019 Microsoft Corporation

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.

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

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.

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

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.

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

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".

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

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.

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

Copyright © 2019 Microsoft Corporation

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".

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

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".

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

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".

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

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.

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

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.

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

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

Copyright © 2019 Microsoft Corporation

"ATTACH" properties, which are intended to be sent as message attachments. When the alarm is triggered, the email message is sent." It is unclear if "When the alarm is triggered, the email message is sent." is a normative requirement.

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

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.

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

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.

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

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.

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

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.

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

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.

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

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

V0063:

Copyright © 2019 Microsoft Corporation

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

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

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.

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

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.

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

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.

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

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.

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

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

Copyright © 2019 Microsoft Corporation

to the message." It is unclear if "the intended alarm effect is for an email message to be composed and delivered to all the addresses specified by the "ATTENDEE" properties in the "VALARM" calendar component" is a normative requirement.

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

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.

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

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.

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

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.

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

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:

Copyright © 2019 Microsoft Corporation

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

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

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.

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

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.

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

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."

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

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
```

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

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.

Copyright © 2019 Microsoft Corporation

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-OXCICAL] section 2.1.3.1.1.2) property.

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

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.

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

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

On export, Exchange 2007 sets this to "Microsoft Exchange Server 2007". On import, Exchange 2007 ignores the **PRODID** property.

Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

Exchange 2010, Exchange 2013, Exchange 2016, and Exchange 2019 behave identically to Exchange 2007, except that on export, Exchange 2010, Exchange 2013, Exchange 2016, and Exchange 2019 set **PRODID** to "Microsoft Exchange Server 2010".

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-OXCICAL] section 2.1.3.1.1.3) property.

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

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.

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

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].

Copyright © 2019 Microsoft Corporation

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

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.

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

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.

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

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.

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

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.

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

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.

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

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

Copyright © 2019 Microsoft Corporation

V0083:

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

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

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

On import, Microsoft Exchange can parse multiple instances of the **CATEGORIES** 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-OXCICAL] section 2.1.3.1.1.20.4) property.

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

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.

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

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.

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

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-OXCICAL] section 2.1.3.1.1.20.5) property.

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

Copyright © 2019 Microsoft Corporation

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.

Microsoft Exchange Server 2010 Service Pack 2 (SP2), Exchange 2013, Exchange 2016, Exchange 2019

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.

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

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.

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

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)

Copyright © 2019 Microsoft Corporation

- **COMMENT** ([MS-OXCICAL] section 2.1.3.1.1.20.5)
- **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**, **VTODO**, **VJOURNAL**, or **VALARM** components, and may be specified multiple times in a **VJOURNAL** component.

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

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.

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

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 "VTODO" calendar components." Later it states "The longitude and latitude values MAY be specified up to six decimal places, which will allow for accuracy to within one meter of geographical position. Receiving applications MUST accept values of this precision and MAY truncate values of greater precision."

