

[MS-XWDCNTC]: Web Distributed Authoring and Versioning (WebDAV) Extensions for Contacts Support

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Revision Summary

Date	Revision History	Revision Class	Comments
02/04/2009	1.0	Major	Initial release.
03/04/2009	1.0.1	Editorial	Revised and edited technical content.
04/10/2009	2.0	Major	Deprecated for Exchange 2010.
07/15/2009	3.0	Major	Changes made for template compliance.
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1 Introduction

The Web Distributed Authoring and Versioning (WebDAV) Extensions for Contacts Support extend the [WebDAV](#) protocol to allow the creation and manipulation of [Contact objects](#) by using WebDAV. For information about the WebDAV protocol, see [\[RFC2518\]](#).

Sections 1.8, 2, and 3 of this specification are normative and can contain the terms MAY, SHOULD, MUST, MUST NOT, and SHOULD NOT as defined in RFC 2119. Sections 1.5 and 1.9 are also normative but cannot contain those terms. All other sections and examples in this specification are informative.

1.1 Glossary

The following terms are defined in [\[MS-GLOS\]](#):

distinguished name (DN)
Hypertext Transfer Protocol (HTTP)

The following terms are defined in [\[MS-OXGLOS\]](#):

contact
Contact object
Contacts folder
File Transfer Protocol (FTP)
header
Integrated Services Digital Network (ISDN)
mailbox
public folder
Root folder
telecommunications device for the deaf (TDD)
Uniform Resource Locator (URL)
Web Distributed Authoring and Versioning Protocol (WebDAV)
WebDAV client
WebDAV server
X500 DN

The following terms are specific to this document:

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

1.2 References

References to Microsoft Open Specifications documentation do not include a publishing year because links are to the latest version of the technical documents, which are updated frequently. References to other documents include a publishing year when one is available.

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. Please check the archive site, <http://msdn2.microsoft.com/en-us/library/E4BD6494-06AD-4aed-9823-445E921C9624>, as an additional source.

[ISO-639-2] International Organization for Standardization, "Codes for the Representation of Names of Languages", ISO 639-2, <http://www.loc.gov/standards/iso639-2/>

[MS-OXCDATA] Microsoft Corporation, "[Data Structures](#)".

[MS-OXCFOLD] Microsoft Corporation, "[Folder Object Protocol](#)".

[MS-OXCMAIL] Microsoft Corporation, "[RFC 2822 and MIME to Email Object Conversion Algorithm](#)".

[MS-OXCMSG] Microsoft Corporation, "[Message and Attachment Object Protocol](#)".

[MS-EXOABK] Microsoft Corporation, "[Address Book Object Protocol](#)".

[MS-OXOCAL] Microsoft Corporation, "[Appointment and Meeting Object Protocol](#)".

[MS-OXOCNTC] Microsoft Corporation, "[Contact Object Protocol](#)".

[MS-OXOMSG] Microsoft Corporation, "[Email Object Protocol](#)".

[MS-OXOSFLD] Microsoft Corporation, "[Special Folders Protocol](#)".

[MS-EXPROPS] Microsoft Corporation, "[Exchange Server Protocols Master Property List](#)".

[MS-WDVSE] Microsoft Corporation, "[Web Distributed Authoring and Versioning \(WebDAV\) Protocol: Server Extensions](#)".

[MS-XWDEXT] Microsoft Corporation, "[Web Distributed Authoring and Versioning \(WebDAV\) Core Extensions](#)".

[RFC2068] Fielding, R., Gettys, J., Mogul, J., et al., "Hypertext Transfer Protocol -- HTTP/1.1", RFC 2068, January 1997, <http://www.ietf.org/rfc/rfc2068.txt>

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

[RFC2518] Goland, Y., Whitehead, E., Faizi, A., et al., "HTTP Extensions for Distributed Authoring - WebDAV", RFC 2518, February 1999, <http://www.ietf.org/rfc/rfc2518.txt>

1.2.2 Informative References

[MS-GLOS] Microsoft Corporation, "[Windows Protocols Master Glossary](#)".

[MS-OXGLOS] Microsoft Corporation, "[Exchange Server Protocols Master Glossary](#)".

[MS-EXPROTO] Microsoft Corporation, "[Exchange Server Protocols System Overview](#)".

[RFC2291] Slein, J., Vitali, F., Whitehead, E., et al., "Requirements for a Distributed Authoring and Versioning Protocol for the World Wide Web", RFC 2291, February 1998, <http://www.ietf.org/rfc/rfc2291.txt>

[RFC2818] Rescorla, E., "HTTP Over TLS", RFC 2818, May 2000, <http://www.ietf.org/rfc/rfc2818.txt>

1.3 Overview

A client uses the WebDAV Extensions for Contacts Support to create and manipulate [Contact objects](#). The following operations can be performed:

- Create, retrieve, and delete [contacts \(3\)](#).

- Set, retrieve, and delete properties of a contact (3).

These operations use standard WebDAV constructs and server extensions to [WebDAV](#). No additional [headers \(2\)](#) or methods are specified in this document, but some of the methods used by the WebDAV Extensions for Contacts Support are extended, as described in [\[MS-XWDEXT\]](#).

1.4 Relationship to Other Protocols

The WebDAV Extensions for Contacts Support depend on the HTTP Extensions for WebDAV, which are described in [\[RFC2518\]](#), and the Hypertext Transfer Protocol (HTTP) 1.1, which is described in [\[RFC2068\]](#). The WebDAV Extensions for Contacts Support also rely on the Hypertext Transfer Protocol over Secure Sockets Layer (HTTPS), described in [\[RFC2818\]](#), for data protection services.

The WebDAV Extensions for Contacts Support use extensions to [\[RFC2518\]](#), which are described in [\[MS-WDVSE\]](#) and [\[MS-XWDEXT\]](#).

Many of the [WebDAV](#) contact properties that are specified in section [2.2.1](#) map to the [Contact object](#) properties that are described in [\[MS-OXOCNTC\]](#) section 2.2.1 and section [2.2.2](#).

For conceptual background information and overviews of the relationships and interactions between this and other protocols, see [\[MS-OXPROTO\]](#).

1.5 Prerequisites/Preconditions

The WebDAV Extensions for Contacts Support require the following:

- The [WebDAV server](#) operates as described in [\[RFC2291\]](#).
- The [WebDAV client](#) has a [URL](#) that points to the WebDAV server.
- The WebDAV client obtains the URL through a mechanism that is outside of [WebDAV](#) and that is determined by the implementer.

1.6 Applicability Statement

A client can use this protocol to communicate with a server to create, retrieve, and delete [contacts \(3\)](#) by using [WebDAV](#).

1.7 Versioning and Capability Negotiation

Versioning: The WebDAV Extensions for Contacts Support have no versioning mechanisms except those that already exist in [WebDAV](#) and [HTTP](#), as described in [\[RFC2068\]](#) and [\[RFC2518\]](#).

Capability Negotiation: The WebDAV Extensions for Contacts Support have no capability negotiation mechanisms except those that already exist in WebDAV and HTTP, as described in [\[RFC2068\]](#) and [\[RFC2518\]](#).

1.8 Vendor-Extensible Fields

None.

1.9 Standards Assignments

None.

2 Messages

2.1 Transport

The WebDAV Extensions for Contacts Support transport messages by using HTTP, as specified in [\[RFC2068\]](#) and [\[RFC2518\]](#).

2.2 Message Syntax

2.2.1 Properties

This section specifies the [WebDAV](#) properties for the [Contact object](#). Many of these properties map directly to the Contact object properties that are specified in [\[MS-OXOCNTC\]](#) section 2.2.1 and section [2.2.2](#).

These properties are listed by canonical name. For more details about the canonical name and WebDAV property naming, see [\[MS-OXPROPS\]](#) section 1.3 and section [1.3.4](#), respectively.

