

[MS-OXWUMS]:

Voice Mail Settings Web Service Protocol

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.

Revision Summary

Date	Revision History	Revision Class	Comments
4/4/2008	0.1	Major	Initial Availability.
6/27/2008	1.0	Major	Initial Release.
8/6/2008	1.0.1	Editorial	Revised and edited technical content.
9/3/2008	1.0.2	Editorial	Updated references.
12/3/2008	1.0.3	Editorial	Revised and edited technical content.
3/4/2009	1.0.4	Editorial	Revised and edited technical content.
4/10/2009	2.0	Major	Updated technical content and applicable product releases.
7/15/2009	3.0	Major	Revised and edited for technical content.
11/4/2009	3.1.0	Minor	Updated the technical content.
2/10/2010	4.0.0	Major	Updated and revised the technical content.
5/5/2010	4.0.1	Editorial	Revised and edited the technical content.
8/4/2010	5.0	Major	Significantly changed the technical content.
11/3/2010	5.1	Minor	Clarified the meaning of the technical content.
3/18/2011	6.0	Major	Significantly changed the technical content.
8/5/2011	6.1	Minor	Clarified the meaning of the technical content.
10/7/2011	6.1	None	No changes to the meaning, language, or formatting of the technical content.
1/20/2012	7.0	Major	Significantly changed the technical content.
4/27/2012	7.0	None	No changes to the meaning, language, or formatting of the technical content.
7/16/2012	7.0	None	No changes to the meaning, language, or formatting of the technical content.
10/8/2012	8.0	Major	Significantly changed the technical content.
2/11/2013	9.0	Major	Significantly changed the technical content.
7/26/2013	9.0	None	No changes to the meaning, language, or formatting of the technical content.
11/18/2013	9.0	None	No changes to the meaning, language, or formatting of the technical content.
2/10/2014	9.0	None	No changes to the meaning, language, or formatting of the technical content.
4/30/2014	9.1	Minor	Clarified the meaning of the technical content.
7/31/2014	9.2	Minor	Clarified the meaning of the technical content.
10/30/2014	9.2	None	No changes to the meaning, language, or formatting of the technical content.

Date	Revision History	Revision Class	Comments
3/16/2015	10.0	Major	Significantly changed the technical content.
5/26/2015	10.0	None	No changes to the meaning, language, or formatting of the technical content.
9/14/2015	10.0	None	No changes to the meaning, language, or formatting of the technical content.
6/13/2016	10.0	None	No changes to the meaning, language, or formatting of the technical content.
9/14/2016	10.0	None	No changes to the meaning, language, or formatting of the technical content.
6/20/2017	10.1	Minor	Clarified the meaning of the technical content.
7/24/2018	11.0	Major	Significantly changed the technical content.
10/1/2018	12.0	Major	Significantly changed the technical content.

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	Overview	11
1.4	Relationship to Other Protocols	11
1.5	Prerequisites/Preconditions	12
1.6	Applicability Statement	12
1.7	Versioning and Capability Negotiation	12
1.8	Vendor-Extensible Fields	13
1.9	Standards Assignments	13
2	Messages	14
2.1	Transport	14
2.2	Common Message Syntax	14
2.2.1	Namespaces	14
2.2.2	Messages	14
2.2.2.1	Malformed XML SOAP Fault	15
2.2.3	Elements	15
2.2.3.1	m:ExceptionType Element	16
2.2.3.2	m:Message Element	16
2.2.3.3	m:ResponseCode Element	16
2.2.4	Complex Types	17
2.2.4.1	t:PhoneCallIdType Complex Type	17
2.2.5	Simple Types	17
2.2.6	Attributes	17
2.2.7	Groups	17
2.2.8	Attribute Groups	18
3	Protocol Details	19
3.1	UMWebServiceSoap Server Details	19
3.1.1	Abstract Data Model	19
3.1.1.1	Phone Call Status State Model	19
3.1.2	Timers	22
3.1.3	Initialization	22
3.1.4	Message Processing Events and Sequencing Rules	22
3.1.4.1	Disconnect Operation	23
3.1.4.1.1	Messages	24
3.1.4.1.1.1	DisconnectSoapIn Message	24
3.1.4.1.1.2	DisconnectSoapOut Message	24
3.1.4.1.2	Elements	25
3.1.4.1.2.1	m:Disconnect Element	25
3.1.4.1.2.2	m:DisconnectResponse Element	25
3.1.4.1.3	Complex Types	25
3.1.4.1.4	Simple Types	26
3.1.4.1.5	Attributes	26
3.1.4.1.6	Groups	26
3.1.4.1.7	Attribute Groups	26
3.1.4.2	DisconnectPhoneCall Operation	26
3.1.4.2.1	Messages	26
3.1.4.2.1.1	DisconnectPhoneCallSoapIn Message	27
3.1.4.2.1.2	DisconnectPhoneCallSoapOut Message	27
3.1.4.2.2	Elements	28
3.1.4.2.2.1	m:DisconnectPhoneCall Element	28

3.1.4.2.2.2	m:DisconnectPhoneCallResponse Element.....	28
3.1.4.2.3	Complex Types	28
3.1.4.2.3.1	m:DisconnectPhoneCallResponseMessageType Complex Type.....	29
3.1.4.2.3.2	m:DisconnectPhoneCallType Complex Type	29
3.1.4.2.4	Simple Types	29
3.1.4.2.5	Attributes	30
3.1.4.2.6	Groups.....	30
3.1.4.2.7	Attribute Groups.....	30
3.1.4.3	GetCallInfo Operation	30
3.1.4.3.1	Messages	31
3.1.4.3.1.1	GetCallInfoSoapIn Message.....	31
3.1.4.3.1.2	GetCallInfoSoapOut Message.....	31
3.1.4.3.2	Elements	32
3.1.4.3.2.1	m:GetCallInfo Element	32
3.1.4.3.2.2	m:GetCallInfoResponse Element	32
3.1.4.3.3	Complex Types	33
3.1.4.3.3.1	tns:UMCallInfo Complex Type.....	33
3.1.4.3.4	Simple Types	34
3.1.4.3.4.1	tns:UMCallState Simple Type.....	34
3.1.4.3.4.2	tns:UMEventCause Simple Type.....	35
3.1.4.3.5	Attributes	36
3.1.4.3.6	Groups	36
3.1.4.3.7	Attribute Groups.....	36
3.1.4.4	GetPhoneCallInformation Operation.....	36
3.1.4.4.1	Messages	37
3.1.4.4.1.1	GetPhoneCallInformationSoapIn	37
3.1.4.4.1.2	GetPhoneCallInformationSoapOut	37
3.1.4.4.2	Elements	38
3.1.4.4.2.1	m:GetPhoneCallInformation Element	38
3.1.4.4.2.2	m:GetPhoneCallInformationResponse Element.....	38
3.1.4.4.3	Complex Types	39
3.1.4.4.3.1	m:GetPhoneCallInformationType Complex Type.....	39
3.1.4.4.3.2	m:GetPhoneCallInformationResponseMessageType Complex Type ...	39
3.1.4.4.3.3	t:PhoneCallInformationType Complex Type	40
3.1.4.4.4	Simple Types	41
3.1.4.4.4.1	t:ConnectionFailureCauseType Simple Type	41
3.1.4.4.4.2	t:PhoneCallStateType Simple Type	42
3.1.4.4.5	Attributes	43
3.1.4.4.6	Groups	43
3.1.4.4.7	Attribute Groups.....	43
3.1.4.5	GetUMProperties Operation	43
3.1.4.5.1	Messages	44
3.1.4.5.1.1	GetUMPropertiesSoapIn Message	44
3.1.4.5.1.2	GetUMPropertiesSoapOut Message	44
3.1.4.5.2	Elements	45
3.1.4.5.2.1	m:GetUMProperties Element.....	45
3.1.4.5.2.2	m:GetUMPropertiesResponse Element	45
3.1.4.5.3	Complex Types	46
3.1.4.5.3.1	m:UMProperties Complex Type	46
3.1.4.5.4	Simple Types	47
3.1.4.5.5	Attributes	47
3.1.4.5.6	Groups.....	47
3.1.4.5.7	Attribute Groups.....	47
3.1.4.6	IsUMEnabled Operation.....	47
3.1.4.6.1	Messages	48
3.1.4.6.1.1	IsUMEnabledSoapIn Message	48
3.1.4.6.1.2	IsUMEnabledSoapOut Message	48
3.1.4.6.2	Elements	49

3.1.4.6.2.1	m:IsUMEnabled Element.....	49
3.1.4.6.2.2	m:IsUMEnabledResponse Element.....	49
3.1.4.6.3	Complex Types	50
3.1.4.6.4	Simple Types	50
3.1.4.6.5	Attributes	50
3.1.4.6.6	Groups.....	50
3.1.4.6.7	Attribute Groups.....	50
3.1.4.7	PlayOnPhone2 Operation.....	50
3.1.4.7.1	Messages	51
3.1.4.7.1.1	PlayOnPhoneSoapIn2	51
3.1.4.7.1.2	PlayOnPhoneSoapOut2	51
3.1.4.7.2	Complex Types	52
3.1.4.7.2.1	m:PlayOnPhoneType Complex Type	53
3.1.4.7.2.2	m:PlayOnPhone2Type Complex Type.....	54
3.1.4.7.2.3	m:PlayOnPhoneResponse2Type Complex Type	54
3.1.4.7.2.4	m:PlayOnPhoneResponseMessageType Complex Type	54
3.1.4.7.3	Simple Types	55
3.1.4.7.4	Attributes	55
3.1.4.7.5	Groups.....	55
3.1.4.7.6	Attribute Groups.....	55
3.1.4.8	PlayOnPhone Operation	55
3.1.4.8.1	Messages	57
3.1.4.8.1.1	PlayOnPhoneSoapIn Message	57
3.1.4.8.1.2	PlayOnPhoneSoapOut Message	57
3.1.4.8.2	Elements.....	58
3.1.4.8.2.1	m:PlayOnPhone Element.....	58
3.1.4.8.2.2	m:PlayOnPhoneResponse Element	59
3.1.4.8.3	Complex Types	59
3.1.4.8.4	Simple Types	59
3.1.4.8.5	Attributes	59
3.1.4.8.6	Groups.....	60
3.1.4.8.7	Attribute Groups.....	60
3.1.4.9	PlayOnPhoneGreeting Operation	60
3.1.4.9.1	Messages	61
3.1.4.9.1.1	PlayOnPhoneGreetingSoapIn Message	61
3.1.4.9.1.2	PlayOnPhoneGreetingSoapOut Message	61
3.1.4.9.2	Elements.....	62
3.1.4.9.2.1	m:PlayOnPhoneGreeting Element.....	62
3.1.4.9.2.2	m:PlayOnPhoneGreetingResponse Element	63
3.1.4.9.3	Simple Types	63
3.1.4.9.3.1	m:UMGreetingType Simple Type.....	63
3.1.4.9.4	Attributes	64
3.1.4.9.5	Groups.....	64
3.1.4.9.6	Attribute Groups.....	64
3.1.4.10	ResetPIN Operation	64
3.1.4.10.1	Messages	65
3.1.4.10.1.1	ResetPINSoapIn Message.....	65
3.1.4.10.1.2	ResetPINSoapOut Message.....	65
3.1.4.10.2	Elements.....	65
3.1.4.10.2.1	m:ResetPIN Element	66
3.1.4.10.2.2	m:ResetPINResponse Element.....	66
3.1.4.10.3	Complex Types	66
3.1.4.10.4	Simple Types	66
3.1.4.10.5	Attributes	66
3.1.4.10.6	Groups.....	66
3.1.4.10.7	Attribute Groups.....	66
3.1.4.11	SetMissedCallNotificationEnabled Operation.....	66
3.1.4.11.1	Messages	67

3.1.4.11.1.1	SetMissedCallNotificationEnabledSoapIn Message	67
3.1.4.11.1.2	SetMissedCallNotificationEnabledSoapOut Message	68
3.1.4.11.2	Elements	68
3.1.4.11.2.1	m:SetMissedCallNotificationEnabled Element	68
3.1.4.11.2.2	m:SetMissedCallNotificationEnabledResponse Element	69
3.1.4.11.3	Complex Types	69
3.1.4.11.4	Simple Types	69
3.1.4.11.5	Attributes	69
3.1.4.11.6	Groups	69
3.1.4.11.7	Attribute Groups	69
3.1.4.12	SetOutOfStatus Operation	69
3.1.4.12.1	Messages	70
3.1.4.12.1.1	SetOutOfStatusSoapIn Message	70
3.1.4.12.1.2	SetOutOfStatusSoapOut Message	71
3.1.4.12.2	Elements	71
3.1.4.12.2.1	m:SetOutOfStatus Element	71
3.1.4.12.2.2	m:SetOutOfStatusResponse Element	72
3.1.4.12.3	Complex Types	72
3.1.4.12.4	Simple Types	72
3.1.4.12.5	Attributes	72
3.1.4.12.6	Groups	72
3.1.4.12.7	Attribute Groups	72
3.1.4.13	SetPlayOnPhoneDialString Operation	72
3.1.4.13.1	Messages	73
3.1.4.13.1.1	SetPlayOnPhoneDialStringSoapIn Message	73
3.1.4.13.1.2	SetPlayOnPhoneDialStringSoapOut Message	73
3.1.4.13.2	Elements	74
3.1.4.13.2.1	m:SetPlayOnPhoneDialString Element	74
3.1.4.13.2.2	m:SetPlayOnPhoneDialStringResponse Element	74
3.1.4.13.3	Complex Types	75
3.1.4.13.4	Simple Types	75
3.1.4.13.5	Attributes	75
3.1.4.13.6	Groups	75
3.1.4.13.7	Attribute Groups	75
3.1.4.14	SetTelephoneAccessFolderEmail Operation	75
3.1.4.14.1	Messages	76
3.1.4.14.1.1	SetTelephoneAccessFolderEmailSoapIn Message	76
3.1.4.14.1.2	SetTelephoneAccessFolderEmailSoapOut Message	76
3.1.4.14.2	Elements	77
3.1.4.14.2.1	m:SetTelephoneAccessFolderEmail Element	77
3.1.4.14.2.2	m:SetTelephoneAccessFolderEmailResponse Element	77
3.1.4.14.3	Complex Types	78
3.1.4.14.4	Simple Types	78
3.1.4.14.5	Attributes	78
3.1.4.14.6	Groups	78
3.1.4.14.7	Attribute Groups	78
3.1.5	Timer Events	78
3.1.6	Other Local Events	78
3.2	UMWebServiceSoap Client Details	78
3.2.1	Abstract Data Model	78
3.2.2	Timers	78
3.2.3	Initialization	78
3.2.4	Message Processing Events and Sequencing Rules	79
3.2.5	Timer Events	80
3.2.6	Other Local Events	80
4	Protocol Examples	81
4.1	Disconnect Operation	81

4.2	DisconnectPhoneCall Operation	81
4.3	GetCallInfo Operation	82
4.4	GetPhoneCallInformation Operation.....	83
4.5	GetUMProperties Operation	84
4.6	IsUMEnabled Operation.....	84
4.7	PlayOnPhone Operation	85
4.8	PlayOnPhone2 Operation.....	86
4.9	PlayOnPhoneGreeting Operation	86
4.10	ResetPIN Operation	87
4.11	SetMissedCallNotificationEnabled Operation.....	87
4.12	SetOutOfStatus Operation	88
4.13	SetPlayOnPhoneDialString Operation	88
4.14	SetTelephoneAccessFolderEmail Operation	89
4.15	SOAP Fault.....	89
5	Security.....	91
5.1	Security Considerations for Implementers	91
5.2	Index of Security Parameters	91
6	Appendix A: Full WSDL	92
7	Appendix B: Full XML Schema.....	98
7.1	Messages Schema	98
7.2	Types Schema	102
8	Appendix C: Product Behavior	103
9	Change Tracking.....	105
10	Index.....	106

1 Introduction

The Voice Mail Settings Web Service Protocol provides an extensibility point that enables clients to read and change information about Unified Messaging properties, and play voice mails or record greetings over the telephone.