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

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.

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

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:

Copyright © 2019 Microsoft Corporation

- **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.

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

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.

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

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.

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

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.

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

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.

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

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

Copyright © 2019 Microsoft Corporation

V0099:

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

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

Microsoft Exchange only exports a value for **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".

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

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

V0101:

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

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

Microsoft Exchange does not implement this priority scheme.

2.2.61 [RFC5545] Section 3.8.1.10 Resources

V0102:

The specification describes the **RESOURCES** ([MS-OXCICAL] section 2.1.3.1.1.20.21) property.

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

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

2.2.62 [RFC5545] Section 3.8.1.11 Status

V0103:

The specification states that non-standard property parameters can be specified on the **STATUS** ([MS-OXCICAL] section 2.1.3.1.1.20.23) property.

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

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

V0104:

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

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

Copyright © 2019 Microsoft Corporation

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.

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

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.

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

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.

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

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.

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

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:

Copyright © 2019 Microsoft Corporation

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

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

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.

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

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.

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

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 2.1.3.1.1.20.10).

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

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.

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

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

Copyright © 2019 Microsoft Corporation

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.

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

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.

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

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**, **VTODO**, **VFREEBUSY**, or **VTIMEZONE** components.

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

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:

Missing Properties	Start	End
None	**DTSTART**	**DTEND**
DTSTART	Fail to import	Fail to import
DTEND	**DTSTART**	**DTSTART** + **DURATION**
DURATION	**DTSTART**	**DTEND**
DTEND, **DURATION**	Fail to import	Fail to import

Copyright © 2019 Microsoft Corporation

Exchange 2010 SP1

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

Exchange 2010 SP2, Exchange 2013, Exchange 2016, Exchange 2019

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 **DTEND** and **DURATION** are missing, if **DTSTART** has a *VALUE* parameter set to **DATE-TIME**, Exchange 2010 SP2, Exchange 2013, Exchange 2016, and Exchange 2019 import the iCalendar object with **DTEND** property value equal to the **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 [RFC5545] section 3.8.2.5, it states that the **DURATION** property may be used instead of an explicit date/time to specify the duration of the event. These statements are contradictory.

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

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

V0118:

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

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

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

V0119:

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

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

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

2.2.68 [RFC5545] Section 3.8.2.5 Duration

V0120:

The specification states that non-standard property parameters can be specified on the **DURATION** ([MS-OXCICAL] section 2.1.3.1.1.20.12) property.

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

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

V0121:

Copyright © 2019 Microsoft Corporation

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

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

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.

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

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.

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

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.

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

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.

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

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.

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

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:

Copyright © 2019 Microsoft Corporation

The specification describes the **FREEBUSY** property.

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

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 2.1.3.1.1.20.25) property.

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

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.

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

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."

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

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 2.1.3.1.1.19.1) property.

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

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.

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

Copyright © 2019 Microsoft Corporation

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.

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

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."

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

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 2.1.3.1.1.19.3.3) property.

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

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 2.1.3.1.1.19.2.4) property.

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

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.

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

Copyright © 2019 Microsoft Corporation

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.

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

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 2.1.3.1.1.19.2.5) property.

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

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.