2.2.1.1 DAV: Namespace Properties

This section specifies properties that are defined by the **DAV:** namespace.

2.2.1.1.1 PidNameContentClass

DAV property name: **DAV:contentclass**

Data type: **PtypString** ([\[MS-OXCDATA\]](#) section 2.11.1.6)

The **PidNameContentClass** property ([\[MS-OXCMSG\]](#) section 2.2.1.48) identifies the content class of an item. For a [Contact object](#), the value of this property MUST be "urn:content-class:person". For a [Contacts folder](#), the value of this property MUST be "urn:content-classes:contactfolder".

The **PidNameContentClass** property is further specified in [\[MS-OXCMAIL\]](#) section 2.1.3.2.2.

2.2.1.2 http://schemas.microsoft.com/exchange/ Namespace Properties

This section specifies properties that are defined by the **http://schemas.microsoft.com/exchange/** namespace.

2.2.1.2.1 PidTagContainerClass

DAV property name: **http://schemas.microsoft.com/exchange/outlookfolderclass**

Data type: **PtypString** ([\[MS-OXCDATA\]](#) section 2.11.1.6)

The **PidTagContainerClass** property ([\[MS-OXOCAL\]](#) section 2.2.11.1) identifies the content class of a folder. For a [Contacts folder](#), the value of this property MUST be "IPF.Contact".

The **PidTagContainerClass** property is further specified in [\[MS-OXOSFLD\]](#) section 2.2.8.

2.2.1.2.2 PidTagMessageClass

DAV property name: **http://schemas.microsoft.com/exchange/outlookmessageclass**

Data type: **PtypString** ([\[MS-OXCDATA\]](#) section 2.11.1.6)

The **PidTagMessageClass** property ([\[MS-OXCMMSG\]](#) section 2.2.1.3) contains the object-type classification. For a [Contact object](#), the value of this property MUST be "IPM.contact".

The **PidTagMessageClass** property is further specified in [\[MS-OXOMSG\]](#) section 2.2.1.16.

2.2.1.3 urn:schemas:contacts: Namespace Properties

This section specifies properties that are defined by the **urn:schemas:contacts:** namespace.

2.2.1.3.1 PidLidBilling

DAV property name: **urn:schemas:contacts:billinginformation**

Data type: **PtypString** ([\[MS-OXCDATA\]](#) section 2.11.1.6)

The **PidLidBilling** property ([\[MS-OXOCNTC\]](#) section 2.2.1.10.24) specifies the billing information for the [contact \(3\)](#).

2.2.1.3.2 PidLidHomeAddress

DAV property name: **urn:schemas:contacts:homepostaladdress**

Data type: **PtypString** ([\[MS-OXCDATA\]](#) section 2.11.1.6)

The **PidLidHomeAddress** property ([\[MS-OXOCNTC\]](#) section 2.2.1.3.8) specifies the home postal address of the [contact \(3\)](#) and is read-only. The value of this property is constructed from the "Home Address" group of properties, which are listed in the table in [\[MS-OXOCNTC\]](#) section 2.2.1.3.

2.2.1.3.3 PidLidOtherAddress

DAV property name: **urn:schemas:contacts:otherpostaladdress**

Data type: **PtypString** ([\[MS-OXCDATA\]](#) section 2.11.1.6)

The **PidLidOtherAddress** property ([\[MS-OXOCNTC\]](#) section 2.2.1.3.8) specifies the alternate postal address for the [contact \(3\)](#) and is read-only. The value of this property is constructed from the "Other Address" group of properties, which are listed in the table in [\[MS-OXOCNTC\]](#) section 2.2.1.3.

2.2.1.3.4 PidLidPostalAddressId

DAV property name: **urn:schemas:contacts:mailingaddressid**

Data type: **PtypInteger32** ([\[MS-OXCDATA\]](#) section 2.11.1.6)

The **PidLidPostalAddressId** property ([\[MS-OXOCNTC\]](#) section 2.2.1.3.9) specifies a numeric value that determines how the [contact's \(3\)](#) mailing address is generated.

The valid values for the **PidLidPostalAddressId** property are listed in the following table.

Value	Meaning
0x00000000	The mailing address is not constructed from other properties, and the mailing address is manually specified.
0x00000001	The mailing address is constructed from the "Home Address" group of properties, which are listed in the table in [MS-OXOCNTC] section 2.2.1.3.

Value	Meaning
0x00000002	The mailing address is constructed from the "Work Address" group of properties, which are listed in the table in [MS-OXOCNTC] section 2.2.1.3.
0x00000003	The mailing address is constructed from the "Other Address" group of properties, which are listed in the table in [MS-OXOCNTC] section 2.2.1.3.

2.2.1.3.5 PidLidReferredBy

DAV property name: **urn:schemas:contacts:referredby**

Data type: **PtypString** ([\[MS-OXCDATA\]](#) section 2.11.1.6)

The **PidLidReferredBy** property ([\[MS-OXPROPS\]](#) section [2.215](#)) specifies the full name of the person who referred the [contact \(3\)](#).

2.2.1.3.6 PidLidWorkAddress

DAV property name: **urn:schemas:contacts:workaddress**

Data type: **PtypString** ([\[MS-OXCDATA\]](#) section 2.11.1.6)

The **PidLidWorkAddress** property ([\[MS-OXOCNTC\]](#) section 2.2.1.3.8) specifies the work address for the [contact \(3\)](#) and is read-only. The value of this property is constructed from the "Work Address" group of properties, which are listed in the table in [\[MS-OXOCNTC\]](#) section 2.2.1.3.

2.2.1.3.7 PidLidWorkAddressCity

DAV property name: **urn:schemas:contacts:l**

Data type: **PtypString** ([\[MS-OXCDATA\]](#) section 2.11.1.6)

The **PidLidWorkAddressCity** property ([\[MS-OXOCNTC\]](#) section 2.2.1.3.2) specifies the city for the [contact's \(3\)](#) work address.

2.2.1.3.8 PidLidWorkAddressCountry

DAV property name: **urn:schemas:contacts:co**

Data type: **PtypString** ([\[MS-OXCDATA\]](#) section 2.11.1.6)

The **PidLidWorkAddressCountry** property ([\[MS-OXOCNTC\]](#) section 2.2.1.3.5) specifies the country/region for the [contact's \(3\)](#) work address.

2.2.1.3.9 PidLidWorkAddressPostalCode

DAV property name: **urn:schemas:contacts:postalcode**

Data type: **PtypString** ([\[MS-OXCDATA\]](#) section 2.11.1.6)

The **PidLidWorkAddressPostalCode** property ([\[MS-OXOCNTC\]](#) section 2.2.1.3.4) specifies the postal code for the [contact's \(3\)](#) work address.

2.2.1.3.10 PidLidWorkAddressPostOfficeBox

DAV property name: **urn:schemas:contacts:postofficebox**

Data type: **PtypString** ([\[MS-OXCDATA\]](#) section 2.11.1.6)

The **PidLidWorkAddressPostOfficeBox** property ([\[MS-OXOCNTC\]](#) section 2.2.1.3.7) specifies the post office box number for the [contact's \(3\)](#) work address.

2.2.1.3.11 PidLidWorkAddressState

DAV property name: **urn:schemas:contacts:st**

Data type: **PtypString** ([\[MS-OXCDATA\]](#) section 2.11.1.6)

The **PidLidWorkAddressState** property ([\[MS-OXOCNTC\]](#) section 2.2.1.3.3) specifies the state for the [contact's \(3\)](#) work address.

2.2.1.3.12 PidLidWorkAddressStreet

DAV property name: **urn:schemas:contacts:street**

Data type: **PtypString** ([\[MS-OXCDATA\]](#) section 2.11.1.6)

The **PidLidWorkAddressStreet** property ([\[MS-OXOCNTC\]](#) section 2.2.1.3.1) specifies the street for the [contact's \(3\)](#) work address.