Sections 1.5, 1.8, 1.9, 2, and 3 of this specification are normative. All other sections and examples in this specification are informative.

1.1 Glossary

This document uses the following terms:

endpoint: A communication port that is exposed by an application server for a specific shared service and to which messages can be addressed.

EntryID: A sequence of bytes that is used to identify and access an object.

event: An action or occurrence to which an application might respond. Examples include state changes, data transfers, key presses, and mouse movements.

handle: Any token that can be used to identify and access an object such as a device, file, or a window.

Hypertext Transfer Protocol (HTTP): An application-level protocol for distributed, collaborative, hypermedia information systems (text, graphic images, sound, video, and other multimedia files) on the World Wide Web.

Hypertext Transfer Protocol Secure (HTTPS): An extension of HTTP that securely encrypts and decrypts web page requests. In some older protocols, "Hypertext Transfer Protocol over Secure Sockets Layer" is still used (Secure Sockets Layer has been deprecated). For more information, see [\[SSL3\]](#) and [\[RFC5246\]](#).

mailbox: A message store that contains email, calendar items, and other Message objects for a single recipient.

Out of Office (OOO): One of the possible values for the free/busy status on an appointment. It indicates that the user will not be in the office during the appointment.

Session Initiation Protocol (SIP): An application-layer control (signaling) protocol for creating, modifying, and terminating sessions with one or more participants. **SIP** is defined in [\[RFC3261\]](#).

SOAP action: The HTTP request header field used to indicate the intent of the SOAP request, using a URI value. See [\[SOAP1.1\]](#) section 6.1.1 for more information.

SOAP body: A container for the payload data being delivered by a **SOAP message** to its recipient. See [\[SOAP1.2-1/2007\]](#) section 5.3 for more information.

SOAP fault: A container for error and status information within a **SOAP message**. See [\[SOAP1.2-1/2007\]](#) section 5.4 for more information.

SOAP header: A mechanism for implementing extensions to a **SOAP message** in a decentralized manner without prior agreement between the communicating parties. See [\[SOAP1.2-1/2007\]](#) section 5.2 for more information.

SOAP message: An **XML** document consisting of a mandatory SOAP envelope, an optional **SOAP header**, and a mandatory **SOAP body**. See [\[SOAP1.2-1/2007\]](#) section 5 for more information.

Unified Messaging: A set of components and services that enable voice, fax, and email messages to be stored in a user's **mailbox** and accessed from a variety of devices.

Uniform Resource Locator (URL): A string of characters in a standardized format that identifies a document or resource on the World Wide Web. The format is as specified in [\[RFC1738\]](#).

Web Services Description Language (WSDL): An XML format for describing network services as a set of endpoints that operate on messages that contain either document-oriented or procedure-oriented information. The operations and messages are described abstractly and are bound to a concrete network protocol and message format in order to define an endpoint. Related concrete endpoints are combined into abstract endpoints, which describe a network service. WSDL is extensible, which allows the description of endpoints and their messages regardless of the message formats or network protocols that are used.

WSDL message: An abstract, typed definition of the data that is communicated during a WSDL operation [\[WSDL\]](#). Also, an element that describes the data being exchanged between web service providers and clients.

WSDL port type: A named set of logically-related, abstract **Web Services Description Language (WSDL)** operations and messages.

XML: The Extensible Markup Language, as described in [\[XML1.0\]](#).

XML namespace: A collection of names that is used to identify elements, types, and attributes in XML documents identified in a URI reference [\[RFC3986\]](#). A combination of XML namespace and local name allows XML documents to use elements, types, and attributes that have the same names but come from different sources. For more information, see [\[XMLNS-2ED\]](#).

XML schema: A description of a type of XML document that is typically expressed in terms of constraints on the structure and content of documents of that type, in addition to the basic syntax constraints that are imposed by **XML** itself. An XML schema provides a view of a document type at a relatively high level of abstraction.

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

1.2 References

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

1.2.1 Normative References

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

[MS-OXDCLI] Microsoft Corporation, "[Autodiscover Publishing and Lookup Protocol](#)".

[MS-OXWSCDATA] Microsoft Corporation, "[Common Web Service Data Types](#)".

[MS-OXWSCORE] Microsoft Corporation, "[Core Items Web Service Protocol](#)".

[MS-OXWSCVTID] Microsoft Corporation, "[Convert Item Identifier Web Service Protocol](#)".

[MS-OXWSSRCH] Microsoft Corporation, "[Mailbox Search Web Service Protocol](#)".

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

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

[RFC3066] Alvestrand, H., "Tags for the Identification of Languages", BCP 47, RFC 3066, January 2001, <http://www.ietf.org/rfc/rfc3066.txt>

[RFC3261] Rosenberg, J., Schulzrinne, H., Camarillo, G., Johnston, A., Peterson, J., Sparks, R., Handley, M., and Schooler, E., "SIP: Session Initiation Protocol", RFC 3261, June 2002, <http://www.ietf.org/rfc/rfc3261.txt>

[RFC3966] Schulzrinne, H., "The tel URI for Telephone Numbers", RFC 3966, December 2004, <http://www.rfc-editor.org/rfc/rfc3966.txt>

[SOAP1.1] Box, D., Ehnebuske, D., Kakivaya, G., et al., "Simple Object Access Protocol (SOAP) 1.1", W3C Note, May 2000, <http://www.w3.org/TR/2000/NOTE-SOAP-20000508/>

[WSDL] Christensen, E., Curbera, F., Meredith, G., and Weerawarana, S., "Web Services Description Language (WSDL) 1.1", W3C Note, March 2001, <http://www.w3.org/TR/2001/NOTE-wsdl-20010315>

[XMLNS] Bray, T., Hollander, D., Layman, A., et al., Eds., "Namespaces in XML 1.0 (Third Edition)", W3C Recommendation, December 2009, <http://www.w3.org/TR/2009/REC-xml-names-20091208/>

[XMLSCHEMA1] Thompson, H., Beech, D., Maloney, M., and Mendelsohn, N., Eds., "XML Schema Part 1: Structures", W3C Recommendation, May 2001, <http://www.w3.org/TR/2001/REC-xmlschema-1-20010502/>

[XMLSCHEMA2] Biron, P.V., Ed. and Malhotra, A., Ed., "XML Schema Part 2: Datatypes", W3C Recommendation, May 2001, <http://www.w3.org/TR/2001/REC-xmlschema-2-20010502/>

1.2.2 Informative References

[MS-OXWCONFIG] Microsoft Corporation, "[Web Service Configuration Protocol](#)".

[MS-OXWSADISC] Microsoft Corporation, "[Autodiscover Publishing and Lookup SOAP-Based Web Service Protocol](#)".

1.3 Overview

Servers that implement this protocol initiate telephone calls and interact with other systems that connect the calls to devices. This protocol is also an entry point to voice access subsystems. Clients use this protocol to update **Unified Messaging** properties and initiate communication between the protocol server system and other devices such as telephone receivers.

The server side of this protocol requires state information to be maintained for call status updates that can be retrieved by the client that initiates a telephone call. The client side of this protocol does not require that state information be maintained.

1.4 Relationship to Other Protocols

This protocol relies on the Mailbox Search Web Service Protocol, as described in [\[MS-OXWSSRCH\]](#), to provide identifiers for items and voice mails to play on a telephone. This protocol also uses the

Convert Item Identifier Web Service Protocol, as described in [\[MS-OXWSCVTID\]](#), to convert item and voice mail identifiers in some scenarios, depending on how the item identifiers are retrieved and which operations are targeted.

A client that implements this protocol can use the Autodiscover Publishing and Lookup SOAP-Based Web Service Protocol, as described in [\[MS-OXWSADISC\]](#), or the Autodiscover Publishing and Lookup Protocol, as described in [\[MS-OXDCLI\]](#), to identify the target **endpoint** to use for each operation.

The Web Service Configuration Protocol, as described in [\[MS-OXWCONFIG\]](#), can provide configuration information for clients that use the endpoint provided by the Autodiscover Publishing and Lookup SOAP-Based Web Service Protocol.

This protocol uses the SOAP Protocol, as described in [\[SOAP1.1\]](#), to specify the structure of information exchanged between the client and server. This protocol uses the XML Protocol, as described in [\[XMLSCHEMA1\]](#) and [\[XMLSCHEMA2\]](#), to describe the message content sent to and from the server.

The Voice Mail Settings Web Service Protocol uses SOAP over **HTTPS**, as described in [\[RFC2818\]](#), as shown in the following figure.

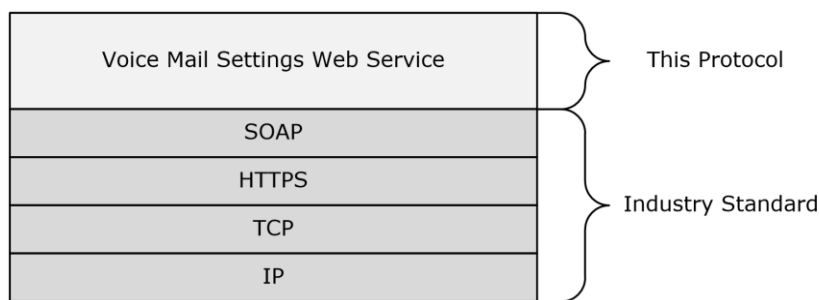


Figure 1: Voice Mail Settings Web Service Protocol HTTPS stack

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

1.5 Prerequisites/Preconditions

The **endpoint URL** that is returned by either the Autodiscover Publishing and Lookup SOAP-Based Web Service Protocol, as described in [\[MS-OXWSADISC\]](#), or the Autodiscover Publishing and Lookup Protocol, as described in [\[MS-OXDCLI\]](#), is a required to form the **HTTP** request to the Web server that hosts this protocol. The operations that this protocol uses cannot be accessed unless the correct endpoint that services the target **mailbox** is identified for the HTTP Web requests that target the Voice Mail Settings Web Service Protocol operations.

The **Unified Messaging** service has to be enabled in order for many of the operations that are associated with this protocol to function. Additionally, for operations that initiate playing items on the phone, such as the **PlayOnPhone** and the **PlayOnPhone2** operations, the item identifiers of the items or voice mails have to be obtained before these operations can be used.

1.6 Applicability Statement

This protocol is applicable for systems that initiate playing items and voice mails on devices.

1.7 Versioning and Capability Negotiation

This document covers versioning issues in the following areas:

- **Supported Transports:** This protocol uses SOAP 1.1.
- **Protocol Versions:** This protocol has only one **WSDL port type** version.
- **Security and Authentication Methods:** This protocol relies on the Web server that hosts the application to perform authentication. The server will not allow unauthenticated clients to access the Voice Mail Settings Web Service Protocol operations.
- **Capability Negotiation:** This protocol does not perform explicit capability negotiation. This protocol relies on the Autodiscover Publishing and Lookup Protocol, as described in [\[MS-OXDCLI\]](#), to identify protocol versions and service **endpoint** that are applicable to a client.

1.8 Vendor-Extensible Fields

None.

1.9 Standards Assignments

None.

2 Messages

In the following sections, the schema definition might differ from the processing rules imposed by the protocol. The **WSDL** in this specification provides a base description of the protocol. The schema in this specification provides a base description of the message syntax. The text that specifies the WSDL and schema might specify restrictions that reflect actual protocol behavior. For example, the schema definition might allow for an element to be **empty**, **null**, or **not present** but the behavior of the protocol as specified restricts the same elements to being **non-empty**, **not null**, or **present**.

2.1 Transport

Messages are transported by using SOAP version 1.1. For details, see [\[SOAP1.1\]](#).

This protocol relies on the Web server that hosts the application to perform authentication. The protocol **MUST** use secure communication via HTTPS, as defined in [\[RFC2818\]](#).

2.2 Common Message Syntax

This section contains common definitions that are used by this protocol. The syntax of the definitions uses **XML schema**, as defined in [\[XMLSCHEMA1\]](#) and [\[XMLSCHEMA2\]](#), and **Web Services Description Language (WSDL)**, as defined in [\[WSDL\]](#).

2.2.1 Namespaces

This specification defines and references various **XML namespaces** by using the mechanisms specified in [\[XMLNS\]](#). Although this specification associates a specific XML namespace prefix for each XML namespace that is used, the choice of any particular XML namespace prefix is implementation-specific and not significant for interoperability.

Prefix	Namespace URI	Reference
tns	http://schemas.microsoft.com/exchange/services/2006/messages	
s	http://www.w3.org/2001/XMLSchema	[XMLSCHEMA2]
soap	http://schemas.xmlsoap.org/WSDL/soap/	[SOAP1.1]
WSDL	http://schemas.xmlsoap.org/WSDL/	[WSDL]
xs	http://www.w3.org/2001/XMLSchema	[XMLSCHEMA2]
t	http://schemas.microsoft.com/exchange/services/2006/types	
m	http://schemas.microsoft.com/exchange/services/2006/messages	

2.2.2 Messages

This specification defines a single common **SOAP fault** definition.

Message	Description
Malformed XML SOAP Fault	Specifies the SOAP fault that is returned if the request XML is malformed according to the schema specified in section 6 .

2.2.2.1 Malformed XML SOAP Fault

The **Disconnect**, **DisconnectPhoneCall**, **GetCallInfo**, **GetPhoneCallInformation**, **GetUMProperties**, **IsUMEnabled**, **PlayOnPhone2**, **PlayOnPhone**, **PlayOnPhoneGreeting**, **ResetPIN**, **SetMissedCallNotificationEnabled**, **SetOutOfStatus**, **SetPlayOnPhoneDialString**, and **SetTelephoneAccessFolderEmail** operations, as specified in section 3.1.4, MUST use the SOAP fault specified in this section if the request XML is malformed according the schema specified in section 6. The following **XML** specifies the structure of the SOAP fault that is returned when a request contains malformed XML. This message is not specified in the schema.

```
<?xml version="1.0" encoding="utf-8"?>
<s:Envelope xmlns:s="http://schemas.xmlsoap.org/soap/envelope/">
  <s:Body>
    <s:Fault>
      <faultcode
xmlns:a="http://schemas.microsoft.com/exchange/services/2006/types">a:ErrorInvalidRequest</faultcode>
      <faultstring xml:lang="en-US">The request is invalid.</faultstring>
      <detail>
        <e:ResponseCode
xmlns:e="http://schemas.microsoft.com/exchange/services/2006/errors">ErrorInvalidRequest</e:ResponseCode>
        <e:Message xmlns:e="http://schemas.microsoft.com/exchange/services/2006/errors">The request is invalid.</e:Message>
      </detail>
    </s:Fault>
  </s:Body>
</s:Envelope>
```

The **faultcode** element MUST contain a text value of "a:ErrorInvalidRequest" if the request is malformed.