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

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.

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

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.

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

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

Copyright © 2019 Microsoft Corporation

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.

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

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.

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

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.

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

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.

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

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.

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

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

Copyright © 2019 Microsoft Corporation

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.

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

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

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

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.

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

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.

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

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-OXCICAL] section 2.1.3.1.1.20.6) property.

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

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**, **VTODO**, **VJOURNAL**, or **VFREEBUSY** components.

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

Copyright © 2019 Microsoft Corporation

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.

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

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.

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

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.

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

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."

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

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.

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

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

V0158:

Copyright © 2019 Microsoft Corporation

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

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

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.

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

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.

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

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** ([MS-OXCICAL] section 2.1.3.1.1.20.22) property value changes, the **RECURRENCE-ID** for a given recurrence instance might also change.

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

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.

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

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:

Copyright © 2019 Microsoft Corporation

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

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

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.

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

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-OXCICAL] section 2.1.3.1.1.20.26) property.

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

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.

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

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.

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

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.

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

Copyright © 2019 Microsoft Corporation

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.

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

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-OXCICAL] section 2.1.3.1.1.20.13) is **DATE-TIME**, but it can be set to a **DATE** type.

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

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.

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

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.

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

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.

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

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

V0173:

Copyright © 2019 Microsoft Corporation

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.

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

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.

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

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.

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

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.

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

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.

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

Copyright © 2019 Microsoft Corporation

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.

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

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.

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

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.

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

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."

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

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 **RECURRENCE-ID** property. See section 2.1.7 for import behavior.

V0180:

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

Copyright © 2019 Microsoft Corporation

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

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."

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

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.

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

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.

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

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.

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

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."

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

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.

Copyright © 2019 Microsoft Corporation

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**.

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

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.

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

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.

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

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.

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

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.

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

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.

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

Copyright © 2019 Microsoft Corporation

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-OXCICAL] section 2.1.3.1.1.20.7) property.

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

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-OXCICAL] section 2.1.3.1.1.20.9) property.

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

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.

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

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.

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

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-OXCICAL] section 2.1.3.1.1.20.14) property.