2.2.1.3.13 PidNameContactsAlternateRecipient

DAV property name: **urn:schemas:contacts:alternaterecipient**

Data type: **PtypString** ([\[MS-OXCDATA\]](#) section 2.11.1.6)

The **PidNameContactsAlternateRecipient** property ([\[MS-OXPROPS\]](#) section [2.414](#)) specifies an alternate e-mail address for the [contact \(3\)](#).

2.2.1.3.14 PidNameContactsCountry

DAV property name: **urn:schemas:contacts:c**

Data type: **PtypString** ([\[MS-OXCDATA\]](#) section 2.11.1.6)

The **PidNameContactsCountry** property ([\[MS-OXPROPS\]](#) section [2.415](#)) specifies the country/region code for the [contact's \(3\)](#) work address.

2.2.1.3.15 PidNameContactsEmail1

DAV property name: **urn:schemas:contacts:email1**

Data type: **PtypString** ([\[MS-OXCDATA\]](#) section 2.11.1.6)

The **PidNameContactsEmail1** property ([\[MS-OXPROPS\]](#) section [2.416](#)) specifies the primary e-mail address of the [contact \(3\)](#).

2.2.1.3.16 PidNameContactsEmail2

DAV property name: **urn:schemas:contacts:email2**

Data type: **PtypString** ([\[MS-OXCDATA\]](#) section 2.11.1.6)

The **PidNameContactsEmail2** property ([\[MS-OXPROPS\]](#) section [2.417](#)) specifies the secondary e-mail address of the [contact \(3\)](#).

2.2.1.3.17 PidNameContactsEmail3

DAV property name: **urn:schemas:contacts:email3**

Data type: **PtypString** ([\[MS-OXCDATA\]](#) section 2.11.1.6)

The **PidNameContactsEmail3** property ([\[MS-OXPROPS\]](#) section [2.418](#)) specifies the third e-mail address of the [contact \(3\)](#).

2.2.1.3.18 PidNameContactsFileAs

DAV property name: **urn:schemas:contacts:fileas**

Data type: **PtypString** ([\[MS-OXCDATA\]](#) section 2.11.1.6)

The **PidNameContactsFileAs** property ([\[MS-OXPROPS\]](#) section [2.419](#)) specifies the contact information in the format in which it is to be displayed.

If the value of this property is not null, the contact information is displayed exactly as it appears in this property; otherwise, the **PidNameContactsFileAsId** property (section [2.2.1.3.19](#)) specifies how the contact information is to be displayed.

If the value of the **PidNameContactsFileAsId** property is zero and the **PidNameContactsFileAs** property is set to null (empty string), the **PidNameContactsFileAs** property will be deleted.

2.2.1.3.19 PidNameContactsFileAsId

DAV property name: **urn:schemas:contacts:fileasid**

Data type: **PtypInteger32** ([\[MS-OXCDATA\]](#) section 2.11.1.6)

The **PidNameContactsFileAsId** property ([\[MS-OXPROPS\]](#) section [2.420](#)) specifies a numeric value that determines how the contact information is displayed.

If the **PidNameContactsFileAs** property (section [2.2.1.3.18](#)) is set to a non-null value, then its value overrides the format that is specified by the **PidNameContactsFileAsId** property; otherwise, the value of the **PidNameContactsFileAs** property is assembled from other properties.

The valid values for the **PidNameContactsFileAsId** property are listed in the following table. Each value specifies how the value of the **PidNameContactsFileAs** property is generated if its value is currently null (an empty string). Commas and spaces appear exactly as shown. The following abbreviations are used in the table to represent the values of the properties that compose the **PidNameContactsFileAs** property:

- Gn — the [contact's \(3\)](#) given name (also called the first name), taken from the **PidTagGivenName** property ([\[MS-OXOABK\]](#) section 2.2.4.2).
- Mn — the contact's (3) middle name, taken from the **PidTagMiddleName** property ([\[MS-OXOCNTC\]](#) section 2.2.1.1.5).
- Org — the contact's (3) organization or company, taken from the **PidTagCompanyName** property ([\[MS-OXOABK\]](#) section 2.2.4.7).

- Sn — the contact's (3) surname, taken from the **PidTagSurname** property ([\[MS-OXOABK\]](#) section 2.2.4.1).

Value	Value of PidNameContactsFileAs property
0x00000000	The PidNameContactsFileAs property is deleted.
0x00000001	Sn, Gn Mn
0x00000002	Gn Mn Sn
0x00000003	Org
0x00000004	Sn, Gn Mn (Org)
0x00000005	Org (Sn, Gn Mn)
0x00000006	SnGn Mn
0x00000007	SnGn Mn (Org)
0x00000008	Org (SnGn Mn)
0x00000009	SnGn
0x0000000A	Sn Gn Mn (Org)
0x0000000B	Org (Sn Gn Mn)
0x0000000C	Sn Gn Mn

2.2.1.3.20 PidNameContactsHomeLatitude

DAV property name: **urn:schemas:contacts:homelatitude**

Data type: **PtypFloating64** ([\[MS-OXCDATA\]](#) section 2.11.1.6)

The **PidNameContactsHomeLatitude** property ([\[MS-OXPROPS\]](#) section [2.421](#)) specifies the latitude of the [contact's \(3\)](#) home.

2.2.1.3.21 PidNameContactsHomeLongitude

DAV property name: **urn:schemas:contacts:homelongitude**

Data type: **PtypFloating64** ([\[MS-OXCDATA\]](#) section 2.11.1.6)

The **PidNameContactsHomeLongitude** property ([\[MS-OXPROPS\]](#) section [2.422](#)) specifies the longitude of the [contact's \(3\)](#) home.

2.2.1.3.22 PidNameContactsHomeTimeZone

DAV property name: **urn:schemas:contacts:hometimezone**

Data type: **PtypString** ([\[MS-OXCDATA\]](#) section 2.11.1.6)

The **PidNameContactsHomeTimeZone** property ([\[MS-OXPROPS\]](#) section [2.423](#)) specifies the time zone of the [contact's \(3\)](#) home.

2.2.1.3.23 PidNameContactsMapUrl

DAV property name: **urn:schemas:contacts:mapurl**

Data type: **PtypString** ([\[MS-OXCDATA\]](#) section 2.11.1.6)

The **PidNameContactsMapUrl** property ([\[MS-OXPROPS\]](#) section [2.424](#)) specifies the map [URL](#) for the [contact \(3\)](#). The property is read-only.

2.2.1.3.24 PidNameContactsOtherCountryCode

DAV property name: **urn:schemas:contacts:othercountrycode**

Data type: **PtypString** ([\[MS-OXCDATA\]](#) section 2.11.1.6)

The **PidNameContactsOtherCountryCode** property ([\[MS-OXPROPS\]](#) section [2.425](#)) specifies an alternative, two-letter country/region code for the [contact \(3\)](#).

2.2.1.3.25 PidNameContactsOtherPager

DAV property name: **urn:schemas:contacts:otherpager**

Data type: **PtypString** ([\[MS-OXCDATA\]](#) section 2.11.1.6)

The **PidNameContactsOtherPager** property ([\[MS-OXPROPS\]](#) section [2.426](#)) specifies a pager telephone number for the [contact \(3\)](#).

2.2.1.3.26 PidNameContactsOtherTimeZone

DAV property name: **urn:schemas:contacts:othertimezone**

Data type: **PtypString** ([\[MS-OXCDATA\]](#) section 2.11.1.6)

The **PidNameContactsOtherTimeZone** property ([\[MS-OXPROPS\]](#) section [2.427](#)) specifies an alternate time zone for the [contact \(3\)](#).