The **faultstring** element MUST contain a text value of "The request is invalid" if the request is malformed.

The contents of the SOAP fault **detail** element are specified by the **ResponseCode** element, as specified in section 2.2.3.3, and the **Message** element, as specified in section 2.2.3.2. The **Message** element MUST contain a text value of "The request is invalid" if the request contained malformed XML. The **ResponseCode** element MUST have a text value of "ErrorInvalidRequest" if the request contained malformed XML.

If the request contained well-formed XML that is not valid, the **ResponseCode** element MUST have a text value of "ErrorSchemaValidation" and the **Message** element MUST contain a text value of "The request failed schema validation".

The **ResponseCode** and **Message** elements are not described in a schema.

2.2.3 Elements

The following table summarizes the set of common **XML schema** element definitions that are defined by this specification. XML schema element definitions that are specific to a particular operation are described with the operation.

Element name	Description
ExceptionType	Specifies the type of exception that caused a SOAP fault.
Message	Specifies an error string that is associated with the ResponseCode element.
ResponseCode	Specifies a response code that is associated with a SOAP fault.

2.2.3.1 m:ExceptionType Element

The **ExceptionType** element specifies the type of exception that caused a SOAP fault.

```
<xs:element name="ExceptionType"
  type="xs:string"
/>
```

The **xs:string** type is specified in [\[XMLSCHEMA1\]](#).

This element MUST be returned when any of the following conditions occur:

- A **Disconnect** operation request contains an invalid telephone phone call identifier. The **ExceptionType** element MUST contain a text value of "a:InvalidCallIdException".
- A **GetCallInfo** operation request contains an invalid telephone phone call identifier. The **ExceptionType** element MUST contain a text value of "a:InvalidCallIdException".
- A **PlayOnPhone** operation request contains an invalid item identifier. The **ExceptionType** element MUST contain a text value of "a:InvalidObjectIdException".
- A **PlayOnPhone** or **PlayOnPhoneGreeting** operation request contains an invalid dial string. The **ExceptionType** element MUST contain a text value of "a:DialingRulesException".

The **ExceptionType** element is not described in a schema. It is an extension of the SOAP fault structure, as specified in [\[SOAP1.1\]](#).

2.2.3.2 m:Message Element

The **Message** element specifies an error string that is associated with the **ResponseCode** element, as specified in section [2.2.3.3](#).

```
<xs:element name="Message"
  type="xs:string"
/>
```

The **Message** element is not described in a schema. It is an extension of the SOAP fault structure, as specified in [\[SOAP1.1\]](#).

This element MUST be returned when the following condition applies:

- A request that is sent to the **endpoint** specified in [\[MS-OXDCLI\]](#) section 2.2.4.1.1.2.4.47 is malformed. In this case, the text value of this element MUST be "The request is invalid".

2.2.3.3 m:ResponseCode Element

The **ResponseCode** element specifies a response code that is associated with a **SOAP fault**.

```
<xs:element name="ResponseCode"
  type="xs:string"
/>
```


The **ResponseCode** element is not described in a schema because it is an extension of the SOAP fault structure, as specified in [\[SOAP1.1\]](#).

This element MUST be returned when the following condition applies:

- A request that is sent to the **endpoint** specified in [\[MS-OXDSCLI\]](#) section 2.2.4.1.1.2.4.47 is malformed. In this case, the text value of this element MUST be "ErrorInvalidRequest".

2.2.4 Complex Types

The following table summarizes the set of common **XML schema** complex type definitions that are defined by this specification. XML schema complex type definitions that are specific to a particular operation are described with the operation.

Complex type name	Description
PhoneCallIdType	Specifies the telephone call identifier.

2.2.4.1 t:PhoneCallIdType Complex Type

The **PhoneCallIdType** complex type specifies a telephone call identifier.

```
<xs:complexType name="PhoneCallIdType">
  <xs:attribute name="Id"
    type="xs:string"
    use="required"
  />
</xs:complexType>
```

The following table lists the attributes of the **PhoneCallIdType** complex type.

Attribute name	Type	Description
Id	xs:string [XMLSCHEMA2]	Specifies a string of maximum 512 characters that identifies the phone call. This attribute MUST be present.

The **PhoneCallIdType** complex type is common to the **DisconnectPhoneCall** operation, as specified in section [3.1.4.2](#), the **GetPhoneCallInformation** operation, as specified in section [3.1.4.4](#), and the **PlayOnPhone2** operation, as specified in section [3.1.4.7](#).

2.2.5 Simple Types

This specification does not define any common XML schema simple types.

2.2.6 Attributes

This specification does not define any common **XML schema** attribute definitions.

2.2.7 Groups

This specification does not define any common **XML schema** group definitions.

2.2.8 Attribute Groups

This specification does not define any common **XML schema** attribute group definitions.

3 Protocol Details

3.1 UMWebServiceSoap Server Details

This protocol defines a single **WSDL** port type that contains a set of operations that enable clients to read and change **Unified Messaging** properties and to initiate communications between the protocol system server and other devices.

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.

3.1.1.1 Phone Call Status State Model

The phone call status server state subsystem specifies the phone call status and the transitions between the different phone call states that can either be read or changed by the Voice Mail Settings Web Service Protocol operations. The state transitions represent Voice Mail Settings Web Service Protocol operation actions or actions taken by subsystems that affect the phone call status state machine.

The following Voice Mail Settings Web Service Protocol operations can cause phone call state changes:

- **PlayOnPhone**
- **PlayOnPhone2**
- **PlayOnPhoneGreeting**
- **Disconnect**
- **DisconnectPhoneCall**

The following Voice Mail Settings Web Service Protocol operations can read phone call state:

- **GetPhoneCallInformation**
- **GetCallInfo**

The following figure shows the Phone Call Status subsystem abstract data model for a phone call initiated by the Voice Mail Settings Web Service Protocol.

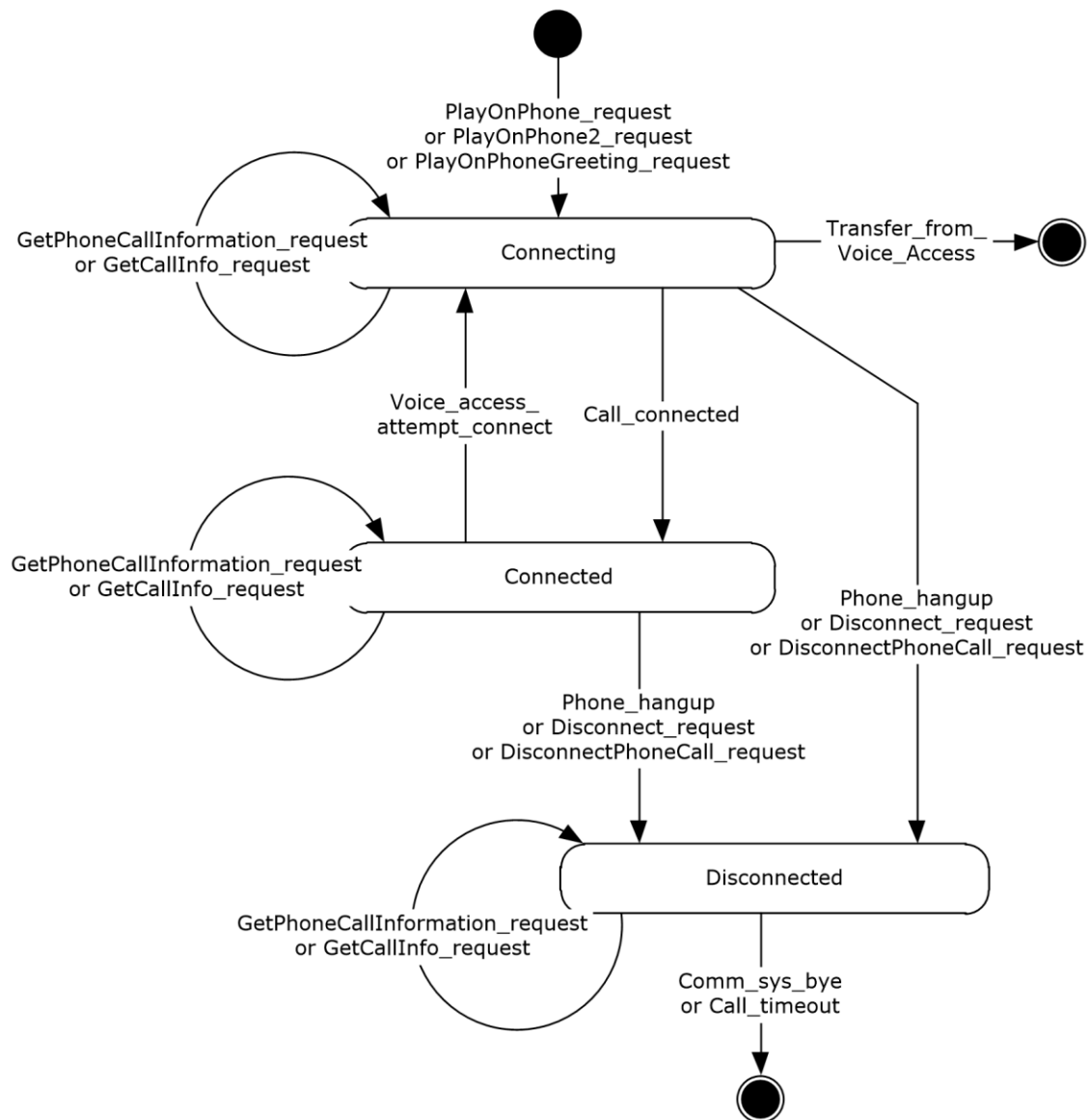


Figure 2: Phone Call Status subsystem abstract data model

The Phone Call Status subsystem abstract data model has the following states:

- **Start:** The state of the phone call status subsystem before a phone call is initiated by either the **PlayOnPhone**, **PlayOnPhone2**, or **PlayOnPhoneGreeting** operations. This is equivalent to the **Idle** state, as specified in sections [3.1.4.3.4.1](#) and [3.1.4.4.4.2](#).
- **Connecting:** The phone call status state represents a successful attempt to initiate a phone call. The **Connecting** state can be initiated by either the **PlayOnPhone** operation, as specified in section [3.1.4.8](#), **PlayOnPhone2** operation, as specified in section [3.1.4.7](#), or **PlayOnPhoneGreeting** operation, as specified in section [3.1.4.9](#). The **Connecting** state can also

be achieved by a phone call that has successfully completed reading a message and has then been used to try to access a contact via the phone call through a voice access subsystem.

- **Connected:** The state of the phone call status subsystem after a call to play an item or greeting on the phone has been connected.
- **Disconnected:** The state of the phone call status subsystem after a phone playing an item or greeting has been physically disconnected, the **Disconnect** operation has been called for the phone call, or the **DisconnectPhoneCall** operation has been called for the phone call.
- **Stop:** The state of the phone call status subsystem after a phone call has ended. This is equivalent to the **Idle** state specified by the **UMCallState** simple type, as specified in section 3.1.4.3.4.1, and the **PhoneCallStateType** simple type, as specified in section 3.1.4.4.2. The **Idle** state cannot be read from the Voice Mail Settings Web Service Protocol as no phone call identifiers are associated with the **Idle** state. The **Idle** state can be achieved by transferring a call through the voice access subsystem to a contact, by the communication system ending the phone call, or by timing out a **Disconnected** phone call.

The Phone Call Status subsystem abstract data model has the following transitions:

- **PlayOnPhone_request:** Represents a successful **PlayOnPhone** operation request message to play an item on a phone.
- **PlayOnPhone2_request:** Represents a successful **PlayOnPhone2** operation request message to play an item on a phone.
- **PlayOnPhoneGreeting_request:** Represents a successful **PlayOnPhoneGreeting** operation request message to play a greeting on a phone.
- **GetPhoneCallInformation_request:** Represents a successful **GetPhoneCallInformation** operation request message to get the status of a phone call.
- **GetCallInfo_request:** Represents a successful **GetCallInfo** operation request message to get the status of a phone call.
- **Call_connected:** Represents the transition from a **Connecting** state initiated by a **PlayOnPhone**, **PlayOnPhone2**, or **PlayOnPhoneGreeting** operation to the **Connected** state by the recipient answering the call.
- **Voice_access_attempt_connect:** Represents the phone call transition after an item has been played on phone and then an attempt at using the voice access subsystem to connect the phone call to a contact.
- **Transfer_from_Voice_Access:** Represents a phone call to a contact that has been successfully connected by the voice access subsystem. The phone call status subsystem is no longer accessible for the phone call after the **Transfer_from_Voice_Access** transition.
- **Phone_hangup:** Represents a transition to the **Disconnected** state caused by a physical disconnection of a phone call.
- **Disconnect_request:** Represents a transition to the **Disconnected** state caused by a successful **Disconnect** operation request.
- **DisconnectPhoneCall_request:** Represents a transition to the **Disconnected** state caused by a successful **DisconnectPhoneCall** operation request.
- **Comm_sys_bye:** Represents a transition to the **Idle** state caused by the communication system ending a phone call.
- **Call_timeout:** Represents a transition to the **Idle** state caused by the **Call_Timeout** timer, as specified in section [3.1.2](#).

3.1.2 Timers

Call_timeout: A per-phone call timer that starts when a phone call enters the **Disconnected** state, as specified in section [3.1.1.1](#). The timer ends after 32 seconds. The phone call status state machine goes into the **Idle** state after the timer has timed out.

3.1.3 Initialization

The **Connecting** state, as specified in section [3.1.1.1](#), is the initial server protocol state. The **Connecting** state is initialized after the server has received a successful request for the **PlayOnPhone** operation, as specified in section [3.1.4.8](#), **PlayOnPhone2** operation, as specified in section [3.1.4.7](#), or **PlayOnPhoneGreeting** operation, as specified in section [3.1.4.9](#), from the client. Additional information about arguments that are required to enter the initial state is specified in section [3.2.3](#).

The server state has a **Call_timeout** timer that is initialized when the server enters the **Disconnected** state.

3.1.4 Message Processing Events and Sequencing Rules

This protocol uses the operations that are listed in the following table. Sequencing rules are specified in section [3.2.4](#).