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

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

Copyright © 2019 Microsoft Corporation

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.

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

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**, **VTODO**, or **VJOURNAL** components.

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

Microsoft Exchange exports at most one **SEQUENCE** property on **VEVENT** components. Microsoft Exchange does not export **VTODO** 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."

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

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-OXCICAL] 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.

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

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-OXCICAL] section 2.1.3.1 (and all subsections).

V0199:

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

Copyright © 2019 Microsoft Corporation

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

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.

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

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.

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

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.

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

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.

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

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.

Copyright © 2019 Microsoft Corporation

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

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.

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

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.

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

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.

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

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.

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

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.

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

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).

Copyright © 2019 Microsoft Corporation

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.

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

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.

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

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

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."

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

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.

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

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".

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

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

Copyright © 2019 Microsoft Corporation

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.

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

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.

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

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.

iTIP Method	MIME Part
PUBLISH	Can import (Treated as a REQUEST)
REQUEST	Can import
REPLY	Can import
ADD	Cannot import (rendered as raw content lines in message body)
CANCEL	Can import
REFRESH	Cannot import (rendered as raw content lines in message body)
COUNTER	Can import
DECLINE-COUNTER	Cannot import (rendered as raw content lines in message body)

2.2.98 [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.

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

Copyright © 2019 Microsoft Corporation

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.

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

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.

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

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.

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

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.

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

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.

Copyright © 2019 Microsoft Corporation

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

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

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

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

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.

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

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.

Component/property	Presence	Notes
VTIMEZONE	0+	MUST be present if any date/time refers to time zone.
•DAYLIGHT	0+	MUST be one or more of either **STANDARD** or **DAYLIGHT**.

Copyright © 2019 Microsoft Corporation

Component/property	Presence	Notes
••COMMENT	0 or 1	
••DTSTART	1	MUST be local time format.
••RDATE	0+	If present, **RRULE** MUST NOT be present.
••RRULE	0+	If present, **RDATE** MUST NOT be present.
••TZNAME	0 or 1	
••TZOFFSETFROM	1	
••TZOFFSETTO	1	
••IANA-PROPERTY	0+	
••X-PROPERTY	0+	
•LAST-MODIFIED	0 or 1	
•STANDARD	0+	MUST be one or more of either **STANDARD** or **DAYLIGHT**.
••COMMENT	0 or 1	
••DTSTART	1	MUST be local time format.
••RDATE	0+	If present, **RRULE** MUST NOT be present.
••RRULE	0+	If present, **RDATE** MUST NOT be present.
••TZNAME	0 or 1	
••TZOFFSETFROM	1	
••TZOFFSETTO	1	
••IANA-PROPERTY	0+	
••X-PROPERTY	0+	
•TZID	1	
•TZURL	0 or 1	
•IANA-PROPERTY	0+	
•X-PROPERTY	0+	

Exchange 2007, Exchange 2010

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

Component/property	Number of instances exported	Notes
VTIMEZONE	0+	
•DAYLIGHT	0-1	
••COMMENT	0	
••DTSTART	1	

Copyright © 2019 Microsoft Corporation

Component/property	Number of instances exported	Notes
••RDATE	0	
••RRULE	1	
••TZNAME	0	
••TZOFFSETFROM	1	
••TZOFFSETTO	1	
••IANA-PROPERTY	0	
••X-PROPERTY	0	
•LAST-MODIFIED	0	
•STANDARD	1	
••COMMENT	0	
••DTSTART	1	
••RDATE	0	
••RRULE	0-1	
••TZNAME	0	
••TZOFFSETFROM	1	
••TZOFFSETTO	1	
••IANA-PROPERTY	0	
••X-PROPERTY	0	
•TZID	1	
•TZURL	0	
•IANA-PROPERTY	0	
•X-PROPERTY	0	

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.

Component/property	Number of instances imported	Notes
VTIMEZONE	0+	If not present for a **TZID**, a default time zone is used.
•DAYLIGHT	0-1	**VTIMEZONE** components that contain no **STANDARD** or **DAYLIGHT** components are ignored.
••COMMENT	0	
••DTSTART	0-1	Values in **UTC** are treated as local time.
••RDATE	0	

Copyright © 2019 Microsoft Corporation

Component/property	Number of instances imported	Notes
••RRULE	0-1	
••TZNAME	0	
••TZOFFSETFROM	1	
••TZOFFSETTO	1	
••IANA-PROPERTY	0	
••X-PROPERTY	0	
•LAST-MODIFIED	0	
•STANDARD	0-1	**VTIMEZONE** components that contain no **STANDARD** or **DAYLIGHT** components are ignored.
••COMMENT	0	
••DTSTART	1	Values in UTC are treated as local time.
••RDATE	0	
••RRULE	0-1	
••TZNAME	0	
••TZOFFSETFROM	1	
••TZOFFSETTO	1	
••IANA-PROPERTY	0	
••X-PROPERTY	0	
•TZID	1	
•TZURL	0	
•IANA-PROPERTY	0	
•X-PROPERTY	0	

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.

Component/property	Number of instances imported	Notes
•DAYLIGHT	0+	**VTIMEZONE** components that contain no **STANDARD** or **DAYLIGHT** components are ignored.
•STANDARD	0+	**VTIMEZONE** components that contain no **STANDARD** or **DAYLIGHT** components are ignored.

Copyright © 2019 Microsoft Corporation

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.

Component/property	Presence	Notes
VALARM	0+	
•ACTION	1	
•ATTACH	0+	
•ATTENDEE	0+	
•DESCRIPTION	0 or 1	
•DURATION	0 or 1	If present, **REPEAT** MUST be present.
•REPEAT	0 or 1	If present, **DURATION** MUST be present.
•SUMMARY	0 or 1	
•TRIGGER	1	
•IANA-PROPERTY	0+	
•X-PROPERTY	0+	

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

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

Component/property	Number of instances exported	Notes
VALARM	0-1	
•ACTION	1	
•ATTACH	0	