2.2.1.3.27 PidNameContactsProxyAddresses

DAV property name: **urn:schemas:contacts:proxyaddresses**

Data type: **PtypMultipleString** ([\[MS-OXCDATA\]](#) section 2.11.1.6.1)

The **PidNameContactsProxyAddresses** property ([\[MS-OXPROPS\]](#) section [2.428](#)) specifies one or more e-mail addresses.

2.2.1.3.28 PidNameContactsSecretaryUrl

DAV property name: **urn:schemas:contacts:secretaryurl**

Data type: **PtypString** ([\[MS-OXCDATA\]](#) section 2.11.1.6)

The **PidNameContactsSecretaryUrl** property ([\[MS-OXPROPS\]](#) section [2.429](#)) specifies the [URL](#) to the [contact's \(3\)](#) secretary.

2.2.1.3.29 PidNameContactsSourceUrl

DAV property name: **urn:schemas:contacts:sourceurl**

Data type: **PtypString** ([\[MS-OXCDATA\]](#) section 2.11.1.6)

The **PidNameContactsSourceUrl** property ([\[MS-OXPROPS\]](#) section [2.430](#)) specifies the [URL](#) of the source from which the [contact's \(3\)](#) information was obtained.

2.2.1.3.30 PidTagAccount

DAV property name: **urn:schemas:contacts:account**

Data type: **PtypString** ([\[MS-OXCDATA\]](#) section 2.11.1.6)

The **PidTagAccount** property ([\[MS-OXOCNTC\]](#) section 2.2.1.10.11) specifies the account (typically an account number) for the [contact \(3\)](#).

2.2.1.3.31 PidTagAssistant

DAV property name: **urn:schemas:contacts:secretarycn**

Data type: **PtypString** ([\[MS-OXCDATA\]](#) section 2.11.1.6)

The **PidTagAssistant** property ([\[MS-OXOABK\]](#) section 2.2.4.8) specifies the friendly name of the [contact's \(3\)](#) secretary.

2.2.1.3.32 PidTagAssistantTelephoneNumber

DAV property name: **urn:schemas:contacts:secretaryphone**

Data type: **PtypString** ([\[MS-OXCDATA\]](#) section 2.11.1.6)

The **PidTagAssistantTelephoneNumber** property ([\[MS-OXOABK\]](#) section 2.2.4.31) specifies the phone number of the [contact's \(3\)](#) secretary.

2.2.1.3.33 PidTagBirthday

DAV property name: **urn:schemas:contacts:bday**

Data type: **PtypTime** ([\[MS-OXCDATA\]](#) section 2.11.1.6)

The **PidTagBirthday** property ([\[MS-OXOABK\]](#) section [2.2.4.79](#)) specifies the birthday of the [contact](#).

2.2.1.3.34 PidTagBusiness2TelephoneNumber

DAV property name: **urn:schemas:contacts:telephonenumber2**

Data type: **PtypString** ([\[MS-OXCDATA\]](#) section 2.11.1.6)

The **PidTagBusiness2TelephoneNumber** property ([\[MS-OXOABK\]](#) section 2.2.4.23) specifies an alternate work phone number for the [contact \(3\)](#).

2.2.1.3.35 PidTagBusinessFaxNumber

DAV property name: **urn:schemas:contacts:facsimiletelephonenumber**

Data type: **PtypString** ([\[MS-OXCDATA\]](#) section 2.11.1.6)

The **PidTagBusinessFaxNumber** property ([\[MS-OXOABK\]](#) section [2.2.4.51](#)) specifies the work facsimile (fax) telephone number for the [contact \(3\)](#).

2.2.1.3.36 PidTagBusinessHomePage

DAV property name: **urn:schemas:contacts:businesshomepage**

Data type: **PtypString** ([\[MS-OXCDATA\]](#) section 2.11.1.6)

The **PidTagBusinessHomePage** property ([\[MS-OXOABK\]](#) section [2.2.4.78](#)) specifies the [URL](#) to the home page of a business's Web site.

2.2.1.3.37 PidTagBusinessTelephoneNumber

DAV property name: **urn:schemas:contacts:telephoneNumber**

Data type: **PtypString** ([\[MS-OXCDATA\]](#) section 2.11.1.6)

The **PidTagBusinessTelephoneNumber** property ([\[MS-OXOABK\]](#) section 2.2.4.21) specifies the work phone number for the [contact \(3\)](#).

2.2.1.3.38 PidTagCallbackTelephoneNumber

DAV property name: **urn:schemas:contacts:callbackphone**

Data type: **PtypString** ([\[MS-OXCDATA\]](#) section 2.11.1.6)

The **PidTagCallbackTelephoneNumber** property ([\[MS-OXOABK\]](#) section [2.2.4.44](#)) specifies the phone number that is used for returning calls to the [contact \(3\)](#).

2.2.1.3.39 PidTagCarTelephoneNumber

DAV property name: **urn:schemas:contacts:othermobile**

Data type: **PtypString** ([\[MS-OXCDATA\]](#) section 2.11.1.6)

The **PidTagCarTelephoneNumber** property ([\[MS-OXOABK\]](#) section [2.2.4.47](#)) specifies an alternate mobile phone number for the [contact \(3\)](#).

2.2.1.3.40 PidTagChildrensNames

DAV property name: **urn:schemas:contacts:childrensnames**

Data type: **PtypMultipleString** ([\[MS-OXCDATA\]](#) section 2.11.1.6.1)

The **PidTagChildrensNames** property ([\[MS-OXOCNTC\]](#) section 2.2.1.10.17) specifies the names of the [contact's \(3\)](#) children.

2.2.1.3.41 PidTagCompanyMainTelephoneNumber

DAV property name: **urn:schemas:contacts:organizationmainphone**

Data type: **PtypString** ([\[MS-OXCDATA\]](#) section 2.11.1.6)

The **PidTagCompanyMainTelephoneNumber** property ([\[MS-OXOABK\]](#) section [2.2.4.53](#)) specifies the main telephone number for a company.

2.2.1.3.42 PidTagCompanyName

DAV property name: **urn:schemas:contacts:o**

Data type: **PtypString** ([\[MS-OXCDATA\]](#) section 2.11.1.6)

The **PidTagCompanyName** property ([\[MS-EXOABK\]](#) section 2.2.4.7) specifies the name of the company or organization with which the [contact \(3\)](#) is associated.

2.2.1.3.43 PidTagComputerNetworkName

DAV property name: **urn:schemas:contacts:computernetworkname**

Data type: **PtypString** ([\[MS-OXCDATA\]](#) section 2.11.1.6)

The **PidTagComputerNetworkName** property ([\[MS-EXOABK\]](#) section [2.2.4.74](#)) specifies the computer network name for the [contact \(3\)](#).

2.2.1.3.44 PidTagCountry

DAV property name: **urn:schemas:contacts:mailingcountry**

Data type: **PtypString** ([\[MS-OXCDATA\]](#) section 2.11.1.6)

The **PidTagCountry** property ([\[MS-EXOABK\]](#) section 2.2.4.19) specifies the country/region portion of the [contact's \(3\)](#) mailing address and is read-only.

2.2.1.3.45 PidTagCustomerId

DAV property name: **urn:schemas:contacts:customerid**

Data type: **PtypString** ([\[MS-OXCDATA\]](#) section 2.11.1.6)

The **PidTagCustomerId** property ([\[MS-EXOABK\]](#) section [2.2.4.75](#)) specifies the customer ID of the [contact \(3\)](#).

2.2.1.3.46 PidTagDepartmentName

DAV property name: **urn:schemas:contacts:department**

Data type: **PtypString** ([\[MS-OXCDATA\]](#) section 2.11.1.6)

The **PidTagDepartmentName** property ([\[MS-EXOABK\]](#) section 2.2.4.6) specifies the department for the [contact \(3\)](#).