Operation name	Description
Disconnect	Disconnects a call whose context handle was returned by the PlayOnPhone operation.
DisconnectPhoneCall	Disconnects a call whose context handle was returned by the PlayOnPhone2 operation. <1>
GetCallInfo	Returns information about a call whose context handle was returned by the PlayOnPhone operation.
GetPhoneCallInformation	Returns information about a call whose context handle was returned by the PlayOnPhone2 operation. <2>
GetUMProperties	Returns a list of Unified Messaging properties.
IsUMEnabled	Returns a value that indicates whether the user who is making the request is enabled for Unified Messaging.
PlayOnPhone2	Requests that an outbound call is performed and plays a voice message or mailbox item over the telephone. <3>
PlayOnPhone	Requests that an outbound call is performed and plays a voice message or mailbox item over the telephone.
PlayOnPhoneGreeting	Makes an outbound call to play and record a greeting over the telephone.
ResetPIN	Creates a new Unified Messaging password for the user who is making the request.
SetMissedCallNotificationEnabled	Sets a value that indicates whether missed call notifications are enabled for the user who is making the request.
SetOofStatus	Sets a value that indicates whether the Out of Office (OOF) greeting is enabled for the user who is making the request.
SetPlayOnPhoneDialString	Sets the default telephone number that is used in PlayOnPhone and PlayOnPhoneGreeting operation requests.

Operation name	Description
SetTelephoneAccessFolderEmail	Sets the mailbox folder from which the Unified Messaging server will read back to the user over the telephone.

3.1.4.1 Disconnect Operation

The **Disconnect** operation disconnects a call. The **Disconnect** operation uses the **endpoint** specified in [\[MS-OXDCLI\]](#) section 2.2.4.1.1.2.4.47.

The following is the WSDL port type specification of the operation.

```
<wsdl:operation name="Disconnect">
  <wsdl:input message="tns:DisconnectSoapIn" />
  <wsdl:output message="tns:DisconnectSoapOut" />
</wsdl:operation>
```

The following is the WSDL binding specification of the operation.

```
<wsdl:operation name="Disconnect">
  <soap:operation
  soapAction="http://schemas.microsoft.com/exchange/services/2006/messages/Disconnect"
  style="document"/>
  <wsdl:input>
    <soap:body use="literal"/>
  </wsdl:input>
  <wsdl:output>
    <soap:body use="literal"/>
  </wsdl:output>
</wsdl:operation>
```

If the operation succeeds, a **DisconnectResponse** element is returned. If the operation fails, a **SOAP fault** response, as specified in [\[SOAP1.1\]](#), is returned that contains information about the failure. A SOAP fault MUST be returned if the **Disconnect** operation specifies an incorrect phone call identifier in the **CallId** element, as specified in section [3.1.4.1.2.1](#), or if this element is not specified. The following **XML** specifies the SOAP fault response that SHOULD<4> be returned if an invalid phone call identifier is provided as an argument to a **Disconnect** operation request.

```
<?xml version="1.0" encoding="utf-8"?>
<s:Envelope xmlns:s="http://schemas.xmlsoap.org/soap/envelope/">
  <s:Body>
    <s:Fault>
      <faultcode
      xmlns:a="http://schemas.microsoft.com/exchange/services/2006/errors">a:InvalidCallIdException
      </faultcode>
      <faultstring xml:lang="en-US">The call identifier isn't valid.</faultstring>
      <detail>
        <m:ExceptionType
        xmlns:m="http://schemas.microsoft.com/exchange/services/2006/messages">InvalidCallIdException
        </m:ExceptionType>
      </detail>
    </s:Fault>
  </s:Body>
</s:Envelope>
```

The **faultcode** element SHOULD<5> contain a text value of "a:InvalidCallIdException" if an invalid phone call identifier is sent in the request.

The **faultstring** element SHOULD [<6>](#) contain a text value of "The call identifier isn't valid." if an invalid phone call identifier is sent in the request.

The contents of the SOAP fault **detail** element are specified by the **ExceptionType** element, as specified in section [2.2.3.1](#).

3.1.4.1.1 Messages

The following table lists the **WSDL message** definitions that are specific to this operation.

Message name	Description
DisconnectSoapIn	Specifies the request that disconnects a phone call.
DisconnectSoapOut	Specifies a successful response to a request that disconnects a phone call.

3.1.4.1.1.1 DisconnectSoapIn Message

The **DisconnectSoapIn WSDL message** specifies the **Disconnect** operation request.

```
<wsdl:message name="DisconnectSoapIn">
  <wsdl:part name="parameters" element="tns:Disconnect" />
</wsdl:message>
```

The **DisconnectSoapIn WSDL message** is the input message for the SOAP action <http://schemas.microsoft.com/exchange/services/2006/messages/Disconnect>.

The **SOAP body** contains a **Disconnect** element.

The parts of the **DisconnectSoapIn WSDL message** are described in the following table.

Part name	Element/type	Description
parameters	Disconnect (section 3.1.4.1.2.1)	Specifies the information that is required to disconnect a telephone call.

3.1.4.1.1.2 DisconnectSoapOut Message

The **DisconnectSoapOut WSDL message** specifies the **Disconnect** operation response.

The SOAP body contains a **DisconnectResponse** element.

```
<wsdl:message name="DisconnectSoapOut">
  <wsdl:part name="parameters" element="tns:DisconnectResponse" />
</wsdl:message>
```

The parts of the **DisconnectSoapOut WSDL message** are described in the following table.

Part name	Element/type	Description
parameters	DisconnectResponse (section 3.1.4.1.2.2)	Specifies a successful response to a Disconnect operation request.

3.1.4.1.2 Elements

The following table lists the **XML schema** elements that are specific to this operation.

Element	Description
Disconnect	Specifies a request to disconnect a phone call.
DisconnectResponse	Specifies the response body content for a DisconnectSoapOut response message.

3.1.4.1.2.1 m:Disconnect Element

The **Disconnect** element specifies a request to disconnect a phone call. This element **MUST** be present in a **Disconnect** operation request.

```
<xs:element name="Disconnect">
  <xs:complexType>
    <xs:sequence>
      <xs:element name="CallId"
        type="xs:string"
        maxOccurs="1"
        minOccurs="1"
      />
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

The following table lists the child elements of the **Disconnect** element.

Element	Type	Description
CallId	xs:string [XMLSCHEMA2]	Specifies the phone call identifier of the call to disconnect. This identifier is returned by the PlayOnPhone operation, as specified in section 3.1.4.8 or the PlayOnPhoneGreeting operation, as specified in section 3.1.4.9 . This element MUST be present. If this element is not specified or if it contains an incorrect phone call identifier, the server MUST return a SOAP fault response, as specified in section 3.1.4.1 .

3.1.4.1.2.2 m:DisconnectResponse Element

The **DisconnectResponse** element specifies the response body content for a **DisconnectSoapOut** response message. This element **MUST** be present.

```
<xs:element name="DisconnectResponse">
  <xs:complexType />
</xs:element>
```

3.1.4.1.3 Complex Types

None.

3.1.4.1.4 Simple Types

None.

3.1.4.1.5 Attributes

None.

3.1.4.1.6 Groups

None.

3.1.4.1.7 Attribute Groups

None.

3.1.4.2 DisconnectPhoneCall Operation

The **DisconnectPhoneCall** operation disconnects a call. The **DisconnectPhoneCall** operation uses the **endpoint** specified in [\[MS-OXDCLI\]](#) section 2.2.4.1.1.2.4.24. <7>

The following is the WSDL port type specification for the operation.

```
<wsdl:operation name="DisconnectPhoneCall">
  <wsdl:input message="tns:DisconnectPhoneCallSoapIn" />
  <wsdl:output message="tns:DisconnectPhoneCallSoapOut" />
</wsdl:operation>
```

The following is the **WSDL** binding specification for the operation.

```
<wsdl:operation name="DisconnectPhoneCall">
  <soap:operation
  soapAction="http://schemas.microsoft.com/exchange/services/2006/messages/DisconnectPhoneCall"
  />
  <wsdl:input>
    <soap:body parts="request" use="literal"/>
    <soap:header message="tns:DisconnectPhoneCallSoapIn" part="Impersonation"
  use="literal"/>
    <soap:header message="tns:DisconnectPhoneCallSoapIn" part="MailboxCulture"
  use="literal"/>
    <soap:header message="tns:DisconnectPhoneCallSoapIn" part="RequestVersion"
  use="literal"/>
  </wsdl:input>
  <wsdl:output>
    <soap:body parts="DisconnectPhoneCallResult" use="literal"/>
    <soap:header message="tns:DisconnectPhoneCallSoapOut" part="ServerVersion"
  use="literal"/>
  </wsdl:output>
</wsdl:operation>
```

3.1.4.2.1 Messages

The following table lists the **WSDL message** definitions that are specific to this operation.

Message name	Description
DisconnectPhoneCallSoapIn	Specifies the request that disconnects a phone call.
DisconnectPhoneCallSoapOut	Specifies the response to a request that disconnects a phone call.

3.1.4.2.1.1 DisconnectPhoneCallSoapIn Message

The **DisconnectPhoneCallSoapIn** WSDL message specifies the **DisconnectPhoneCall** operation request.

```
<wsdl:message name="DisconnectPhoneCallSoapIn">
  <wsdl:part name="request" element="tns:DisconnectPhoneCall"/>
  <wsdl:part name="Impersonation" element="t:ExchangeImpersonation"/>
  <wsdl:part name="MailboxCulture" element="t:MailboxCulture"/>
  <wsdl:part name="RequestVersion" element="t:RequestServerVersion"/>
</wsdl:message>
```

The **DisconnectPhoneCallSoapIn WSDL message** is the input message for the **SOAP action** <http://schemas.microsoft.com/exchange/services/2006/messages/DisconnectPhoneCall>.

The parts of the **DisconnectPhoneCallSoapIn** WSDL message are described in the following table.

Part name	Element/type	Description
request	DisconnectPhoneCall (section 3.1.4.2.2.1)	Specifies the SOAP body of the request.
Impersonation	ExchangeImpersonation ([MS-OXWSCDATA] section 2.2.3.3)	Specifies a SOAP header that identifies the user whom the client application is impersonating. The ExchangeImpersonation element is specified in [MS-OXWSCDATA] section 2.2.3.3.
MailboxCulture	MailboxCulture ([MS-OXWSCDATA] section 2.2.3.6)	Specifies a SOAP header that identifies the language to use to access the mailbox. The languages are defined by [RFC3066] .
RequestVersion	RequestServerVersion ([MS-OXWSCDATA] section 2.2.3.9)	Specifies a SOAP header that identifies the target schema version for the DisconnectPhoneCall operation request. The RequestServerVersion element is specified in [MS-OXWSCDATA] section 2.2.3.9.

3.1.4.2.1.2 DisconnectPhoneCallSoapOut Message

The **DisconnectPhoneCallSoapOut WSDL message** specifies the **DisconnectPhoneCall** operation response.

```
<wsdl:message name="DisconnectPhoneCallSoapOut">
  <wsdl:part name="DisconnectPhoneCallResult" element="tns:DisconnectPhoneCallResponse"/>
  <wsdl:part name="ServerVersion" element="t:ServerVersionInfo"/>
</wsdl:message>
```

The **DisconnectPhoneCallSoapOut** WSDL message is the output message for the **SOAP action** <http://schemas.microsoft.com/exchange/services/2006/messages/DisconnectPhoneCall>.

The parts of the **DisconnectPhoneCallSoapOut** WSDL message are described in the following table.

Part name	Element/type	Description
DisconnectPhoneCallResult	DisconnectPhoneCallResponse	Specifies the SOAP body of the

Part name	Element/type	Description
	(section 3.1.4.2.2.2)	response.
ServerVersion	ServerVersionInfo ([MS-OXWSCDATA] section 2.2.3.10)	Specifies the SOAP header that identifies the server version for the response. The ServerVersionInfo element is specified in [MS-OXWSCDATA] section 2.2.3.10.

A successful **DisconnectPhoneCall** operation response includes a text value of **Success** in the **ResponseClass** attribute of the **DisconnectPhoneCallResponse** XML instance element (section 3.1.4.2.2.2). The **ResponseCode** child element of the **DisconnectPhoneCallResponse** XML instance element has a text value of "NoError".

A **DisconnectPhoneCall** operation error response caused by an invalid phone call identifier has a text value of "Error" in the **ResponseClass** attribute of the **DisconnectPhoneCallResponse** XML instance element (section 3.1.4.2.2.2). The **ResponseCode** child element of the **DisconnectPhoneCallResponse** XML instance element has a text value of "ErrorInvalidPhoneCallId". The **MessageText** child element of the **DisconnectPhoneCallResponse** XML instance element has a text value of "The phone call ID isn't valid".

3.1.4.2.2 Elements

The following table lists the **XML schema** element definitions that are specific to this operation.

Element	Description
DisconnectPhoneCall	Specifies a request to disconnect a call.
DisconnectPhoneCallResponse	Specifies a response to a request to disconnect a call.

3.1.4.2.2.1 m:DisconnectPhoneCall Element

The **DisconnectPhoneCall** element specifies a request to disconnect a call. This element **MUST** be present.

```
<xs:element name="DisconnectPhoneCall"
  type="m:DisconnectPhoneCallType"
/>
```

3.1.4.2.2.2 m:DisconnectPhoneCallResponse Element

The **DisconnectPhoneCallResponse** element specifies a response to disconnect a call. This element **MUST** be present.

```
<xs:element name="DisconnectPhoneCallResponse"
  type="m:DisconnectPhoneCallResponseMessageType"
/>
```

3.1.4.2.3 Complex Types

The following table lists the **XML schema** complex type definitions that are specific to this operation.

Complex type	Description
DisconnectPhoneCallResponseMessageType	Specifies a response to a DisconnectPhoneCall operation request.
DisconnectPhoneCallType	Specifies a DisconnectPhoneCall operation request.

3.1.4.2.3.1 m:DisconnectPhoneCallResponseMessageType Complex Type

The **DisconnectPhoneCallResponseMessageType** complex type specifies a response to a **DisconnectPhoneCall** operation request. The **DisconnectPhoneCallResponseMessageType** complex type extends the **ResponseMessageType** type, as specified in [\[MS-OXWSCDATA\]](#) section 2.2.4.67. For more details, see section [3.1.4.2](#).

```
<xs:complexType name="DisconnectPhoneCallResponseMessageType">
  <xs:complexContent>
    <xs:extension
      base="m:ResponseMessageType"
    />
  </xs:complexContent>
</xs:complexType>
```

3.1.4.2.3.2 m:DisconnectPhoneCallType Complex Type

The **DisconnectPhoneCallType** complex type specifies a **DisconnectPhoneCall** operation request. The **DisconnectPhoneCallType** complex type extends the **BaseRequestType** complex type, as specified in [\[MS-OXWSCDATA\]](#) section 2.2.4.17.

```
<xs:complexType name="DisconnectPhoneCallType">
  <xs:complexContent>
    <xs:extension
      base="BaseRequestType"
    >
    <xs:sequence>
      <xs:element name="PhoneCallId"
        type="t:PhoneCallIdType"
      />
    </xs:sequence>
  </xs:extension>
</xs:complexType>
```

The following table lists the child elements of the **DisconnectPhoneCallType** complex type.

Element name	Type	Description
PhoneCallId	t:PhoneCallIdType (section 2.2.4.1)	Specifies the identifier of the phone call to disconnect. This element MUST occur only once.

3.1.4.2.4 Simple Types

None.

3.1.4.2.5 Attributes

None.

3.1.4.2.6 Groups

None.

3.1.4.2.7 Attribute Groups

None.

3.1.4.3 GetCallInfo Operation

The **GetCallInfo** operation returns information about a call. The **GetCallInfo** operation uses the **endpoint** specified in [\[MS-OXDSCLI\]](#) section 2.2.4.1.1.2.4.47.

The following is the **WSDL port type** specification for the operation.