•ATTENDEE	0	
•DESCRIPTION	1	
•DURATION	0	
•REPEAT	0	
•SUMMARY	0	
•TRIGGER	1	
•IANA-PROPERTY	0	
•X-PROPERTY	0	

Copyright © 2019 Microsoft Corporation

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.

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

2.2.105 [RFC5546] Section 3.2 Methods for VEVENT Calendar Components

V0222:

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

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

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.

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

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.

Copyright © 2019 Microsoft Corporation

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

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 **RECURRENCE-ID** ([MS-OXCICAL] section 2.1.3.1.1.20.20) property.

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

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

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:

Component/Property	Presence	Notes
METHOD	1	MUST be "REQUEST".
VEVENT	1+	All components MUST have the same **UID**.
•ATTENDEE	1+	
•DTSTAMP	1	
•DTSTART	1	
•ORGANIZER	1	
•SEQUENCE	0 or 1	MUST be present if value is greater than 0, can be present if 0.
•SUMMARY	1	Can be null.
•UID	1	
•ATTACH	0+	
•CATEGORIES	0 or 1	This property can contain a list of values.
•CLASS	0 or 1	
•COMMENT	0 or 1	
•CONTACT	0+	
•CREATED	0 or 1	
•DESCRIPTION	0 or 1	Can be null.
•DTEND	0 or 1	If present **DURATION** MUST NOT be present.

Copyright © 2019 Microsoft Corporation

Component/Property	Presence	Notes
•DURATION	0 or 1	If present **DTEND** MUST NOT be present.
•EXDATE	0+	
•EXRULE	0+	
•GEO	0 or 1	
•LAST-MODIFIED	0 or 1	
•LOCATION	0 or 1	
•PRIORITY	0 or 1	
•RDATE	0+	
•RECURRENCE-ID	0 or 1	Only if referring to an instance of a recurring calendar component. Otherwise it MUST NOT be present.
•RELATED-TO	0+	
•REQUEST-STATUS	0+	
•RESOURCES	0 or 1	This property can contain a list of values.
•RRULE	0+	
•STATUS	0 or 1	Can be "TENTATIVE" or "CONFIRMED".
•TRANSP	0 or 1	
•URL	0 or 1	
•IANA-PROPERTY	0+	
•X-PROPERTY	0+	
•VALARM	0+	
VTIMEZONE	0+	MUST be present if any date/time refers to a time zone.
IANA-COMPONENT	0+	
X-COMPONENT	0+	
VFREEBUSY	0	
VJOURNAL	0	
VTODO	0	

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

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

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

Copyright © 2019 Microsoft Corporation

Component/Property	Number of instances exported	Notes
•ATTENDEE	0+	See section 2.1.7.
•DTSTAMP	0-1	
•DTSTART	0-1	
•ORGANIZER	0-1	
•SEQUENCE	0-1	Can be 0.
•SUMMARY	0-1	Can be an empty string.
•UID	0-1	
•ATTACH	0+	
•CATEGORIES	0+	Can be a list.
•CLASS	0-1	
•COMMENT	0	
•CONTACT	0+	
•CREATED	0	
•DESCRIPTION	0-1	Can be an empty string.
•DTEND	0-1	
•DURATION	0-1	
•EXDATE	0+	
•EXRULE	0	
•GEO	0	
•LAST-MODIFIED	0	
•LOCATION	0-1	
•PRIORITY	0-1	
•RDATE	0+	
•RECURRENCE-ID	0-1	
•RELATED-TO	0	
•REQUEST-STATUS	0	
•RESOURCES	0	
•RRULE	0-1	
•STATUS	0-1	
•TRANSP	0-1	
•URL	0	

Copyright © 2019 Microsoft Corporation

Component/Property	Number of instances exported	Notes
•IANA-PROPERTY	0	
•X-PROPERTY	0+	
•VALARM	0-1	
VTIMEZONE	0+	A **VTIMEZONE** is exported for each unique *TZID* parameter in the iCalendar object.
IANA-COMPONENT	0	
X-COMPONENT	0	
VFREEBUSY	0	
VJOURNAL	0	
VTODO	0	

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.

Component/Property	Number of instances exported	Notes
METHOD	1	MUST be set to "REQUEST".
VEVENT	1+	All components MUST have the same **UID** value.
•ATTENDEE	0+	
•DTSTAMP	1	
•DTSTART	1	
•ORGANIZER	1	
•SEQUENCE	0-1	Can import 0.
•SUMMARY	1	Can import an empty string.
•UID	1	
•ATTACH	0+	
•CATEGORIES	0-1	Can import a list.
•CLASS	0-1	
•COMMENT	0	
•CONTACT	0+	
•CREATED	0-1	
•DESCRIPTION	0-1	Can import an empty string.
•DTEND	1	If **DTEND** and **DURATION** are present, **DTEND** is used.

Copyright © 2019 Microsoft Corporation

Component/Property	Number of instances exported	Notes
•DURATION	0	If **DTEND** and **DURATION** are present, **DTEND** is used.
•EXDATE	0-1	
•EXRULE	0	
•GEO	0	
•LAST-MODIFIED	0-1	
•LOCATION	0-1	
•PRIORITY	0-1	
•RDATE	0-2	
•RECURRENCE-ID	0-1	Assumed to refer to an instance of a recurring appointment.
•RELATED-TO	0	
•REQUEST-STATUS	0	
•RESOURCES	0	
•RRULE	0-1	
•STATUS	0	Can import "TENTATIVE" or "CONFIRMED".
•TRANSP	0-1	
•URL	0	
•IANA-PROPERTY	0	
•X-PROPERTY	0-34	
•VALARM	0-1	
VTIMEZONE	0+	If a **TZID** references an undeclared **VTIMEZONE**, a default time zone is used.
IANA-COMPONENT	0	
X-COMPONENT	0	
VFREEBUSY	0	
VJOURNAL	0	
VTODO	0	

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.

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

Copyright © 2019 Microsoft Corporation

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.

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

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).

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

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-OXCICAL] 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.

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

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.

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

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:

Copyright © 2019 Microsoft Corporation

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

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

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.

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

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.

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

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.

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

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.

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

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.

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

Copyright © 2019 Microsoft Corporation

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.

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

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:

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

Copyright © 2019 Microsoft Corporation

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	

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

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.

Copyright © 2019 Microsoft Corporation

Component/Property	Presence	Notes
•UID	1	Same value as the original **REQUEST**.
•SEQUENCE	0-1	Used to resolve out-of-order delivery of messages.
•ATTACH	0+	
•CATEGORIES	0-1	Can be a list.
•CLASS	0-1	
•COMMENT	0-1	
•CONTACT	0-1	
•CREATED	0-1	
•DESCRIPTION	0-1	
•DTEND	1	
•DTSTART	1	
•DURATION	0	
•EXDATE	0-1	
•EXRULE	0	
•GEO	0	
•LAST-MODIFIED	0-1	
•LOCATION	0-1	
•PRIORITY	0-1	
•RDATE	0-2	
•RELATED-TO	0	
•RESOURCES	0	
•REQUEST-STATUS	0	
•RRULE	0-1	
•STATUS	0	
•TRANSP	0-1	
•URL	0	
•IANA-PROPERTY	0	
•X-PROPERTY	0	
•VALARM	0-1	
VTIMEZONE	0-1	A **VTIMEZONE** is exported for each unique *TZID* parameter in the iCalendar object.
IANA-COMPONENT	0	

Copyright © 2019 Microsoft Corporation

Component/Property	Presence	Notes
X-COMPONENT	0	
VFREEBUSY	0	
VJOURNAL	0	
VTODO	0	

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.

Component/Property	Number of instances imported	Notes
METHOD	1	MUST be set to "REPLY".
VEVENT	1	Microsoft Exchange only imports the first **VEVENT**.
•ATTENDEE	1+	Exactly one **ATTENDEE** property MUST have the *PARTSTAT* parameter set or the import fails.
•DTSTAMP	0-1	
•ORGANIZER	0-1	
•RECURRENCE-ID	0-1	
•UID	1	
•SEQUENCE	0-1	Used to resolve out-of-order delivery of messages.
•ATTACH	0+	
•CATEGORIES	0+	Can import a list.
•CLASS	0-1	
•COMMENT	0-1	
•CONTACT	0+	
•CREATED	0	
•DESCRIPTION	0-1	
•DTEND	0-1	If both **DTEND** and **DURATION** are specified, **DTEND** is used.
•DTSTART	1	
•DURATION	0-1	If both **DTEND** and **DURATION** are specified, **DTEND** is used.
•EXDATE	0+	
•EXRULE	0	
•GEO	0	
•LAST-MODIFIED	0	

Copyright © 2019 Microsoft Corporation