2.2.1.3.47 PidTagDisplayName

DAV property name: **urn:schemas:contacts:cn**

Data type: **PtypString** ([\[MS-OXCDATA\]](#) section 2.11.1.6)

The **PidTagDisplayName** property ([\[MS-OXCFOLD\]](#) section 2.2.2.2.5) specifies the friendly name of the [contact \(3\)](#).

2.2.1.3.48 PidTagDisplayNamePrefix

DAV property name: **urn:schemas:contacts:personaltitle**

Data type: **PtypString** ([\[MS-OXCDATA\]](#) section 2.11.1.6)

The **PidTagDisplayNamePrefix** property ([\[MS-OXOABK\]](#) section [2.2.4.4](#)) specifies the prefix title for the [contact \(3\)](#).

2.2.1.3.49 PidTagFtpSite

DAV property name: **urn:schemas:contacts:ftpsite**

Data type: **PtypString** ([\[MS-OXCDATA\]](#) section 2.11.1.6)

The **PidTagFtpSite** property ([\[MS-OXOABK\]](#) section [2.2.4.76](#)) specifies the [URL](#) to the [File Transfer Protocol \(FTP\)](#) site for the [contact \(3\)](#).

2.2.1.3.50 PidTagGender

DAV property name: **urn:schemas:contacts:gender**

Data type: **PtypInteger16** ([\[MS-OXCDATA\]](#) section 2.11.1.6)

The **PidTagGender** property ([\[MS-OXOABK\]](#) section [2.2.4.73](#)) specifies the gender of the [contact \(3\)](#).

The following table lists the valid values for the **PidTagGender** property.

Value	Meaning
0x0001	The contact (3) is female.
0x0002	The contact (3) is male.

2.2.1.3.51 PidTagGeneration

DAV property name: **urn:schemas:contacts:namesuffix**

Data type: **PtypString** ([\[MS-OXCDATA\]](#) section 2.11.1.6)

The **PidTagGeneration** property ([\[MS-OXOABK\]](#) section [2.2.4.6](#)) specifies the generation qualifier for the [contact \(3\)](#).

2.2.1.3.52 PidTagGivenName

DAV property name: **urn:schemas:contacts:givenName**

Data type: **PtypString** ([\[MS-OXCDATA\]](#) section 2.11.1.6)

The **PidTagGivenName** property ([\[MS-OXOABK\]](#) section [2.2.4.2](#)) specifies the first name of the [contact \(3\)](#).

2.2.1.3.53 PidTagGovernmentIdNumber

DAV property name: **urn:schemas:contacts:governmentid**

Data type: **PtypString** ([\[MS-OXCDATA\]](#) section 2.11.1.6)

The **PidTagGovernmentIdNumber** property ([MS-OXOABK] section 2.2.4.59) specifies the government identifier for the [contact \(3\)](#). In the United States, the government identifier is typically the Social Security number.

2.2.1.3.54 PidTagHobbies

DAV property name: **urn:schemas:contacts:hobbies**

Data type: **PtypString** ([MS-OXCDATA] section 2.11.1.6)

The **PidTagHobbies** property ([MS-OXOABK] section 2.2.4.69) specifies the [contact's \(3\)](#) hobbies, separated by semicolons.

2.2.1.3.55 PidTagHome2TelephoneNumber

DAV property name: **urn:schemas:contacts:homephone2**

Data type: **PtypString** ([MS-OXCDATA] section 2.11.1.6)

The **PidTagHome2TelephoneNumber** property ([MS-OXOABK] section 2.2.4.25) specifies an alternate home telephone number for the [contact \(3\)](#).

2.2.1.3.56 PidTagHomeAddressCity

DAV property name: **urn:schemas:contacts:homeCity**

Data type: **PtypString** ([MS-OXCDATA] section 2.11.1.6)

The **PidTagHomeAddressCity** property ([MS-OXOABK] section 2.2.4.27) specifies the [contact's \(3\)](#) home city.

2.2.1.3.57 PidTagHomeAddressCountry

DAV property name: **urn:schemas:contacts:homeCountry**

Data type: **PtypString** ([MS-OXCDATA] section 2.11.1.6)

The **PidTagHomeAddressCountry** property ([MS-OXOABK] section 2.2.4.30) specifies the [contact's \(3\)](#) home country/region.

2.2.1.3.58 PidTagHomeAddressPostalCode

DAV property name: **urn:schemas:contacts:homePostalCode**

Data type: **PtypString** ([MS-OXCDATA] section 2.11.1.6)

The **PidTagHomeAddressPostalCode** property ([MS-OXOABK] section 2.2.4.29) specifies the [contact's \(3\)](#) home postal code. In the United States, the postal code is typically the zip code.

2.2.1.3.59 PidTagHomeAddressPostOfficeBox

DAV property name: **urn:schemas:contacts:homepostofficebox**

Data type: **PtypString** ([MS-OXCDATA] section 2.11.1.6)

The **PidTagHomeAddressPostOfficeBox** property ([MS-OXOABK] section 2.2.4.26) specifies the post office box number for the [contact's \(3\)](#) home address.

2.2.1.3.60 PidTagHomeAddressStateOrProvince

DAV property name: **urn:schemas:contacts:homeState**

Data type: **PtysString** ([\[MS-OXCDATA\]](#) section 2.11.1.6)

The **PidTagHomeAddressStateOrProvince** property ([\[MS-OXOABK\]](#) section [2.2.4.28](#)) specifies the home state or province of the [contact \(3\)](#).

2.2.1.3.61 PidTagHomeAddressStreet

DAV property name: **urn:schemas:contacts:homeStreet**

Data type: **PtysString** ([\[MS-OXCDATA\]](#) section 2.11.1.6)

The **PidTagHomeAddressStreet** property ([\[MS-OXOABK\]](#) section 2.2.4.20) specifies the street for the [contact's \(3\)](#) home address.

2.2.1.3.62 PidTagHomeFaxNumber

DAV property name: **urn:schemas:contacts:homefax**

Data type: **PtysString** ([\[MS-OXCDATA\]](#) section 2.11.1.6)

The **PidTagHomeFaxNumber** property ([\[MS-OXOABK\]](#) section [2.2.4.52](#)) specifies the home facsimile (fax) number for the [contact \(3\)](#).

2.2.1.3.63 PidTagHomeTelephoneNumber

DAV property name: **urn:schemas:contacts:homePhone**

Data type: **PtysString** ([\[MS-OXCDATA\]](#) section 2.11.1.6)

The **PidTagHomeTelephoneNumber** property ([\[MS-OXOABK\]](#) section 2.2.4.22) specifies the home telephone number, in international dialing format, for the [contact \(3\)](#).

2.2.1.3.64 PidTagInitials

DAV property name: **urn:schemas:contacts:initials**

Data type: **PtysString** ([\[MS-OXCDATA\]](#) section 2.11.1.6)

The **PidTagInitials** property ([\[MS-OXOABK\]](#) section 2.2.4.3) specifies the [contact's \(3\)](#) initials.

2.2.1.3.65 PidTagIsdnNumber

DAV property name: **urn:schemas:contacts:internationalisdnnumber**

Data type: **PtysString** ([\[MS-OXCDATA\]](#) section 2.11.1.6)

The **PidTagIsdnNumber** property ([\[MS-OXOABK\]](#) section [2.2.4.56](#)) specifies the [Integrated Services Digital Network \(ISDN\)](#) number for the [contact \(3\)](#).

2.2.1.3.66 PidTagLanguage

DAV property name: **urn:schemas:contacts:language**

Data type: **PtypString** ([\[MS-OXCDATA\]](#) section 2.11.1.6)

The **PidTagLanguage** property ([\[MS-OXOABK\]](#) section [2.2.4.61](#)) contains an ISO-639-Alpha-3 code that specifies the language of the [contact \(3\)](#). For more details about ISO-639-Alpha-3 codes, see [\[ISO-639-2\]](#).