```
<wsdl:operation name="GetCallInfo">
  <wsdl:input message="tns:GetCallInfoSoapIn" />
  <wsdl:output message="tns:GetCallInfoSoapOut" />
</wsdl:operation>
```

The following is the **WSDL binding** specification for the operation.

```
<wsdl:operation name="GetCallInfo">
  <soap:operation
soapAction="http://schemas.microsoft.com/exchange/services/2006/messages/GetCallInfo"
style="document"/>
  <wsdl:input>
    <soap:body use="literal"/>
  </wsdl:input>
  <wsdl:output>
    <soap:body use="literal"/>
  </wsdl:output>
</wsdl:operation>
```

If the operation succeeds, a **GetCallInfoResponse** element is returned. If the operation fails, a **SOAP fault** response, as specified in [\[SOAP1.1\]](#), is returned that contains information about the failure. A SOAP fault is returned if the **GetCallInfo** operation specifies an incorrect phone call identifier in the **CallId** element, as specified in section [3.1.4.3.2.1](#). The following **XML** specifies the SOAP fault response that SHOULD [<8>](#) be returned if an invalid phone call identifier is provided as an argument to a **GetCallInfo** operation request.

```
<?xml version="1.0" encoding="utf-8"?>
<s:Envelope xmlns:s="http://schemas.xmlsoap.org/soap/envelope/">
  <s:Body>
    <s:Fault>
      <faultcode
xmlns:a="http://schemas.microsoft.com/exchange/services/2006/errors">a:InvalidCallIdException
</faultcode>
      <faultstring xml:lang="en-US">The call identifier isn't valid.</faultstring>
      <detail>
        <ExceptionType
xmlns:m="http://schemas.microsoft.com/exchange/services/2006/messages">InvalidCallIdException
</ExceptionType>
      </detail>
    </s:Fault>
```

```
</s:Body>
</s:Envelope>
```

The **faultcode** element SHOULD [<9>](#) have a text value of "a:InvalidCallIdException" if an invalid phone call identifier is sent in the request.

The **faultstring** element SHOULD [<10>](#) have a text value of "The call identifier isn't valid." if an invalid phone call identifier is sent in the request.

The contents of the SOAP fault **detail** element are specified by the **ExceptionType** element, as specified in section [2.2.3.1](#).

3.1.4.3.1 Messages

The following table lists the **WSDL message** definitions that are specific to this operation.

Message name	Description
GetCallInfoSoapIn	Specifies the request to get information about a phone call.
GetCallInfoSoapOut	Specifies the response to a request to get information about a phone call.

3.1.4.3.1.1 GetCallInfoSoapIn Message

The **GetCallInfoSoapIn** **WSDL message** specifies the **GetCallInfo** operation request.

```
<wsdl:message name="GetCallInfoSoapIn">
  <wsdl:part name="parameters" element="tns:GetCallInfo" />
</wsdl:message>
```

The **GetCallInfoSoapIn** WSDL message is the input message for the **SOAP action** <http://schemas.microsoft.com/exchange/services/2006/messages/GetCallInfo>.

The **SOAP body** contains a **GetCallInfo** element.

The parts of the **GetCallInfoSoapIn** WSDL message are described in the following table.

Part name	Element/type	Description
parameters	GetCallInfo (section 3.1.4.3.2.1)	Specifies SOAP body that contains the data that is required to get information about a telephone call.

3.1.4.3.1.2 GetCallInfoSoapOut Message

The **GetCallInfoSoapOut** WSDL message specifies the **GetCallInfo** operation response.

```
<wsdl:message name="GetCallInfoSoapOut">
  <wsdl:part name="parameters" element="tns:GetCallInfoResponse" />
</wsdl:message>
```

The **SOAP body** contains a **GetCallInfoResponse** element.

The parts of the **GetCallInfoSoapOut WSDL message** are described in the following table.

Part name	Element/type	Description
parameters	GetCallInfoResponse (section 3.1.4.3.2.2)	Specifies the SOAP body that contains a response to a GetCallInfo operation request.

3.1.4.3.2 Elements

The following table lists the **XML schema** element definitions that are specific to this operation.

Element name	Description
GetCallInfo	Specifies a request to get information about a phone call.
GetCallInfoResponse	Specifies a response to a GetCallInfo operation request.

3.1.4.3.2.1 m:GetCallInfo Element

The **GetCallInfo** element specifies a request to get information about a phone call. This element **MUST** be present.

```
<xs:element name="GetCallInfo">
  <xs:complexType>
    <xs:sequence>
      <xs:element name="CallId"
        type="xs:string"
        maxOccurs="1"
        minOccurs="1"
      />
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

The following table lists the child elements of the **GetCallInfo** element.

Element	Type	Description
CallId	xs:string [XMLSCHEMA2]	Specifies a string with a maximum of 512 characters that identifies the call for which to request information. This identifier is returned as part of the PlayOnPhone operation (section 3.1.4.8) or the PlayOnPhoneGreeting operation (section 3.1.4.9). This element MUST be present. The SOAP fault specified in section 3.1.4.3 MUST be returned if the CallId element value is an incorrect call identifier.

3.1.4.3.2.2 m:GetCallInfoResponse Element

The **GetCallInfoResponse** element specifies a response to a **GetCallInfo** request. This element **MUST** be present.

```
<xs:element name="GetCallInfoResponse"
  maxOccurs="1"
```



```

minOccurs="1"
>
<xs:complexType>
  <xs:sequence>
    <xs:element name="GetCallInfoResponse"
      type="tns:UMCallInfo"
      maxOccurs="1"
      minOccurs="0"
    />
  </xs:sequence>
</xs:complexType>
</xs:element>

```

The following table lists the child elements of the **GetCallInfoResponse** element.

Element name	Type	Description
GetCallInfoResponse	tns:UMCallInfo (section 3.1.4.3.3.1)	Specifies information about the status of a phone call. This element MUST be present.

3.1.4.3.3 Complex Types

The following table lists the **XML schema** complex type definitions that are specific to this operation.

Complex type name	Description
UMCallInfo	Specifies the phone call status and provides information about what caused a phone call to reach the Disconnected state.

3.1.4.3.3.1 tns:UMCallInfo Complex Type

The **UMCallInfo** complex type specifies the phone call status and provides information about what caused a phone call to enter the **Disconnected** state.

```

<xs:complexType name="UMCallInfo">
  <xs:sequence>
    <xs:element name="CallState"
      type="tns:UMCallState"
      maxOccurs="1"
      minOccurs="1"
    />
    <xs:element name="EventCause"
      type="tns:UMEventCause"
      maxOccurs="1"
      minOccurs="1"
    />
  </xs:sequence>
</xs:complexType>

```

The following table lists the child elements of the **UMCallInfo** complex type.

Element name	Type	Description
CallState	tns:UMCallState (section 3.1.4.3.4.1)	Specifies a value that indicates the status of a call for which the GetCallInfo operation requested information. This element MUST be present.
EventCause	tns:UMEventCause (section 3.1.4.3.4.2)	Specifies a value that indicates the event that caused a call to enter the Disconnected state. This element MUST be present.

3.1.4.3.4 Simple Types

The following table lists the **XML schema** simple type definitions that are specific to this operation.

Simple type name	Description
UMCallState	Specifies the state of a phone call at the time that the GetCallInfo operation request is successfully processed.
UMEventCause	Specifies the reason that a phone call was disconnected.

3.1.4.3.4.1 tns:UMCallState Simple Type

The **UMCallState** simple type specifies the state of a phone call at the time that the **GetCallInfo** operation request is successfully processed.

```

<xs:simpleType name="UMCallState">
  <xs:restriction
    base="s:string"
  >
    <xs:enumeration
      value="Idle"
    />
    <xs:enumeration
      value="Connecting"
    />
    <xs:enumeration
      value="Alerted"
    />
    <xs:enumeration
      value="Connected"
    />
    <xs:enumeration
      value="Disconnected"
    />
    <xs:enumeration
      value="Incoming"
    />
    <xs:enumeration
      value="Transferring"
    />
    <xs:enumeration
      value="Forwarding"
    />
  </xs:restriction>
</xs:simpleType>

```

The following enumeration values are defined by the **UMCallState** simple type.

Value	Meaning
Idle	Specifies the initial state of the phone call system before a phone call has been initiated and after a phone call has exited the Disconnected state. No phone call context handle is associated with this state and therefore this state is not applicable to this protocol.
Connecting	Specifies that the Unified Messaging system is dialing or waiting for a phone to answer the call. This value MUST be sent to the client when the Unified Messaging system is dialing or waiting for a phone to answer the call.
Alerted	This state is not applicable to this protocol.
Connected	Specifies that a phone call between the Unified Messaging system and a telephone is connected. This value MUST be sent to the client when the Unified Messaging system and the telephone are connected.
Disconnected	Specifies that a phone call between the Unified Messaging system and a telephone has been disconnected. This value MUST be sent to the client when the Unified Messaging system and the telephone are disconnected.
Incoming	This state is not applicable to this protocol.
Transferring	This state is not applicable to this protocol.
Forwarding	This state is not applicable to this protocol.

The phone call status system state model is specified in section [3.1.1.1](#).

3.1.4.3.4.2 tns:UMEventCause Simple Type

The **UMEventCause** simple type specifies the reason that a phone call was disconnected.

```
<xs:simpleType name="UMEventCause">
  <xs:restriction
    base="s:string"
  >
    <xs:enumeration
      value="None"
    />
    <xs:enumeration
      value="UserBusy"
    />
    <xs:enumeration
      value="NoAnswer"
    />
    <xs:enumeration
      value="Unavailable"
    />
    <xs:enumeration
      value="Other"
    />
  </xs:restriction>
</xs:simpleType>
```

The following enumeration values are defined by the **UMEventCause** simple type.

Value	Meaning
None	Specifies that a call is not in the Disconnected state or that the disconnect reason is unknown.

Value	Meaning
	This value MUST be returned if the phone call is not in the Disconnected state.
UserBusy	Specifies that the called party line was busy. This value MUST be returned if the party line is busy.
NoAnswer	Specifies that the called party did not answer. This value MUST be returned if the call is not answered. This value is not accessible through this protocol.
Unavailable	Specifies that the called party number was not available. This value MUST be returned if the phone number that was called is not available. This value is not accessible through this protocol.
Other	Specifies all other disconnect reasons. This value MUST be returned if the None , UserBusy , NoAnswer , or Unavailable values are not applicable to specify the reason why a phone call is in the Disconnected state. This value is not accessible through this protocol.

The phone call status system state model is specified in section [3.1.1.1](#).

3.1.4.3.5 Attributes

None.

3.1.4.3.6 Groups

None.

3.1.4.3.7 Attribute Groups

None.

3.1.4.4 GetPhoneCallInformation Operation

The **GetPhoneCallInformation** operation gets information about a telephone call. The **GetPhoneCallInformation** operation uses the **endpoint** specified in [\[MS-OXDCLI\]](#) section 2.2.4.1.1.2.4.24. [<11>](#)

The following is the **WSDL port type** specification for the operation.

```
<wsdl:operation name="GetPhoneCallInformation">
  <wsdl:input message="tns:GetPhoneCallInformationSoapIn" />
  <wsdl:output message="tns:GetPhoneCallInformationSoapOut" />
</wsdl:operation>
```

The following is the **WSDL binding** specification for the operation.

```
<wsdl:operation name="GetPhoneCallInformation">
  <soap:operation
soapAction="http://schemas.microsoft.com/exchange/services/2006/messages/GetPhoneCallInformation"/>
  <wsdl:input>
    <soap:body parts="request" use="literal"/>
    <soap:header message="tns:GetPhoneCallInformationSoapIn" part="Impersonation"
use="literal"/>
    <soap:header message="tns:GetPhoneCallInformationSoapIn" part="MailboxCulture"
use="literal"/>
    <soap:header message="tns:GetPhoneCallInformationSoapIn" part="RequestVersion"
use="literal"/>
  </wsdl:input>
  <wsdl:output>
    <soap:body parts="GetPhoneCallInformationResult" use="literal"/>
  </wsdl:output>
</wsdl:operation>
```

```

        <soap:header message="tns:GetPhoneCallInformationSoapOut" part="ServerVersion"
use="literal"/>
    </wsdl:output>
</wsdl:operation>

```

3.1.4.4.1 Messages

The following table lists the **WSDL message** definitions that are specific to this operation.

Message name	Description
GetPhoneCallInformationSoapIn	Specifies the request to get information about a phone call.
GetPhoneCallInformationSoapOut	Specifies the response to a request to get information about a phone call.

3.1.4.4.1.1 GetPhoneCallInformationSoapIn

The **GetPhoneCallInformationSoapIn WSDL message** specifies the **GetPhoneCallInformation** operation request.

```

<wsdl:message name="GetPhoneCallInformationSoapIn">
  <wsdl:part name="request" element="tns:GetPhoneCallInformation"/>
  <wsdl:part name="Impersonation" element="t:ExchangeImpersonation"/>
  <wsdl:part name="MailboxCulture" element="t:MailboxCulture"/>
  <wsdl:part name="RequestVersion" element="t:RequestServerVersion"/>
</wsdl:message>

```

The **GetPhoneCallInformationSoapIn** WSDL message is the input message for the **SOAP action** <http://schemas.microsoft.com/exchange/services/2006/messages/GetPhoneCallInformation>.

The parts of the **GetPhoneCallInformationSoapIn** message are described in the following table.

Part name	Element/type	Description
request	tns:GetPhoneCallInformation (section 3.1.4.4.2.1)	Specifies the SOAP body of the request.
Impersonation	t:ExchangeImpersonation ([MS-OXWSCDATA] section 2.2.3.3)	Specifies a SOAP header that identifies the user whom the client application is impersonating.
MailboxCulture	t:MailboxCulture ([MS-OXWSCDATA] section 2.2.3.6)	Specifies a SOAP header that identifies the language to use to access the mailbox. The languages are defined by [RFC3066] .
RequestVersion	t:RequestServerVersion ([MS-OXWSCDATA] section 2.2.3.9)	Specifies a SOAP header that identifies the target schema version for the GetPhoneCallInformation operation request.

3.1.4.4.1.2 GetPhoneCallInformationSoapOut

The **GetPhoneCallInformationSoapOut WSDL message** specifies the **GetPhoneCallInformation** operation response.

```

<wsdl:message name="GetPhoneCallInformationSoapOut">

```

```

    <wsdl:part name="GetPhoneCallInformationResult"
    element="tns:GetPhoneCallInformationResponse"/>
    <wsdl:part name="ServerVersion" element="t:ServerVersionInfo"/>
  </wsdl:message>

```

The **GetPhoneCallInformationSoapOut** WSDL message is the output message for the **SOAP action** <http://schemas.microsoft.com/exchange/services/2006/messages/GetPhoneCallInformation>.