Component/Property	Number of instances imported	Notes
•LOCATION	0-1	
•PRIORITY	0-1	
•RDATE	0+	
•RELATED-TO	0	
•RESOURCES	0	
•REQUEST-STATUS	0	
•RRULE	0-1	
•STATUS	0-1	
•TRANSP	0-1	
•URL	0	
•IANA-PROPERTY	0	
•X-PROPERTY	0+	
•VALARM	0-1	
VTIMEZONE	0+	If a **TZID** references an undeclared **VTIMEZONE**, a default time zone is used.
IANA-COMPONENT	0	
X-COMPONENT	0	
VFREEBUSY	0	
VJOURNAL	0	
VTODO	0	

2.2.115 [RFC5546] Section 3.2.4 ADD

V0235:

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

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

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

Copyright © 2019 Microsoft Corporation

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.

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

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.

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

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.

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

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:

Component/Property	Presence	Notes
METHOD	1	MUST be "CANCEL".
VEVENT	1+	All MUST have the same **UID**.
•ATTENDEE	0+	MUST include all attendees being removed the event. MUST include all attendees if the entire event is cancelled.
•DTSTAMP	1	
•ORGANIZER	1	
•SEQUENCE	1	
•UID	1	MUST be the **UID** of the original **REQUEST.**

Copyright © 2019 Microsoft Corporation

Component/Property	Presence	Notes
•COMMENT	0 or 1	
•ATTACH	0+	
•CATEGORIES	0 or 1	Can contain a list of values.
•CLASS	0 or 1	
•CONTACT	0+	
•CREATED	0 or 1	
•DESCRIPTION	0 or 1	
•DTEND	0 or 1	If present, **DURATION** MUST NOT be present.
•DTSTART	0 or 1	
•DURATION	0 or 1	If present, **DTEND** MUST NOT be present.
•EXDATE	0+	
•EXRULE	0+	
•GEO	0 or 1	
•LAST-MODIFIED	0 or 1	
•LOCATION	0 or 1	
•PRIORITY	0 or 1	
•RDATE	0+	
•RECURRENCE-ID	0 or 1	MUST be present if referring to one or more or more recurring instances. Otherwise, it MUST NOT be present.
•RELATED-TO	0+	
•RESOURCES	0 or 1	
•RRULE	0+	
•STATUS	0 or 1	MUST be set to "CANCELLED". If uninviting specific attendees, MUST NOT be included.
•SUMMARY	0 or 1	
•TRANSP	0 or 1	
•URL	0 or 1	
•IANA-PROPERTY	0+	
•X-PROPERTY	0+	
•REQUEST-STATUS	0	
VTIMEZONE	0+	MUST be present if any date/time refers to a time zone.
IANA-COMPONENT	0+	
X-COMPONENT	0+	

Copyright © 2019 Microsoft Corporation

Component/Property	Presence	Notes
VTODO	0	
VJOURNAL	0	
VFREEBUSY	0	
VALARM	0	

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

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

Component/Property	Number of instances exported	Notes
METHOD	1	Is set to "CANCEL".
VEVENT	1	Microsoft Exchange only exports one **VEVENT** in a **CANCEL**.
•ATTENDEE	1+	One **ATTENDEE** property is exported for each recipient of the cancellation.
•DTSTAMP	1	
•ORGANIZER	1	
•SEQUENCE	1	
•UID	1	
•COMMENT	0-1	
•ATTACH	0+	
•CATEGORIES	0-1	Can be a list.
•CLASS	0-1	
•CONTACT	0+	
•CREATED	0-1	
•DESCRIPTION	0-1	
•DTEND	1	
•DTSTART	1	
•DURATION	0	
•EXDATE	0-1	
•EXRULE	0	
•GEO	0	
•LAST-MODIFIED	0-1	
•LOCATION	0-1	

Copyright © 2019 Microsoft Corporation

Component/Property	Number of instances exported	Notes
•PRIORITY	0-1	
•RDATE	0-2	
•RECURRENCE-ID	0-1	
•RELATED-TO	0	
•RESOURCES	0	
•RRULE	0-1	
•STATUS	0	
•SUMMARY	0-1	
•TRANSP	0-1	
•URL	0	
•IANA-PROPERTY	0	
•X-PROPERTY	0+	
•REQUEST-STATUS	0	
VALARM	0	
VTIMEZONE	0+	A **VTIMEZONE** is exported for each unique *TZID* parameter in the iCalendar object.
IANA-COMPONENT	0	
X-COMPONENT	0	
VTODO	0	
VJOURNAL	0	
VFREEBUSY	0	

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.

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

Copyright © 2019 Microsoft Corporation

Component/Property	Number of instances imported	Notes
•SEQUENCE	0-1	
•UID	1	
•COMMENT	0-1	
•ATTACH	0+	
•CATEGORIES	0+	Can import a list.
•CLASS	0-1	
•CONTACT	0+	
•CREATED	0	
•DESCRIPTION	0-1	
•DTEND	0-1	If both **DTEND** and **DURATION** are specified, **DTEND** is used.
•DTSTART	1	
•DURATION	0-1	If both **DTEND** and **DURATION** are specified, **DTEND** is used.
•EXDATE	0+	
•EXRULE	0	
•GEO	0	
•LAST-MODIFIED	0	
•LOCATION	0-1	
•PRIORITY	0-1	
•RDATE	0+	
•RECURRENCE-ID	0-1	
•RELATED-TO	0	
•RESOURCES	0	
•RRULE	0-1	
•STATUS	0-1	**STATUS** is only used in rendering the message to the user. It does not affect scheduling logic.
•SUMMARY	0-1	
•TRANSP	0-1	
•URL	0	
•IANA-PROPERTY	0	
•X-PROPERTY	0+	
•REQUEST-STATUS	0	

Copyright © 2019 Microsoft Corporation

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

2.2.117 [RFC5546] Section 3.2.6 REFRESH

V0238:

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

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

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

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

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

C0030:

The table in [RFC5546] section 3.2.7 contains a value of "1" for the **SEQUENCE** property in the **VEVENT** component of a CANCEL-type iCalendar object. However, this is contradicted by the comment in the table: "MUST be present if value greater than 0, can be present if 0."

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

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:

Component/Property	Presence	Notes
METHOD	1	MUST be "COUNTER".

Copyright © 2019 Microsoft Corporation

Component/Property	Presence	Notes
VEVENT	1	
•DTSTAMP	1	
•DTSTART	1	
•ORGANIZER	1	MUST be the organizer of the original event.
•SEQUENCE	1	MUST be present if value is greater than 0, can be present if 0.
•SUMMARY	1	Can be null.
•UID	1	MUST be the **UID** associated with the **REQUEST** being countered.
•ATTACH	0+	
•ATTENDEE	0+	Can also be used to propose other attendees.
•CATEGORIES	0 or 1	Can contain a list of values.
•CLASS	0 or 1	
•COMMENT	0 or 1	
•CONTACT	0+	
•CREATED	0 or 1	
•DESCRIPTION	0 or 1	
•DTEND	0 or 1	If present, **DURATION** MUST NOT be present.
•DURATION	0 or 1	Iif present, **DTEND** MUST NOT be present.
•EXDATE	0+	
•EXRULE	0+	
•GEO	0 or 1	
•LAST-MODIFIED	0 or 1	
•LOCATION	0 or 1	
•PRIORITY	0 or 1	
•RDATE	0+	
•RECURRENCE-ID	0 or 1	MUST only if referring to an instance of a recurring calendar component. Otherwise it MUST NOT be present.
•RELATED-TO	0+	
•REQUEST-STATUS	0+	
•RESOURCES	0 or 1	Can contain a list of values.
•RRULE	0+	
•STATUS	0 or 1	Value MUST be "CONFIRMED", "TENATIVE", or "CANCELLED".
•TRANSP	0 or 1	

Copyright © 2019 Microsoft Corporation

Component/Property	Presence	Notes
•URL	0 or 1	
•IANA-PROPERTY	0+	
•X-PROPERTY	0+	
•VALARM	0+	
VTIMEZONE	0+	MUST be present if any date/time refers to time zone.
IANA-COMPONENT	0+	
X-COMPONENT	0+	
VTODO	0	
VJOURNAL	0	
VFREEBUSY	0	

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

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

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

Copyright © 2019 Microsoft Corporation

Component/Property	Number of instances exported	Notes
•DURATION	0	
•EXDATE	0-1	
•EXRULE	0	
•GEO	0	
•LAST-MODIFIED	0-1	
•LOCATION	0-1	
•PRIORITY	0-1	
•RDATE	0-2	
•RECURRENCE-ID	0-1	
•RELATED-TO	0	
•REQUEST-STATUS	0	
•RESOURCES	0	
•RRULE	0-1	
•STATUS	0	
•TRANSP	0-1	
•URL	0	
•IANA-PROPERTY	0	
•X-PROPERTY	0	
•VALARM	0-1	
VTIMEZONE	0-1	A **VTIMEZONE** is exported for each unique *TZID* parameter in the iCalendar object.
IANA-COMPONENT	0	
X-COMPONENT	0	
VTODO	0	
VJOURNAL	0	
VFREEBUSY	0	

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.

Component/Property	Number of instances imported	Notes
METHOD	1	MUST be set to "COUNTER".

Copyright © 2019 Microsoft Corporation

Component/Property	Number of instances imported	Notes
VEVENT	1	
•DTSTAMP	0-1	
•DTSTART	1	
•ORGANIZER	0-1	**ORGANIZER** is only used to render the message.
•SEQUENCE	0-1	
•SUMMARY	0-1	Can be an empty string.
•UID	1	
•ATTACH	0+	
•ATTENDEE	1+	Exactly one **ATTENDEE** property MUST have the *PARTSTAT* parameter set, or the import fails. All other attendees are ignored.
•CATEGORIES	0+	Can import a list.
•CLASS	0-1	
•COMMENT	0-1	
•CONTACT	0+	
•CREATED	0	
•DESCRIPTION	0-1	
•DTEND	0-1	If both **DTEND** and **DURATION** are specified, **DTEND** is used.
•DURATION	0-1	If both **DTEND** and **DURATION** are specified, **DTEND** is used.