2.2.1.3.67 PidTagLocality

DAV property name: **urn:schemas:contacts:mailingcity**

Data type: **PtypString** ([\[MS-OXCDATA\]](#) section 2.11.1.6)

The **PidTagLocality** property ([\[MS-OXOABK\]](#) section 2.2.4.16) specifies the city portion of the [contact's \(3\)](#) mailing address and is read-only.

2.2.1.3.68 PidTagLocation

DAV property name: **urn:schemas:contacts:location**

Data type: **PtypString** ([\[MS-OXCDATA\]](#) section 2.11.1.6)

The **PidTagLocation** property ([\[MS-OXOABK\]](#) section [2.2.4.62](#)) specifies the contact's regional location.

2.2.1.3.69 PidTagManagerName

DAV property name: **urn:schemas:contacts:manager**

Data type: **PtypString** ([\[MS-OXCDATA\]](#) section 2.11.1.6)

The **PidTagManagerName** property ([\[MS-OXOABK\]](#) section [2.2.4.12](#)) specifies the **distinguished name (DN) (1)** for the manager of the [contact \(3\)](#).

2.2.1.3.70 PidTagMessageHandlingSystemCommonName

DAV property name: **urn:schemas:contacts:dn**

Data type: **PtypString** ([\[MS-OXCDATA\]](#) section 2.11.1.6)

The **PidTagMessageHandlingSystemCommonName** property ([\[MS-OXOABK\]](#) section 2.2.4.33) specifies the [X500 DN](#) of the [contact \(3\)](#). This property is read-only.

2.2.1.3.71 PidTagMiddleName

DAV property name: **urn:schemas:contacts:middlename**

Data type: **PtypString** ([\[MS-OXCDATA\]](#) section 2.11.1.6)

The **PidTagMiddleName** property ([\[MS-OXOCNTC\]](#) section 2.2.1.1.5) specifies the [contact's \(3\)](#) middle name.

2.2.1.3.72 PidTagMobileTelephoneNumber

DAV property name: **urn:schemas:contacts:mobile**

Data type: **PtypString** ([\[MS-OXCDATA\]](#) section 2.11.1.6)

The **PidTagMobileTelephoneNumber** property ([\[MS-OXOABK\]](#) section 2.2.4.27) specifies the [contact's \(3\)](#) mobile telephone number.

2.2.1.3.73 PidTagNickname

DAV property name: **urn:schemas:contacts:nickname**

Data type: **PtypString** ([\[MS-OXCDATA\]](#) section 2.11.1.6)

The **PidTagNickname** property ([\[MS-OXOABK\]](#) section [2.2.4.3](#)) specifies the [contact's \(3\)](#) nickname.

2.2.1.3.74 PidTagOfficeLocation

DAV property name: **urn:schemas:contacts:roomnumber**

Data type: **PtypString** ([\[MS-OXCDATA\]](#) section 2.11.1.6)

The **PidTagOfficeLocation** property ([\[MS-OXOABK\]](#) section 2.2.4.5) specifies the [contact's \(3\)](#) office number.

2.2.1.3.75 PidTagOrganizationalIdNumber

DAV property name: **urn:schemas:contacts:employeenumber**

Data type: **PtypString** ([\[MS-OXCDATA\]](#) section 2.11.1.6)

The **PidTagOrganizationalIdNumber** property ([\[MS-OXOABK\]](#) section [2.2.4.63](#)) specifies the [contact's \(3\)](#) employee number.

2.2.1.3.76 PidTagOtherAddressCity

DAV property name: **urn:schemas:contacts:othercity**

Data type: **PtypString** ([\[MS-OXCDATA\]](#) section 2.11.1.6)

The **PidTagOtherAddressCity** property ([\[MS-OXOABK\]](#) section [2.2.4.33](#)) specifies an alternate city for the [contact \(3\)](#).

2.2.1.3.77 PidTagOtherAddressCountry

DAV property name: **urn:schemas:contacts:othercountry**

Data type: **PtypString** ([\[MS-OXCDATA\]](#) section 2.11.1.6)

The **PidTagOtherAddressCountry** property ([\[MS-OXOABK\]](#) section [2.2.4.36](#)) specifies an alternate country/region for the [contact \(3\)](#).

2.2.1.3.78 PidTagOtherAddressPostalCode

DAV property name: **urn:schemas:contacts:otherpostalcode**

Data type: **PtypString** ([\[MS-OXCDATA\]](#) section 2.11.1.6)

The **PidTagOtherAddressPostalCode** property ([\[MS-OXOABK\]](#) section [2.2.4.35](#)) specifies an alternate postal code, typically a zip code in the United States, for the [contact \(3\)](#).

2.2.1.3.79 PidTagOtherAddressPostOfficeBox

DAV property name: **urn:schemas:contacts:otherpostofficebox**

Data type: **PtypString** ([\[MS-OXCDATA\]](#) section 2.11.1.6)

The **PidTagOtherAddressPostOfficeBox** property ([\[MS-OXOABK\]](#) section [2.2.4.32](#)) specifies an alternate post office box for the [contact \(3\)](#).

2.2.1.3.80 PidTagOtherAddressStateOrProvince

DAV property name: **urn:schemas:contacts:otherstate**

Data type: **PtypString** ([\[MS-OXCDATA\]](#) section 2.11.1.6)

The **PidTagOtherAddressStateOrProvince** property ([\[MS-OXOABK\]](#) section [2.2.4.34](#)) specifies an alternate state or province for the [contact \(3\)](#).

2.2.1.3.81 PidTagOtherAddressStreet

DAV property name: **urn:schemas:contacts:otherstreet**

Data type: **PtypString** ([\[MS-OXCDATA\]](#) section 2.11.1.6)

The **PidTagOtherAddressStreet** property ([\[MS-OXOABK\]](#) section [2.2.4.31](#)) specifies an alternate street address for the [contact \(3\)](#).

2.2.1.3.82 PidTagOtherTelephoneNumber

DAV property name: **urn:schemas:contacts:otherTelephone**

Data type: **PtypString** ([\[MS-OXCDATA\]](#) section 2.11.1.6)

The **PidTagOtherTelephoneNumber** property ([\[MS-OXOABK\]](#) section [2.2.4.48](#)) specifies an alternate telephone number for the [contact \(3\)](#).

2.2.1.3.83 PidTagPagerTelephoneNumber

DAV property name: **urn:schemas:contacts:pager**

Data type: **PtypString** ([\[MS-OXCDATA\]](#) section 2.11.1.6)

The **PidTagPagerTelephoneNumber** property ([\[MS-OXOABK\]](#) section 2.2.4.28) specifies the [contact's \(3\)](#) work pager number.

2.2.1.3.84 PidTagPersonalHomePage

DAV property name: **urn:schemas:contacts:personalHomePage**

Data type: **PtypString** ([\[MS-OXCDATA\]](#) section 2.11.1.6)

The **PidTagPersonalHomePage** property ([\[MS-OXOABK\]](#) section [2.2.4.77](#)) specifies the [URL](#) of the home page for the [contact \(3\)](#).

2.2.1.3.85 PidTagPostalAddress

DAV property name: **urn:schemas:contacts:mailingpostaladdress**

Data type: **PtypString** ([\[MS-OXCDATA\]](#) section 2.11.1.6)

The **PidTagPostalAddress** property ([\[MS-OXOABK\]](#) section [2.2.4.18](#)) specifies the postal portion of the [contact's \(3\)](#) home mailing address and is read-only. The value of this property is constructed from the "Mailing Address" group of properties, which are listed in the table in [\[MS-OXOCNTC\]](#) section 2.2.1.3.