The parts of the **GetPhoneCallInformationSoapOut** message are listed in the following table.

Part name	Element/type	Description
GetPhoneCallInformationResult	tns:GetPhoneCallInformationResponse (section 3.1.4.4.2.2)	Specifies the SOAP body of the response.
ServerVersion	t:ServerVersionInfo ([MS-OXWSCDATA] section 2.2.3.10)	Specifies the SOAP header that identifies the server version for the response.

A successful **GetPhoneCallInformation** operation response has a text value of "Success" for the **ResponseClass** attribute of the **GetPhoneCallInformationResponse XML** instance element. The **ResponseCode** child element of the **GetPhoneCallInformationResponse XML** instance element MUST have a text value of "NoError".

A **GetPhoneCallInformation** operation error response caused by an invalid phone call identifier MUST have a text value of "Error" for the **ResponseClass** attribute of the **GetPhoneCallInformationResponse XML** instance element. The **ResponseCode** child element of the **GetPhoneCallInformationResponse XML** instance element MUST have a text value of "ErrorInvalidPhoneCallId". The **MessageText** child element of the **GetPhoneCallInformationResponse XML** instance element MUST have a text value of "The phone call ID isn't valid".

3.1.4.4.2 Elements

The following table lists the **XML schema** element definitions that are specific to this operation.

Element name	Description
GetPhoneCallInformation	Specifies a request to get information about a phone call.
GetPhoneCallInformationResponse	Specifies a response to GetPhoneCallInformation operation request.

3.1.4.4.2.1 m:GetPhoneCallInformation Element

The **GetPhoneCallInformation** element specifies a request to get telephone call information. This element MUST be present.

```

<xs:element name="GetPhoneCallInformation"
  type="m:GetPhoneCallInformationType"
/>

```

3.1.4.4.2.2 m:GetPhoneCallInformationResponse Element

The **GetPhoneCallInformationResponse** element specifies a response to get telephone call information. This element **MUST** be present.

```
<xs:element name="GetPhoneCallInformationResponse"
  type="m:GetPhoneCallInformationResponseMessageType"
  />
```

3.1.4.4.3 Complex Types

The following table lists the **XML schema** complex type definitions that are specific to this operation.

Complex type name	Description
GetPhoneCallInformationType	Specifies a request to get telephone call information.
GetPhoneCallInformationResponseMessageType	Specifies a response to a request to get telephone call information.
PhoneCallInformationType	Specifies the state information for a telephone call.

3.1.4.4.3.1 m:GetPhoneCallInformationType Complex Type

The **GetPhoneCallInformationType** complex type specifies a request to get telephone call information. The **GetPhoneCallInformationType** complex type extends the **BaseRequestType** complex type, as specified in [\[MS-OXWSCDATA\]](#) section 2.2.4.17.

```
<xs:complexType name="GetPhoneCallInformationType">
  <xs:complexContent>
    <xs:restriction
      base="m:BaseRequestType"
    >
      <xs:sequence>
        <xs:element name="PhoneCallId"
          type="t:PhoneCallIdType"
          maxOccurs="1"
          minOccurs="1"
        />
      </xs:sequence>
    </xs:restriction>
  </xs:complexContent>
</xs:complexType>
```

The following table lists the child elements of the **GetPhoneCallInformationType** complex type.

Element name	Type	Description
PhoneCallId	t:PhoneCallIdType (section 2.2.4.1)	Specifies the identifier of the telephone call. This element MUST occur only once.

The **BaseRequestType** complex type is an abstract type. The **BaseRequestType** complex type is specified in [\[MS-OXWSCDATA\]](#) section 2.2.4.17.

3.1.4.4.3.2 m:GetPhoneCallInformationResponseMessageType Complex Type

The **GetPhoneCallInformationResponseMessageType** complex type specifies a response to a request to get telephone call information. The **GetPhoneCallInformationResponseMessageType** complex type extends the **ResponseMessageType** type, as specified in [\[MS-OXWSCDATA\]](#) section 2.2.4.67.

```
<xs:complexType name="GetPhoneCallInformationResponseMessageType">
  <xs:complexContent>
    <xs:extension
      base="m:ResponseMessageType"
    >
      <xs:sequence>
        <xs:element name="PhoneCallInformation"
          type="t:PhoneCallInformationType"
          maxOccurs="1"
          minOccurs="0"
        />
      </xs:sequence>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>
```

The following table lists the child elements of the **GetPhoneCallInformationResponseMessageType** complex type.

Element name	Type	Description
PhoneCallInformation	t:PhoneCallInformationType (section 3.1.4.4.3.3)	Specifies the state information for a telephone call. This element MUST be present for a successful response. This element MUST NOT be present in the case of an error response.

3.1.4.4.3.3 t:PhoneCallInformationType Complex Type

The **PhoneCallInformationType** complex type specifies the state information for a telephone call.

```
<xs:complexType name="PhoneCallInformationType">
  <xs:sequence>
    <xs:element name="PhoneCallState"
      type="t:PhoneCallStateType"
      maxOccurs="1"
      minOccurs="1"
    />
    <xs:element name="ConnectionFailureCause"
      type="t:ConnectionFailureCauseType"
      maxOccurs="1"
      minOccurs="1"
    />
    <xs:element name="SIPResponseText"
      type="xs:string"
      minOccurs="0"
      maxOccurs="1"
    />
    <xs:element name="SIPResponseCode"
      type="xs:int"
      minOccurs="0"
      maxOccurs="1"
    />
  </xs:sequence>
</xs:complexType>
```


The following table lists the child elements of the **PhoneCallInformationType** complex type.

Element name	Type	Description
PhoneCallState	t:PhoneCallStateType (section 3.1.4.4.4.2)	Specifies the state for a telephone call. This element MUST be present. The phone call system state diagram is specified in section 3.1.1.1 .
ConnectionFailureCause	t:ConnectionFailureCauseType (section 3.1.4.4.4.1)	Specifies the reason why a telephone call was disconnected. This element MUST be present.
SIPResponseText	xs:string [XMLSCHEMA2]	Specifies the Session Initiation Protocol (SIP) , as defined in [RFC3261], response text. This text is always "OK". This element MUST NOT be present for a successful GetPhoneCallInformation operation response.
SIPResponseCode	xs:int [XMLSCHEMA2]	Specifies the Session Initiation Protocol (SIP), as defined in [RFC3261], response code. This code is always 200. This element MUST NOT be present for a successful GetPhoneCallInformation operation response.

3.1.4.4.4 Simple Types

The following table lists the **XML schema** simple type definitions that are specific to this operation.

Simple type name	Description
ConnectionFailureCauseType	Specifies the reason that a telephone call was disconnected.
PhoneCallStateType	Specifies the state of a telephone call at the time that the GetPhoneCallInformation operation request is successfully processed.

3.1.4.4.4.1 t:ConnectionFailureCauseType Simple Type

The **ConnectionFailureCauseType** simple type specifies the disconnect reason of a telephone call.

```
<xs:simpleType>
  <xs:restriction
    base="xs:string"
  >
    <xs:enumeration
      value="None"
    />
    <xs:enumeration
      value="UserBusy"
    />
    <xs:enumeration
      value="NoAnswer"
    />
    <xs:enumeration
```

```

        value="Unavailable"
      />
    <xs:enumeration
      value="Other"
    />
  </xs:restriction>
</xs:simpleType>

```

The following enumeration values are defined by the simple type.

Value	Meaning
None	Specifies that a call is not in the Disconnected state or that the disconnect reason is unknown. This value MUST be returned if the phone call is not in the Disconnected state.
UserBusy	Specifies that the called party line was busy. This value MUST be returned if the party line is busy.
NoAnswer	Specifies that the called party did not answer. This value MUST be returned if the call is not answered. This value is not accessible through this protocol.
Unavailable	Specifies that the called party number was not available. This value MUST be returned if the phone number that was called is not available. This value is not accessible through this protocol.
Other	Specifies all other disconnect reasons. This value MUST be returned if the "None", "UserBusy", "NoAnswer", or "Unavailable" values are not applicable to specify the reason why a phone call is in the Disconnected state. This value is not accessible through this protocol.

The **xs:string** type is specified in [\[XMLSCHEMA2\]](#). The phone call status system state model is specified in section [3.1.1.1](#).

3.1.4.4.2 t:PhoneCallStateType Simple Type

The **PhoneCallStateType** simple type specifies the current state for a phone call.

```

<xs:simpleType>
  <xs:restriction
    base="xs:string"
  >
    <xs:enumeration
      value="Idle"
    />
    <xs:enumeration
      value="Connecting"
    />
    <xs:enumeration
      value="Alerted"
    />
    <xs:enumeration
      value="Connected"
    />
    <xs:enumeration
      value="Disconnected"
    />
    <xs:enumeration
      value="Incoming"
    />
    <xs:enumeration
      value="Transferring"
    />
    <xs:enumeration
      value="Forwarding"
    />
  </xs:restriction>
</xs:simpleType>

```

```
</xs:restriction>
</xs:simpleType>
```

The following enumeration values are defined by the **PhoneCallStateType** simple type.

Value	Meaning
Idle	Specifies the initial state of the phone call system before a phone call has been initiated and after a phone call has exited the Disconnected state. No phone call context handle is associated with this state and therefore this state is not applicable to this protocol.
Connecting	Specifies that the Unified Messaging system is dialing or waiting for a phone to answer the call. This value MUST be sent to the client when the Unified Messaging system is dialing or waiting for a phone to answer the call.
Alerted	This state is not applicable to this protocol.
Connected	Specifies that a call between the Unified Messaging system and a telephone is connected. This value MUST be sent to the client when the Unified Messaging system and the telephone are connected.
Disconnected	Specifies that a call between the Unified Messaging system and a telephone device is disconnected. This value MUST be sent to the client when the Unified Messaging system and the telephone are disconnected.
Incoming	This state is not applicable to this protocol.
Transferring	This state is not applicable to this protocol.
Forwarding	This state is not applicable to this protocol.

The phone call status system state model is specified in section [3.1.1.1](#).

3.1.4.4.5 Attributes

None.

3.1.4.4.6 Groups

None.

3.1.4.4.7 Attribute Groups

None.

3.1.4.5 GetUMProperties Operation

The **GetUMProperties** operation returns a list of **Unified Messaging** properties. The **GetUMProperties** operation uses the **endpoint** specified in [\[MS-OXDCLI\]](#) section 2.2.4.1.1.2.4.47.

The following is the **WSDL port type** specification for the operation.

```
<wsdl:operation name="GetUMProperties">
  <wsdl:input message="tns:GetUMPropertiesSoapIn" />
  <wsdl:output message="tns:GetUMPropertiesSoapOut" />
</wsdl:operation>
```

The following is the **WSDL** binding specification for the operation.

```
<wsdl:operation name="GetUMProperties">
  <soap:operation
    soapAction="http://schemas.microsoft.com/exchange/services/2006/messages/GetUMProperties"
    style="document"/>
  <wsdl:input>
    <soap:body use="literal"/>
  </wsdl:input>
  <wsdl:output>
    <soap:body use="literal"/>
  </wsdl:output>
</wsdl:operation>
```

If the operation succeeds, a **GetUMPropertiesResponse** element is returned. If the operation fails, a **SOAP fault** response, as specified in [\[SOAP1.1\]](#), is returned that contains information about the failure. A SOAP fault response MUST be returned if the **GetUMPropertiesSoapIn** message request **XML** is malformed. The structure of a SOAP fault for a malformed request is specified in section [2.2.2.1](#).

3.1.4.5.1 Messages

The following table lists the **WSDL message** definitions that are specific to this operation.

Message name	Description
GetUMPropertiesSoapIn	Specifies the request to get Unified Messaging properties.
GetUMPropertiesSoapOut	Specifies the response to a request to get Unified Messaging properties.

3.1.4.5.1.1 GetUMPropertiesSoapIn Message

The **GetUMPropertiesSoapIn WSDL message** specifies the **GetUMProperties** operation request.

```
<wsdl:message name="GetUMPropertiesSoapIn">
  <wsdl:part name="parameters" element="tns:GetUMProperties" />
</wsdl:message>
```

The **GetUMPropertiesSoapIn** WSDL message is the input message for the **SOAP action** <http://schemas.microsoft.com/exchange/services/2006/messages/GetUMProperties>.

The SOAP body contains a **GetUMProperties** element.

The parts of the **GetUMPropertiesSoapIn** WSDL message are described in the following table.

Part name	Element/type	Description
parameters	GetUMProperties (section 3.1.4.5.2.1)	Specifies the SOAP body that contains the information that is required to get Unified Messaging properties.

3.1.4.5.1.2 GetUMPropertiesSoapOut Message

The **GetUMPropertiesSoapOut** WSDL message specifies the **GetUMProperties** operation response.

```
<wsdl:message name="GetUMPropertiesSoapOut">
  <wsdl:part name="parameters" element="tns:GetUMPropertiesResponse" />
</wsdl:message>
```

The SOAP body contains a **GetUMPropertiesResponse** element.

The parts of the **GetUMPropertiesSoapOut** WSDL message are described in the following table.

Part name	Element/type	Description
parameters	GetUMPropertiesResponse (section 3.1.4.5.2.2)	Specifies a response to a GetUMProperties operation request.

3.1.4.5.2 Elements

The following table lists the **XML schema** element definitions that are specific to this operation.

Element name	Description
GetUMProperties	Specifies a request to get Unified Messaging properties.
GetUMPropertiesResponse	Specifies a response to a GetUMProperties operation request.

3.1.4.5.2.1 m:GetUMProperties Element

The **GetUMProperties** element specifies a request to get **Unified Messaging** properties. This element **MUST** be present.

```
<xs:element name="GetUMProperties">
  <xs:complexType />
</xs:element>
```

3.1.4.5.2.2 m:GetUMPropertiesResponse Element

The **GetUMPropertiesResponse** element specifies a response to a **GetUMProperties** operation request. This element **MUST** be present for successful **GetUMProperties** operation response messages.

```
<xs:element name="GetUMPropertiesResponse">
  <xs:complexType>
    <xs:sequence>
      <xs:element name="GetUMPropertiesResponse"
        type="tns:UMProperties"
        maxOccurs="1"
        minOccurs="1"
      />
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

The following table lists the child elements of the **GetUMPropertiesResponse** element.

Element name	Type	Description
GetUMPropertiesResponse	tns:UMProperties (section 3.1.4.5.3.1)	Specifies a list of Unified Messaging properties. This element MUST be present.

3.1.4.5.3 Complex Types

The following table lists the **XML schema** complex type definitions that are specific to this operation.

Complex type name	Description
UMProperties	Specifies a list of Unified Messaging properties.

3.1.4.5.3.1 m:UMProperties Complex Type

The **UMProperties** complex type specifies a list of **Unified Messaging** properties.