•EXDATE	0+	
•EXRULE	0	
•GEO	0	
•LAST-MODIFIED	0	
•LOCATION	0-1	
•PRIORITY	0-1	
•RDATE	0+	
•RECURRENCE-ID	0-1	
•RELATED-TO	0	
•REQUEST-STATUS	0	
•RESOURCES	0	
•RRULE	0-1	
•STATUS	0-1	**STATUS** is only used to render the message.

Copyright © 2019 Microsoft Corporation

Component/Property	Number of instances imported	Notes
•TRANSP	0-1	
•URL	0	
•IANA-PROPERTY	0	
•X-PROPERTY	0+	
•VALARM	0-1	
VTIMEZONE	0+	If a *TZID* references an undeclared **VTIMEZONE**, a default time zone is used.
IANA-COMPONENT	0	
X-COMPONENT	0	
VTODO	0	
VJOURNAL	0	
VFREEBUSY	0	

2.2.118 [RFC5546] Section 3.2.8 DECLINECOUNTER

V0240:

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

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

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.

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

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.

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

Copyright © 2019 Microsoft Corporation

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

2.2.121 [RFC5546] Section 3.3.2 REQUEST

V0243:

The specification describes the use of **REQUEST** with **VFREEBUSY** components.

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

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

2.2.122 [RFC5546] Section 3.3.3 REPLY

V0244:

The specification describes the use of **REPLY** with **VFREEBUSY** components.

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

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

2.2.123 [RFC5546] Section 3.4 Methods for VTODO Components

V0245:

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

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

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

2.2.124 [RFC5546] Section 3.4.1 PUBLISH

V0246:

The specification describes the use of **PUBLISH** with **VTODO** components.

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

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

2.2.125 [RFC5546] Section 3.4.2 REQUEST

V0247:

The specification describes the use of **REQUEST** with **VTODO** components.

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

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

Copyright © 2019 Microsoft Corporation

2.2.126 [RFC5546] Section 3.4.3 REPLY

V0248:

The specification describes the use of **REPLY** with **VTODO** components.

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

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.

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

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.

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

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.

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

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.

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

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:

Copyright © 2019 Microsoft Corporation

The specification describes the use of **DECLINECOUNTER** with **VTODO** components.

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

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.

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

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.

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

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.

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

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.

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

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**.

Copyright © 2019 Microsoft Corporation

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

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.

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

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

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.

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

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.

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

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.

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

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.

Copyright © 2019 Microsoft Corporation

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

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

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.

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

Microsoft Exchange treats methods not addressed in this section as **PUBLISH**. 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.

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

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.

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

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

The following table specifies how Microsoft Exchange falls back when encountering an unimplemented method.

Copyright © 2019 Microsoft Corporation

Method	Fallback
PUBLISH	Implemented
REQUEST	Implemented
REPLY	Implemented
ADD	Not implemented, fall back to **PUBLISH**.
CANCEL	Implemented
REFRESH	Not implemented, fall back to **PUBLISH.**
COUNTER	Implemented
DECLINECOUNTER	Not implemented, fall back to **PUBLISH**.

V0266:

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

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

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

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

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

V0267:

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

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

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

Copyright © 2019 Microsoft Corporation

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

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

V0268:

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

Component Property	Fallback
ATTACH	Ignore
ATTENDEE	Required if **EVENT-REQUEST** is not implemented; otherwise reply with Not Supported.
CATEGORIES	Ignore
CLASS	Ignore
COMMENT	Ignore
COMPLETED	Ignore
CONTACT	Ignore
CREATED	Ignore
DESCRIPTION	Required
DURATION	Reply with Not Supported
DTSTAMP	Required
DTSTART	Required
DTEND	Required
EXDATE	Ignore
EXRULE	Ignore Reply with Not Supported. If implemented, **VTIMEZONE** MUST also be implemented.
GEO	Ignore
LAST-MODIFIED	Ignore
LOCATION	Required
ORGANIZER	Ignore
PRIORITY	Ignore
RELATED-TO	Ignore
RDATE	Ignore
RRULE	Ignore. The first instance occurs on the **DTSTART** property. If implemented, **VTIMEZONE** MUST also be implemented.

Copyright © 2019 Microsoft Corporation

Component Property	Fallback
RECURRENCE-ID	Required if **RRULE** is implemented; otherwise ignore.
REQUEST-STATUS	Required
RESOURCES	Ignore
SEQUENCE	Required
STATUS	Ignore
SUMMARY	Ignore
TRANSP	Required if **FREEBUSY** is implemented; otherwise ignore.
URL	Ignore
UID	Required
X-	Ignore

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

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

Component Property	Fallback
ATTACH ([MS-OXCICAL] section 2.1.3.1.1.20.1)	Not implemented, ignored
ATTENDEE ([MS-OXCICAL] section 2.1.3.1.1.20.2)	Implemented
CATEGORIES ([MS-OXCICAL] section 2.1.3.1.1.20.3)	Implemented
CLASS ([MS-OXCICAL] section 2.1.3.1.1.20.4)	Some values implemented, others treated as "PUBLIC".
COMMENT ([MS-OXCICAL] section 2.1.3.1.1.20.5)	Some cases implemented, others ignored.
COMPLETED	Not implemented, ignored
CONTACT ([MS-OXCICAL] section 2.1.3.1.1.20.6)	Implemented
CREATED ([MS-OXCICAL] section 2.1.3.1.1.20.7)	Not implemented, ignored
DESCRIPTION ([MS-OXCICAL] section 2.1.3.1.1.20.11)	Implemented
DURATION ([MS-OXCICAL] section 2.1.3.1.1.20.12)	Implemented
DTSTAMP ([MS-OXCICAL] section 2.1.3.1.1.20.9)	Implemented
DTSTART ([MS-OXCICAL] section 2.1.3.1.1.20.10)	Implemented

Copyright © 2019 Microsoft Corporation

Component Property	Fallback
DTEND ([MS-OXCICAL] section 2.1.3.1.1.20.8)	Implemented