2.2.1.3.86 PidTagPostalCode

DAV property name: **urn:schemas:contacts:mailingpostalcode**

Data type: **PtypString** ([\[MS-OXCDATA\]](#) section 2.11.1.6)

The **PidTagPostalCode** property ([\[MS-OXOABK\]](#) section 2.2.4.18) specifies postal code portion of the [contact's \(3\)](#) home mailing address and is read-only.

2.2.1.3.87 PidTagPostOfficeBox

DAV property name: **urn:schemas:contacts:mailingpostofficebox**

Data type: **PtypString** ([\[MS-OXCDATA\]](#) section 2.11.1.6)

The **PidTagPostOfficeBox** property ([\[MS-OXOABK\]](#) section 2.2.4.15) specifies the post office box portion of the [contact's \(3\)](#) home mailing address and is read-only.

2.2.1.3.88 PidTagPrimaryFaxNumber

DAV property name: **urn:schemas:contacts:otherfax**

Data type: **PtypString** ([\[MS-OXCDATA\]](#) section 2.11.1.6)

The **PidTagPrimaryFaxNumber** property ([\[MS-OXOABK\]](#) section 2.2.4.29) specifies an alternate facsimile (fax) number for the [contact \(3\)](#).

2.2.1.3.89 PidTagProfession

DAV property name: **urn:schemas:contacts:profession**

Data type: **PtypString** ([\[MS-OXCDATA\]](#) section 2.11.1.6)

The **PidTagProfession** property ([\[MS-OXOABK\]](#) section [2.2.4.70](#)) specifies the [contact's \(3\)](#) profession.

2.2.1.3.90 PidTagSpouseName

DAV property name: **urn:schemas:contacts:spousecn**

Data type: **PtypString** ([\[MS-OXCDATA\]](#) section 2.11.1.6)

The **PidTagSpouseName** property ([\[MS-OXOABK\]](#) section [2.2.4.72](#)) specifies the friendly name of the [contact's \(3\)](#) spouse/partner.

2.2.1.3.91 PidTagStateOrProvince

DAV property name: **urn:schemas:contacts:mailingstate**

Data type: **PtypString** ([\[MS-OXCDATA\]](#) section 2.11.1.6)

The **PidTagStateOrProvince** property ([\[MS-OXOABK\]](#) section 2.2.4.17) specifies the state or province portion of the [contact's \(3\)](#) mailing address and is read-only.

2.2.1.3.92 PidTagStreetAddress

DAV property name: **urn:schemas:contacts:mailingstreet**

Data type: **PtypString** ([\[MS-OXCDATA\]](#) section 2.11.1.6)

The **PidTagStreetAddress** property ([\[MS-OXOABK\]](#) section 2.2.4.14) specifies the street portion of the [contact's \(3\)](#) mailing address and is read-only.

2.2.1.3.93 PidTagSurname

DAV property name: **urn:schemas:contacts:sn**

Data type: **PtypString** ([\[MS-OXCDATA\]](#) section 2.11.1.6)

The **PidTagSurname** property ([\[MS-OXOABK\]](#) section 2.2.4.1) specifies the [contact's \(3\)](#) surname.

2.2.1.3.94 PidTagTelecommunicationsDeviceForDeafTelephoneNumber

DAV property name: **urn:schemas:contacts:ttytddphone**

Data type: **PtypString** ([\[MS-OXCDATA\]](#) section 2.11.1.6)

The **PidTagTelecommunicationsDeviceForDeafTelephoneNumber** property ([\[MS-OXOABK\]](#) section [2.2.4.54](#)) specifies the [contact's \(3\) telecommunications device for the deaf \(TDD\)](#) phone number.

2.2.1.3.95 PidTagTelexNumber

DAV property name: **urn:schemas:contacts:telexnumber**

Data type: **PtypString** ([\[MS-OXCDATA\]](#) section 2.11.1.6)

The **PidTagTelexNumber** property ([\[MS-OXOABK\]](#) section 2.2.4.30) specifies the [contact's \(3\)](#) work telex number.

2.2.1.3.96 PidTagTitle

DAV property name: **urn:schemas:contacts:title**

Data type: **PtypString** ([\[MS-OXCDATA\]](#) section 2.11.1.6)

The **PidTagTitle** property ([\[MS-OXOABK\]](#) section 2.2.4.4) specifies the [contact's \(3\)](#) work title or job position.

2.2.1.3.97 PidTagUserCertificate

DAV property name: **urn:schemas:contacts:usercertificate**

Data type: **PtypBinary** ([\[MS-OXCDATA\]](#) section 2.11.1.6)

The **PidTagUserCertificate** property ([\[MS-OXOABK\]](#) section 2.2.4.34) specifies the certificate that is used to authenticate the [contact \(3\)](#).

2.2.1.3.98 PidTagWeddingAnniversary

DAV property name: **urn:schemas:contacts:weddinganniversary**

Data type: **PtypTime** ([\[MS-OXCDATA\]](#) section 2.11.1.6)

The **PidTagWeddingAnniversary** property ([\[MS-OXOABK\]](#) section [2.2.4.80](#)) specifies the [contact's \(3\)](#) wedding anniversary.

2.2.1.4 urn:schemas:httpmail: Namespace Properties

This section specifies properties that are defined by the **urn:schemas:httpmail:** namespace.

2.2.1.4.1 PidNameHttpmailContacts

DAV property name: **urn:schemas:httpmail:contacts**

Data type: **PtypString** ([\[MS-OXCDATA\]](#) section 2.11.1.6)

The **PidNameHttpmailContacts** property ([\[MS-OXPROPS\]](#) section [2.477](#)) specifies the [URL](#) of the user's default contacts folder. This property exists only on the [Root folder](#) of the user's [mailbox](#) on the server. If the property is nonexistent, the mailbox does not contain a default contacts folder.

2.2.2 Methods

The WebDAV Extensions for Contacts Support use the following methods:

- **DELETE**, as specified in [\[RFC2068\]](#) section 9.7 and [\[RFC2518\]](#) section 8.6. Extensions to this method are specified in [\[MS-XWDEXT\]](#) section 2.2.1.7.
- **PROPFIND**, as specified in [\[RFC2518\]](#) section 8.1. Extensions to this method are specified in [\[MS-XWDEXT\]](#) section 2.2.1.17.
- **PROPPATCH**, as specified in [\[RFC2518\]](#) section 9.2. Extensions to this method are specified in [\[MS-XWDEXT\]](#) section 2.2.1.18.
- **SEARCH**, as specified in [\[MS-WDVSE\]](#).

3 Protocol Details

3.1 Client Details

3.1.1 Abstract Data Model

This section describes a conceptual model of possible data organization that an implementation maintains to participate in this protocol. The described organization is provided to facilitate the explanation of how the protocol behaves. This document does not mandate that implementations adhere to this model as long as their external behavior is consistent with that described in this document.

The WebDAV Extensions for Contacts Support treat a list of [contacts \(3\)](#) as a folder and treat each contact (3) as an item within the folder. Each contact (3) has properties, as specified in section [2.2.1](#).

3.1.2 Timers

None.

3.1.3 Initialization

None.

3.1.4 Higher-Layer Triggered Events

The client responds to higher-layer triggered events by sending requests, as specified in [\[RFC2068\]](#) and [\[RFC2518\]](#). Each request contains a method that specifies an operation to be performed. The following sections provide details about the methods used by the WebDAV Extensions for Contacts Support to perform operations.

3.1.4.1 Discovery

The client uses the **PROPFIND** method to discover which contacts folders exist on the server.

For more details about the **PROPFIND** method, see section [2.2.2](#).