```
<xs:complexType name="UMProperties">
  <xs:sequence>
    <xs:element name="OofStatus"
      type="s:boolean"
      maxOccurs="1"
      minOccurs="1"
    />
    <xs:element name="MissedCallNotificationEnabled"
      type="s:boolean"
      maxOccurs="1"
      minOccurs="1"
    />
    <xs:element name="PlayOnPhoneDialString"
      type="s:string"
      maxOccurs="1"
      minOccurs="0"
    />
    <xs:element name="TelephoneAccessNumbers"
      type="s:string"
      maxOccurs="1"
      minOccurs="0"
    />
    <xs:element name="TelephoneAccessFolderEmail"
      type="s:string"
      maxOccurs="1"
      minOccurs="0"
    />
  </xs:sequence>
</xs:complexType>
```

The following table lists the child elements of the **UMProperties** complex type.

Element name	Type	Description
OofStatus	s:boolean [XMLSCHEMA2]	Specifies whether the Out of Office (OOF) greeting is enabled. A text value of "true" specifies that the OOF greeting is enabled. This element MUST be present.
MissedCallNotificationEnabled	s:boolean	Specifies whether missed call notifications are enabled. A text value of "true" specifies that missed call notifications are enabled. This element MUST be present.
PlayOnPhoneDialString	s:string	Specifies the default telephone number to use for the PlayOnPhone and PlayOnPhoneGreeting operations (sections 3.1.4.8 and 3.1.4.9). This element MUST be present.
TelephoneAccessNumbers	s:string	Specifies a comma-separated list of telephone numbers that the user can use to access Unified Messaging via a telephone. This element MUST be present if the server has a telephone access number set for the requestor's account. Otherwise, this element MUST NOT be present.
TelephoneAccessFolderEmail	s:string	Specifies the identifier for the e-mail folder from which Unified Messaging will read messages over the telephone. The text value of this is the folder EntryID encoded as a base64 string ([RFC2045] section 6.8). This element MUST be present.

3.1.4.5.4 Simple Types

None.

3.1.4.5.5 Attributes

None.

3.1.4.5.6 Groups

None.

3.1.4.5.7 Attribute Groups

None.

3.1.4.6 IsUMEnabled Operation

The **IsUMEnabled** operation returns a value that indicates whether the user who is making the request is enabled for **Unified Messaging**. The **IsUMEnabled** operation uses the **endpoint** specified in [\[MS-OXDCLI\]](#) section 2.2.4.1.1.2.4.47.

The following is the **WSDL port type** specification for the operation.

```
<wsdl:operation name="IsUMEnabled">
  <wsdl:input message="tns:IsUMEnabledSoapIn" />
  <wsdl:output message="tns:IsUMEnabledSoapOut" />
</wsdl:operation>
```

The following is the **WSDL binding** specification for the operation.

```

<wsdl:operation name="IsUMEnabled">
  <soap:operation
  soapAction="http://schemas.microsoft.com/exchange/services/2006/messages/IsUMEnabled"
  style="document"/>
  <wsdl:input>
    <soap:body use="literal"/>
  </wsdl:input>
  <wsdl:output>
    <soap:body use="literal"/>
  </wsdl:output>
</wsdl:operation>

```

If the operation succeeds, an **IsUMEnabledResponse** element is returned. If the operation fails, a **SOAP fault** response, as specified in [\[SOAP1.1\]](#), is returned that contains information about the failure. A SOAP fault is returned if the **IsUMEnabledSoapIn** request message **XML** is malformed. The structure of a SOAP fault for a malformed request is specified in section [2.2.2.1.<12>](#)

3.1.4.6.1 Messages

The following table lists the **WSDL message** definitions that are specific to this operation.

Message name	Description
IsUMEnabledSoapIn	Specifies the request to get information about whether the Unified Messaging feature is enabled for a user.
IsUMEnabledSoapOut	Specifies the response to a request to get information about whether the Unified Messaging feature is enabled for a user.

3.1.4.6.1.1 IsUMEnabledSoapIn Message

The **IsUMEnabledSoapIn WSDL message** specifies the **IsUMEnabled** operation request.

```

<wsdl:message name="IsUMEnabledSoapIn">
  <wsdl:part name="parameters" element="tns:IsUMEnabled" />
</wsdl:message>

```

The **IsUMEnabledSoapIn** WSDL message is the input message for the **SOAP action** <http://schemas.microsoft.com/exchange/services/2006/messages/IsUMEnabled>.

The SOAP body contains a **IsUMEnabled** element.

The parts of the **IsUMEnabledSoapIn** WSDL message are described in the following table.

Part name	Element/type	Description
parameters	IsUMEnabled (section 3.1.4.6.2.1)	Specifies the information that is required to discover whether a mailbox is enabled for Unified Messaging .

3.1.4.6.1.2 IsUMEnabledSoapOut Message

The **IsUMEnabledSoapOut WSDL message** specifies the **IsUMEnabled** operation response.


```

<wsdl:message name="IsUMEnabledSoapOut">
  <wsdl:part name="parameters" element="tns:IsUMEnabledResponse" />
</wsdl:message>

```

The SOAP body contains an **IsUMEnabledResponse** element.

The parts of the **IsUMEnabledSoapOut** message are described in the following table.

Part name	Element/type	Description
parameters	IsUMEnabledResponse (section 3.1.4.6.2.2)	Specifies a response to an IsUMEnabled operation request.

3.1.4.6.2 Elements

The following table lists the **XML schema** element definitions that are specific to this operation.

Element name	Description
IsUMEnabled	Specifies a request to get information about whether a mailbox is enabled for Unified Messaging .
IsUMEnabledResponse	Specifies a response to an IsUMEnabled operation request.

3.1.4.6.2.1 m:IsUMEnabled Element

The **IsUMEnabled** element specifies a request to get information about whether a **mailbox** is enabled for **Unified Messaging**. This element **MUST** be present.

```

<xs:element name="IsUMEnabled">
  <xs:complexType />
</xs:element>

```

3.1.4.6.2.2 m:IsUMEnabledResponse Element

The **IsUMEnabledResponse** element specifies a response to an **IsUMEnabled** operation request. This element **MUST** be present in response to a successful request.

```

<xs:element name="IsUMEnabledResponse">
  <xs:complexType>
    <xs:sequence>
      <xs:element name="IsUMEnabledResponse"
        type="s:boolean"
        maxOccurs="1"
        minOccurs="1"
      />
    </xs:sequence>
  </xs:complexType>
</xs:element>

```

The following table lists the child elements of the **IsUMEnabledResponse** element.

Element name	Type	Description
IsUMEnabledResponse	s:boolean [XMLSCHEMA2]	Specifies a value that indicates whether a mailbox is enabled for Unified Messaging . This element MUST be present.

3.1.4.6.3 Complex Types

None.

3.1.4.6.4 Simple Types

None.

3.1.4.6.5 Attributes

None.

3.1.4.6.6 Groups

None.

3.1.4.6.7 Attribute Groups

None.

3.1.4.7 PlayOnPhone2 Operation

The **PlayOnPhone2** operation initiates an outbound call and plays a voice message over the telephone. The **PlayOnPhone2** operation uses the **endpoint** specified in [\[MS-OXDSCLI\]](#) section 2.2.4.1.1.2.4.47. [<13>](#)

The following is the **WSDL port type** specification for the operation.

```
<wsdl:operation name="PlayOnPhone2">
  <wsdl:input message="tns:PlayOnPhoneSoapIn2" />
  <wsdl:output message="tns:PlayOnPhoneSoapOut2" />
</wsdl:operation>
```

The following is the **WSDL binding** specification for the operation.

```
<wsdl:operation name="PlayOnPhone2">
  <soap:operation
  soapAction="http://schemas.microsoft.com/exchange/services/2006/messages/PlayOnPhone"/>
  <wsdl:input>
    <soap:body parts="request" use="literal"/>
    <soap:header message="tns:PlayOnPhoneSoapIn2" part="Impersonation" use="literal"/>
    <soap:header message="tns:PlayOnPhoneSoapIn2" part="MailboxCulture" use="literal"/>
    <soap:header message="tns:PlayOnPhoneSoapIn2" part="RequestVersion" use="literal"/>
  </wsdl:input>
  <wsdl:output>
    <soap:body parts="PlayOnPhoneResult" use="literal"/>
    <soap:header message="tns:PlayOnPhoneSoapOut2" part="ServerVersion" use="literal"/>
  </wsdl:output>
</wsdl:operation>
```

3.1.4.7.1 Messages

The following table lists the **WSDL message** definitions that are specific to this operation.

Message name	Description
PlayOnPhoneSoapIn2	Specifies the request that initiates the playing of an item or voice mail on a phone call.
PlayOnPhoneSoapOut2	Specifies the response to a request to initiate the playing of an item or voice mail on a phone call.

3.1.4.7.1.1 PlayOnPhoneSoapIn2

The **PlayOnPhoneSoapIn2 WSDL message** specifies the **PlayOnPhone2** operation request.

```
<wsdl:message name="PlayOnPhoneSoapIn2">
  <wsdl:part name="request" type="tns:PlayOnPhone2Type"/>
  <wsdl:part name="Impersonation" element="t:ExchangeImpersonation"/>
  <wsdl:part name="MailboxCulture" element="t:MailboxCulture"/>
  <wsdl:part name="RequestVersion" element="t:RequestServerVersion"/>
</wsdl:message>
```

The **PlayOnPhoneSoapIn2** WSDL message is the input message for the **SOAP action** <http://schemas.microsoft.com/exchange/services/2006/messages/PlayOnPhone>.

The parts of the **PlayOnPhoneSoapIn2** message are listed in the following table.

Part name	Element/type	Description
request	tns:PlayOnPhone2Type (section 3.1.4.7.2.2)	Specifies the SOAP body of the request.
Impersonation	t:ExchangeImpersonation ([MS-OXWSCDATA] section 2.2.3.3)	Specifies a SOAP header that identifies the user whom the client application is impersonating.
MailboxCulture	t:MailboxCulture ([MS-OXWSCDATA] section 2.2.3.6)	Specifies a SOAP header that identifies the language to use for accessing the mailbox. The languages are specified in [RFC3066] .
RequestVersion	t:RequestServerVersion ([MS-OXWSCDATA] section 2.2.3.9)	Specifies a SOAP header that identifies the target schema version for the PlayOnPhone2 operation request.

3.1.4.7.1.2 PlayOnPhoneSoapOut2

The **PlayOnPhoneSoapOut2 WSDL message** specifies the **PlayOnPhone2** operation response.

```
<wsdl:message name="PlayOnPhoneSoapOut2">
  <wsdl:part name="PlayOnPhoneResult" type="tns:PlayOnPhoneResponse2Type"/>
  <wsdl:part name="ServerVersion" element="t:ServerVersionInfo"/>
</wsdl:message>
```

The **PlayOnPhoneSoapOut2** WSDL message is the output message for the **SOAP action** <http://schemas.microsoft.com/exchange/services/2006/messages/PlayOnPhone>.

The parts of the **PlayOnPhoneSoapOut2** message are described in the following table.

Part name	Element/type	Description
PlayOnPhoneResult	tns:PlayOnPhoneResponse2Type (section 3.1.4.7.2.3)	Specifies the SOAP body of the response.
ServerVersion	t:ServerVersionInfo ([MS-OXWSCDATA] section 2.2.3.10)	Specifies the SOAP header that identifies the server version for the response.

A successful **PlayOnPhone2** operation response MUST have a text value of "Success" for the **ResponseClass** attribute of the **PlayOnPhoneResponse** XML instance element (section 3.1.4.7.2.3). The **ResponseCode** child element of the **PlayOnPhoneResponse** XML instance element MUST have a text value of "NoError". Additionally, a successful **PlayOnPhone2** operation response MUST have a valid phone call identifier returned in the **PhoneCallId** element, as specified in section [3.1.4.7.2.4](#).

An error **PlayOnPhone2** operation response caused by an invalid item identifier, as specified by the **ItemId** element in section [3.1.4.7.2.1](#), MUST have a text value of "Error" for the **ResponseClass** attribute of the **PlayOnPhoneResponse** XML instance element (section 3.1.4.7.2.3). The **ResponseCode** child element of the **PlayOnPhoneResponse** XML instance element MUST have a text value of "ErrorInvalidIdMalformed". The **MessageText** child element of the **PlayOnPhoneResponse** XML instance element MUST have a text value of "Id is malformed". The response SOAP body XML MUST match the following XML.

```
<s:Body xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:xsd="http://www.w3.org/2001/XMLSchema">
  <PlayOnPhoneResponse ResponseClass="Error"
xmlns="http://schemas.microsoft.com/exchange/services/2006/messages">
    <MessageText>Id is malformed.</MessageText>
    <ResponseCode>ErrorInvalidIdMalformed</ResponseCode>
    <DescriptiveLinkKey>0</DescriptiveLinkKey>
  </PlayOnPhoneResponse>
</s:Body>
```

An error **PlayOnPhone2** operation response caused by a dial string that does not represent a valid phone number, as specified by the **DialString** element in section 3.1.4.7.2.1, MUST have a text value of "Error" for the **ResponseClass** attribute of the **PlayOnPhoneResponse** XML instance element (section 3.1.4.7.2.3). The **ResponseCode** child element of the **PlayOnPhoneResponse** XML instance element MUST have a text value of "ErrorPhoneNumberNotDialable". The **MessageText** child element of the **PlayOnPhoneResponse** XML instance element MUST have a text value of "Dialing restrictions are preventing the phone number that was entered from being dialed." The response SOAP body XML MUST match the following XML.

```
<s:Body xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:xsd="http://www.w3.org/2001/XMLSchema">
  <PlayOnPhoneResponse ResponseClass="Error"
xmlns="http://schemas.microsoft.com/exchange/services/2006/messages">
    <MessageText>Dialing restrictions are preventing the phone number that was entered from
being dialed.</MessageText>
    <ResponseCode>ErrorPhoneNumberNotDialable</ResponseCode>
    <DescriptiveLinkKey>0</DescriptiveLinkKey>
  </PlayOnPhoneResponse>
</s:Body>
```

3.1.4.7.2 Complex Types

The following table lists the **XML schema** complex type definitions that are specific to this operation.

Complex type name	Description
PlayOnPhoneType	Specifies the request to play a voice mail or mailbox item over the telephone.
PlayOnPhone2Type	Specifies the request to play a voice mail or mailbox item over the telephone.
PlayOnPhoneResponse2Type	Specifies the response to a request to play a voice mail or mailbox item over the telephone.
PlayOnPhoneResponseMessageType	Specifies the response to a request to play a voice mail or mailbox item over the telephone.

3.1.4.7.2.1 m:PlayOnPhoneType Complex Type

The **PlayOnPhoneType** complex type specifies the request to play a voice mail or **mailbox** item over the telephone. The **PlayOnPhoneType** complex type extends the **BaseRequestType** complex type, as specified in [\[MS-OXWSCDATA\]](#) section 2.2.4.17.