EXDATE ([MS-OXCICAL] section 2.1.3.1.1.20.13)	Implemented
EXRULE	Not implemented, ignored
GEO	Not implemented, ignored
LAST-MODIFIED ([MS-OXCICAL] section 2.1.3.1.1.20.14)	Not implemented, ignored
LOCATION ([MS-OXCICAL] section 2.1.3.1.1.20.15)	Implemented
ORGANIZER ([MS-OXCICAL] section 2.1.3.1.1.20.16)	Implemented
PRIORITY ([MS-OXCICAL] section 2.1.3.1.1.20.17)	Implemented
RELATED-TO	Not implemented, ignored
RDATE ([MS-OXCICAL] section 2.1.3.1.1.20.18)	Implemented
RRULE ([MS-OXCICAL] section 2.1.3.1.1.20.19)	Some cases implemented, others cause the VEVENT to be ignored
RECURRENCE-ID ([MS-OXCICAL] section 2.1.3.1.1.20.20)	Implemented
REQUEST-STATUS	Not implemented, ignored
RESOURCES ([MS-OXCICAL] section 2.1.3.1.1.20.21)	Not implemented, ignored
SEQUENCE ([MS-OXCICAL] section 2.1.3.1.1.20.22)	Implemented
STATUS ([MS-OXCICAL] section 2.1.3.1.1.20.23)	Partially implemented, approximated into the Busy Status property of an appointment or meeting
SUMMARY ([MS-OXCICAL] section 2.1.3.1.1.20.24)	Implemented
TRANSP ([MS-OXCICAL] section 2.1.3.1.1.20.25)	Implemented
URL	Not implemented, ignored
X-	Some X-props implemented, others ignored

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

V0269:

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

Copyright © 2019 Microsoft Corporation

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

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

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

V0270:

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

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

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

2.2.144 [RFC5546] Section 5.1.2 Journal-Related Fallbacks

V0271:

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

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

Microsoft Exchange does not export or import **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 **REPLY** method to the organizer using the **ATTENDEE** ([MS-OXCICAL] section 2.1.3.1.1.20.2) properties to indicate that the request was delegated and to whom.

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

Microsoft Exchange does not export *DELEGATED-TO* or *DELEGATED-FROM*. Microsoft Exchange ignores *DELEGATED-TO* and *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 **REFRESH** request from someone who is not an attendee of an event or to-do. Only attendees of an event are authorized to receive replies to **REFRESH** requests. Replying to such requests to anyone who is not an attendee can be a security problem.

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

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

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

2.2.147 [RFC5546] Section 6.2 Recommendations

V0274:

Copyright © 2019 Microsoft Corporation

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.

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

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.

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

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.

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

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.

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

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:

Copyright © 2019 Microsoft Corporation

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

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

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.

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

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].

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

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.

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

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.

Copyright © 2019 Microsoft Corporation

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

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.

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

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

2.2.153 [RFC6047] Section 2.2.2 Authentication

V0283:

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

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

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

V0284:

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

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

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

V0285:

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.

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

Copyright © 2019 Microsoft Corporation

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 an [RFC2045] "Content-Type" value of "text/calendar".

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

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.

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

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**.

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

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.

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

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

V0290:

Copyright © 2019 Microsoft Corporation

The specification states that in order to permit the information in the scheduling message to be understood by MIME user agents that do not support the "text/calendar" content type, scheduling messages SHOULD be sent with an alternative, human-readable form of the information.

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

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-OXCICAL] 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.

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

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.

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

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.

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

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.

Copyright © 2019 Microsoft Corporation

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

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.

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

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.

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

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 2.1.3.1.1.1) is the same for each component.

Copyright © 2019 Microsoft Corporation

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

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.

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

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.

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

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

Copyright © 2019 Microsoft Corporation

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**.

Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, Exchange 2019

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.

Copyright © 2019 Microsoft Corporation

3 Change Tracking

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

Copyright © 2019 Microsoft Corporation

4 Index

A

ATTENDEE MUST be Present on Group Scheduled Calendar Entities 13

C

Change tracking 111

D

Delegate MUST Inherit RSVP and ROLE from Delegator 13
DTEND MUST be Later in Time than DTSTART 13

G

Glossary 9

I

Informative references 11
Introduction 9

N

Normative references 10

O

ORGANIZER MUST be Present on Group Scheduled Calendar Entities 14

R

References
  informative 11
  normative 10

T

Tracking changes 111

V

Valid Range of INTEGER Value Type 13
VEVENT Components in COUNTER-type iCalendar Objects MUST Contain an ORGANIZER Property 14
VEVENT Components in REPLY-type iCalendar Objects MUST Contain an ORGANIZER Property 14
VEVENT Components in REQUEST-type iCalendar Objects MUST Contain One or More ATTENDEE Properties 14
VEVENT with no End Time does not take up Any Time 13

Copyright © 2019 Microsoft Corporation