3.1.4.1.1 Default Contacts Folder in User's Mailbox

To determine the location of the default [Contacts folder](#), the client retrieves the **PidNameHttpmailContacts** property (section [2.2.1.4.1](#)) from the [Root folder](#) of the user's [mailbox](#) on the server. The property specifies the [URL](#) of the user's default contacts folder. If the property is not present, the user's mailbox does not contain a default contacts folder.

3.1.4.1.2 Other Contacts Folders

To discover other [Contacts folders](#) that exist either in the user's [mailbox](#) or in [public folders](#), the client retrieves the **PidNameContentClass** property ([\[MS-OXCMSG\]](#) section 2.2.1.48) and the **PidTagContainerClass** property ([\[MS-OXOCAL\]](#) section 2.2.11.1). A folder is a contacts folder if these properties are set as follows:

- The **PidNameContentClass** property is set to the value "urn:content-classes:contactfolder".
- The **PidTagContainerClass** property is set to the value "IPF.contact".

3.1.4.2 Creating a Contact

The client uses the **PROPPATCH** method to create a new [contact \(3\)](#) in the [Contacts folder](#). The new contact (3) MUST have the following property settings:

- The **PidNameContentClass** property ([\[MS-OXCMSG\]](#) section 2.2.1.48) is set to "urn:content-class:person".
- The **PidTagMessageClass** property ([\[MS-OXCMSG\]](#) section 2.2.1.3) is set to "IPM.contact".

For more details about the **PROPPATCH** method, see section [2.2.2](#).

3.1.4.3 Retrieving a List of Contacts

The client uses the **PROPFIND** method or the **SEARCH** method to retrieve the list of [contacts \(3\)](#) from the [Contacts folder](#). The request MUST have the **Depth header (2)** set to either 1 or infinity. For more details about the **Depth** header (2), see [\[RFC2518\]](#) and [\[MS-WDVSE\]](#).

For more details about the **PROPFIND** method and the **SEARCH** method, see section [2.2.2](#).

3.1.4.4 Deleting a Contact

The client uses the **DELETE** method to delete a [contact \(3\)](#).

For more details about the **DELETE** method, see section [2.2.2](#).

3.1.4.5 Setting Properties on a Contact

The client uses the **PROPPATCH** method to set properties on a particular [contact \(3\)](#).

For more details about the **PROPPATCH** method, see section [2.2.2](#).

3.1.4.6 Retrieving Properties on a Contact

The client uses the **PROPFIND** method to retrieve properties on a particular [contact \(3\)](#). The request MUST have the **Depth** header set to zero. For more details about the **Depth header (2)**, see [\[RFC2518\]](#) and [\[MS-WDVSE\]](#).

For more details about the **PROPFIND** method, see section [2.2.2](#).

3.1.4.7 Deleting Properties on a Contact

The client uses the **PROPPATCH** method to delete properties on a particular [contact \(3\)](#).

For more details about the **PROPPATCH** method, see section [2.2.2](#).

3.1.5 Message Processing Events and Sequencing Rules

The client handles responses from the server as specified in [\[RFC2068\]](#) and [\[RFC2518\]](#).

3.1.6 Timer Events

None.

3.1.7 Other Local Events

None.

3.2 Server Details

3.2.1 Abstract Data Model

This section describes a conceptual model of possible data organization that an implementation maintains to participate in this protocol. The described organization is provided to facilitate the explanation of how the protocol behaves. This document does not mandate that implementations adhere to this model as long as their external behavior is consistent with that described in this document.

The WebDAV Extensions for Contacts Support treat a list of [contacts \(3\)](#) as a folder and treat each contact (3) as an item within the folder. Each contact (3) has properties, as specified in section [2.2.1](#).

3.2.2 Timers

None.

3.2.3 Initialization

None.

3.2.4 Higher-Layer Triggered Events

None.

3.2.5 Message Processing Events and Sequencing Rules

General response behavior is specified in [\[RFC2068\]](#) and [\[RFC2518\]](#).

3.2.5.1 Processing a DELETE Request

In response to a **DELETE** method request, the server deletes the specified [contact \(3\)](#) from the [Contacts folder](#).

For more details about the **DELETE** method, see section [2.2.2](#).

3.2.5.2 Processing a PROPFIND Request

In response to a **PROPFIND** method request, the server sends one of the following, depending on the request:

- A list of the [contacts \(3\)](#) that exist in the [Contacts folder](#). In this case, the request will specify the depth as either 1 or infinity.
- The properties on a particular contact (3) or resource. In this case, the request will specify the depth as zero.

For more details about the **PROPFIND** method, see section [2.2.2](#).

3.2.5.3 Processing a PROPPATCH Request

In response to a PROPPATCH method request, the server does one of the following, depending on the request:

- Creates a new [contact \(3\)](#) in the contacts folder.
- Sets properties on the specified contact (3).
- Deletes properties on the specified contact (3).

For more details about the **PROPPATCH** method, see section [2.2.2](#).

3.2.5.4 Processing a SEARCH Request

In response to a **SEARCH** method request, the server sends a list of the [contacts \(3\)](#) that exist in the [Contacts folder](#).

For more details about the **SEARCH** method, see section [2.2.2](#).

3.2.6 Timer Events

None.

3.2.7 Other Local Events

None.

4 Protocol Examples

4.1 Creating a Contact

The following example shows how to use the **PROPPATCH** method to create a [contact \(3\)](#). The response is a standard [WebDAV](#) response to the **PROPPATCH** method request.

Request body

```
<?xml version="1.0"?>
<a:propertyupdate xmlns:a="DAV:" xmlns:ex="http://schemas.microsoft.com/exchange/"
xmlns:ct="urn:schemas:contacts:" xmlns:dt="urn:uuid:c2f41010-65b3-11d1-a29f-00aa00c14882/">
  <a:set>
    <a:prop>
      <ct:givenName>David</>
      <ct:middlename>Oliver</>
      <ct:sn>Lawrence</>
      <ct:o>IBM</>
      <a:contentclass>urn:content-class:person</>
      <ct:fileasid dt:dt="i4">6</>
      <ex:outlookmessageclass>IPM.Contact</>
      <ct:email1>david@contoso.com</>
    </a:prop>
  </a:set>
</a:propertyupdate>
```

Response body

```
<?xml version="1.0"?>
<a:multistatus xmlns:c="http://schemas.microsoft.com/exchange/"
xmlns:b="urn:schemas:contacts:" xmlns:a="DAV:">
  <a:response>
    <a:href>http://exch-d-739/exchange/johnk/Contacts/David.eml</a:href>
    <a:status>HTTP/1.1 201 Created</a:status>
    <a:propstat>
      <a:status>HTTP/1.1 200 OK</a:status>
      <a:prop>
        <b:givenName/>
        <b:middlename/>
        <b:sn/>
        <b:o/>
        <a:contentclass/>
        <b:fileasid/>
        <c:outlookmessageclass/>
        <b:email1/>
      </a:prop>
    </a:propstat>
  </a:response>
</a:multistatus>
```

5 Security

5.1 Security Considerations for Implementers

None.

5.2 Index of Security Parameters

None.

6 Appendix A: Product Behavior

The information in this specification is applicable to the following Microsoft products or supplemental software. References to product versions include released service packs:

- Microsoft Exchange Server 2003
- Microsoft Exchange Server 2007

Exceptions, if any, are noted below. If a service pack or Quick Fix Engineering (QFE) number appears with the product version, behavior changed in that service pack or QFE. The new behavior also applies to subsequent service packs of the product unless otherwise specified. If a product edition appears with the product version, behavior is different in that product edition.

Unless otherwise specified, any statement of optional behavior in this specification that is prescribed using the terms SHOULD or SHOULD NOT implies product behavior in accordance with the SHOULD or SHOULD NOT prescription. Unless otherwise specified, the term MAY implies that the product does not follow the prescription.

7 Change Tracking

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

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