```
<xs:complexType name="PlayOnPhoneType">
  <xs:complexContent>
    <xs:extension
      base="m:BaseRequestType"
    >
      <xs:sequence>
        <xs:element name="ItemId"
          type="t:ItemIdType"
          maxOccurs="1"
          minOccurs="1"
        />
        <xs:element name="DialString"
          type="xs:string"
          maxOccurs="1"
          minOccurs="1"
        />
      </xs:sequence>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>
```

The following table lists the child elements of the **PlayOnPhoneType** complex type.

Element name	Type	Description
ItemId	t:ItemIdType ([MS-OXWSCORE] section 2.2.4.25)	Specifies the voice mail or item identifier of the voice mail or item to play on the telephone number identified by the DialString element. This element MUST be present.
DialString	xs:string ([XMLSCHEMA2])	Specifies the dial string of the telephone, as defined in [RFC3966] , that plays the voice mail or mailbox item as identified by the ItemId element. This element MUST be present.

3.1.4.7.2.2 m:PlayOnPhone2Type Complex Type

The **PlayOnPhone2Type** complex type specifies the request to play a voice mail or **mailbox** item over the telephone.

```
<xs:complexType name="PlayOnPhone2Type">
  <xs:sequence>
    <xs:element name="PlayOnPhone"
      type="m:PlayOnPhoneType"
    />
  </xs:sequence>
</xs:complexType>
```

The following table lists the child elements of the **PlayOnPhone2Type** complex type.

Element name	Type	Description
PlayOnPhone	m:PlayOnPhone (section 3.1.4.7.2.1)	Specifies the request to play a voice mail or mailbox item over the telephone. This element MUST be present.

3.1.4.7.2.3 m:PlayOnPhoneResponse2Type Complex Type

The **PlayOnPhoneResponse2Type** complex type specifies the response to a request to play a voice mail or item over the telephone.

```
<xs:complexType name="PlayOnPhoneResponse2Type">
  <xs:sequence>
    <xs:element name="PlayOnPhoneResponse"
      type="m:PlayOnPhoneResponseMessageType"
    />
  </xs:sequence>
</xs:complexType>
```

The following table lists the child elements of the **PlayOnPhoneResponse2Type** complex type.

Element name	Type	Description
PlayOnPhoneResponse	m:PlayOnPhoneResponseMessageType (section 3.1.4.7.2.4)	Specifies the response to play a voice mail or item over the telephone. This element MUST be present.

3.1.4.7.2.4 m:PlayOnPhoneResponseMessageType Complex Type

The **PlayOnPhoneResponseMessageType** complex type specifies the response to a request to play a voice mail or **mailbox** item over the telephone. The **PlayOnPhoneResponseMessageType** complex type extends the **ResponseMessageType** complex type, as specified in [\[MS-OXWSCDATA\]](#) section 2.2.4.67.

```
<xs:complexType name="PlayOnPhoneResponseMessageType">
  <xs:complexContent>
```

```

<xs:extension
  base="m:ResponseMessageType"
>
  <xs:sequence>
    <xs:element name="PhoneCallId"
      type="t:PhoneCallIdType"
      maxOccurs="1"
      minOccurs="0"
    />
  </xs:sequence>
</xs:extension>
</xs:complexContent>
</xs:complexType>

```

The following table lists the child elements of the **PlayOnPhoneResponseMessageType** complex type.

Element name	Type	Description
PhoneCallId	t:PhoneCallIdType (section 2.2.4.1)	Specifies the telephone call identifier. This element MUST be present if the request is successful. This element MUST NOT be present if the request is unsuccessful.

3.1.4.7.3 Simple Types

None.

3.1.4.7.4 Attributes

None.

3.1.4.7.5 Groups

None.

3.1.4.7.6 Attribute Groups

None.

3.1.4.8 PlayOnPhone Operation

The **PlayOnPhone** operation initiates an outbound call and plays a voice message or item over the telephone. The **PlayOnPhone** operation uses the **endpoint** specified in [\[MS-OXDCLI\]](#) section 2.2.4.1.1.2.4.47.

The following is the **WSDL port type** specification for the operation.

```

<wsdl:operation name="PlayOnPhone">
  <wsdl:input message="tns:PlayOnPhoneSoapIn" />
  <wsdl:output message="tns:PlayOnPhoneSoapOut" />
</wsdl:operation>

```

The following is the **WSDL binding** specification for the operation.

```

<wsdl:operation name="PlayOnPhone">
  <soap:operation
    soapAction="http://schemas.microsoft.com/exchange/services/2006/messages/PlayOnPhone"
    style="document"/>
  <wsdl:input>
    <soap:body use="literal"/>
  </wsdl:input>
  <wsdl:output>
    <soap:body use="literal"/>
  </wsdl:output>
</wsdl:operation>

```

If the operation succeeds, a **PlayOnPhoneResponse** element is returned.

If the operation fails, a **SOAP fault** response, as specified in [\[SOAP1.1\]](#), is returned that contains information about the failure.

A SOAP fault is returned if the **PlayOnPhone** operation specifies an invalid item identifier in the **entryId** element, as specified in section [3.1.4.8.2.1](#). The following **XML** specifies the SOAP fault response that SHOULD [<14>](#) be returned if an invalid item identifier is provided as an argument to a **PlayOnPhone** operation request.

```

<?xml version="1.0" encoding="utf-8"?>
<s:Envelope xmlns:s="http://schemas.xmlsoap.org/soap/envelope/">
  <s:Body>
    <s:Fault>
      <faultcode
        xmlns:a="http://schemas.microsoft.com/exchange/services/2006/errors">a:InvalidObjectIdExcepti
on</faultcode>
      <faultstring xml:lang="en-US">The object identifier isn't valid.</faultstring>
      <detail>
        <m:ExceptionType
          xmlns:m="http://schemas.microsoft.com/exchange/services/2006/messages">InvalidObjectIdExcepti
on</m:ExceptionType>
        </detail>
      </s:Fault>
    </s:Body>
  </s:Envelope>

```

The **faultcode** element SHOULD [<15>](#) contain a text value of "a:InvalidObjectIdException" if an invalid item identifier is sent in the request.

The **faultstring** element SHOULD [<16>](#) contain a text value of "The object identifier isn't valid" if an invalid item identifier is sent in the request.

The contents of the SOAP fault **detail** element are specified by the **ExceptionType** element (section [2.2.3.1](#)).

A SOAP fault MUST be returned if the **PlayOnPhone** operation specifies an invalid dial string in the **DialString** element, as specified in section [3.1.4.8.2.1](#). The following XML specifies the SOAP fault response that SHOULD [<17>](#) be returned if an invalid **DialString** element is provided as an argument to a **PlayOnPhone** operation request.

```

<?xml version="1.0" encoding="utf-8"?>
<s:Envelope xmlns:s="http://schemas.xmlsoap.org/soap/envelope/">
  <s:Body>
    <s:Fault>
      <faultcode
        xmlns:a="http://schemas.microsoft.com/exchange/services/2006/errors">a:DialingRulesException<
/faultcode>

```



```

    <faultstring xml:lang="en-US">Dialing restrictions are preventing the phone number that
was entered from being dialed.</faultstring>
    <detail>
      <m:ExceptionType
xmlns:m="http://schemas.microsoft.com/exchange/services/2006/messages">DialingRulesException<
/m:ExceptionType>
    </detail>
  </s:Fault>
</s:Body>
</s:Envelope>

```

The **faultcode** element SHOULD [<18>](#) contain a text value of "a:DialingRulesException" if an invalid dial string is sent in the request.

The **faultstring** element SHOULD [<19>](#) contain a text value of "Dialing restrictions are preventing the phone number that was entered from being dialed" if an invalid dial string is sent in the request.

The contents of the SOAP fault **detail** element are specified by the **ExceptionType** element.

3.1.4.8.1 Messages

The following table lists the **WSDL message** definitions that are specific to this operation.

Message name	Description
PlayOnPhoneSoapIn	Specifies the request that initiates the playing of an item or voice mail on a phone call.
PlayOnPhoneSoapOut	Specifies the response to a request to initiate the playing of an item or voice mail on a phone call.

3.1.4.8.1.1 PlayOnPhoneSoapIn Message

The **PlayOnPhoneSoapIn** **WSDL message** specifies the **PlayOnPhone** operation request.

```

<wsdl:message name="PlayOnPhoneSoapIn">
  <wsdl:part name="parameters" element="tns:PlayOnPhone" />
</wsdl:message>

```

The **PlayOnPhoneSoapIn** WSDL message is the input message for the SOAP action <http://schemas.microsoft.com/exchange/services/2006/messages/PlayOnPhone>.

The SOAP body contains a **PlayOnPhone** element.

The parts of the **PlayOnPhoneSoapIn** WSDL message are described in the following table.

Part name	Element/type	Description
parameters	PlayOnPhone (section 3.1.4.8.2.1)	Specifies the SOAP body information that is required to play a voice message or item on a telephone.

3.1.4.8.1.2 PlayOnPhoneSoapOut Message

The **PlayOnPhoneSoapOut WSDL message** specifies the response to a request to initiate the playing of an item or voice mail on a phone call.

The SOAP body contains a **PlayOnPhoneResponse** element.

```
<wsdl:message name="PlayOnPhoneSoapOut">
  <wsdl:part name="parameters" element="tns:PlayOnPhoneResponse" />
</wsdl:message>
```

The parts of the **PlayOnPhoneSoapOut** WSDL message are described in the following table.

Part name	Element/type	Description
parameters	PlayOnPhoneResponse (section 3.1.4.8.2.2)	Specifies a response to a PlayOnPhone operation request.

3.1.4.8.2 Elements

The following table lists the **XML schema** element definitions that are specific to this operation.

Element name	Description
PlayOnPhone	Specifies a request to play a voice message or item on a telephone.
PlayOnPhoneResponse	Specifies a response to a PlayOnPhone operation request.

3.1.4.8.2.1 m:PlayOnPhone Element

The **PlayOnPhone** element specifies a request to play a voice message or item on a telephone. This element **MUST** be present.

```
<xs:element name="PlayOnPhone">
  <xs:complexType>
    <xs:sequence>
      <xs:element name="entryId"
        type="s:string"
        maxOccurs="1"
        minOccurs="1"
      />
      <xs:element name="DialString"
        type="s:string"
        maxOccurs="1"
        minOccurs="1"
      />
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

The following table lists the child elements of the **PlayOnPhone** element.

Element name	Type	Description
entryId	s:string [XMLSCHEMA2]	Specifies the identifier of the voice mail or item to play. This element MUST be present. The value of the entryId element is encoded as a base64 string (as specified in [RFC2045] section 6.8).
DialString	s:string	Specifies the telephone number, as defined in [RFC3966] , to dial. This element MUST be present.

The EntryID that represents the item identifier that is used in the **entryId** element can be retrieved by using the Mailbox Search Web Service Protocol, as specified in [\[MS-OXWSSRCH\]](#). Specifically, the **FindItem** operation, as specified in [\[MS-OXWSSRCH\]](#) section 3.1.4.2, can return a **StoreEntryId** element, as specified in [\[MS-OXWSCORE\]](#) section 2.2.4.24, when the **FieldUri** attribute of the **FieldUri** element, as specified in [\[MS-OXWSCDATA\]](#) section 2.2.4.57, of the **AdditionalProperties** element, as specified in [\[MS-OXWSCDATA\]](#) section 2.2.4.44, has the value "item:StoreEntryId" in the request.

3.1.4.8.2.2 m:PlayOnPhoneResponse Element

The **PlayOnPhoneResponse** element specifies a response to a **PlayOnPhone** operation request. This element MUST be present if the **PlayOnPhone** operation request is successful.

```
<xs:element name="PlayOnPhoneResponse">
  <xs:complexType>
    <xs:sequence>
      <xs:element name="PlayOnPhoneResponse"
        type="s:string"
        maxOccurs="1"
        minOccurs="1"
      />
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

The following table lists the child elements of the **PlayOnPhoneResponse** element.

Element name	Type	Description
PlayOnPhoneResponse	s:string [XMLSCHEMA2]	Specifies the identifier of the phone call. This element MUST be present. This value MUST be used as the CallId element for subsequent Disconnect operation (section 3.1.4.1) and GetCallInfo operation (section 3.1.4.3) requests.

3.1.4.8.3 Complex Types

None.

3.1.4.8.4 Simple Types

None.

3.1.4.8.5 Attributes

None.

3.1.4.8.6 Groups

None.

3.1.4.8.7 Attribute Groups

None.

3.1.4.9 PlayOnPhoneGreeting Operation

The **PlayOnPhoneGreeting** operation initiates an outbound call to play and record a greeting over the telephone. The **PlayOnPhoneGreeting** operation uses the **endpoint** specified in [\[MS-OXDCLI\]](#) section 2.2.4.1.1.2.4.47.

The following is the **WSDL port type** specification for the operation.

```
<wsdl:operation name="PlayOnPhoneGreeting">
  <wsdl:input message="tns:PlayOnPhoneGreetingSoapIn" />
  <wsdl:output message="tns:PlayOnPhoneGreetingSoapOut" />
</wsdl:operation>
```

The following is the **WSDL binding** specification for the operation.

```
<wsdl:operation name="PlayOnPhoneGreeting">
  <soap:operation
soapAction="http://schemas.microsoft.com/exchange/services/2006/messages/PlayOnPhoneGreeting"
style="document"/>
  <wsdl:input>
    <soap:body use="literal"/>
  </wsdl:input>
  <wsdl:output>
    <soap:body use="literal"/>
  </wsdl:output>
</wsdl:operation>
```

If the operation succeeds, a **PlayOnPhoneGreetingResponse** element is returned.

If the operation fails, a **SOAP fault** response, as specified in [\[SOAP1.1\]](#), is returned that contains information about the failure.

A SOAP fault is returned if the **PlayOnPhoneGreeting** operation specifies an invalid dial string in the **DialString** element. The following **XML** specifies the SOAP fault response that SHOULD [<20>](#) be returned if an invalid **DialString** element is provided as an argument to a **PlayOnPhoneGreeting** operation request.

```
<?xml version="1.0" encoding="utf-8"?>
<s:Envelope xmlns:s="http://schemas.xmlsoap.org/soap/envelope/">
  <s:Body>
    <s:Fault>
      <faultcode
xmlns:a="http://schemas.microsoft.com/exchange/services/2006/errors">a:DialingRulesException<
/faultcode>
      <faultstring xml:lang="en-US">Dialing restrictions are preventing the phone number that
was entered from being dialed.</faultstring>
      <detail>
        <m:ExceptionType
xmlns:m="http://schemas.microsoft.com/exchange/services/2006/messages">DialingRulesException<
/m:ExceptionType>
      </detail>
    </s:Fault>
```

```
</s:Body>
</s:Envelope>
```

The **faultcode** element SHOULD [<21>](#) contain a text value of "a:DialingRulesException" if an invalid dial string is sent in the request.

The **faultstring** element SHOULD [<22>](#) contain a text value of "Dialing restrictions are preventing the phone number that was entered from being dialed." if an invalid dial string is sent in the request.

The contents of the SOAP fault **detail** element are specified by the **ExceptionType** element, as specified in section [2.2.3.1](#).

3.1.4.9.1 Messages

The following table lists the **WSDL message** definitions that are specific to this operation.

Message name	Description
PlayOnPhoneGreetingSoapIn	Specifies the request that initiates the playing of a user's voice mail greeting on a phone call.
PlayOnPhoneGreetingSoapOut	Specifies the response to a request to initiate the playing of a user's voice mail greeting on a phone call.

3.1.4.9.1.1 PlayOnPhoneGreetingSoapIn Message

The **PlayOnPhoneGreetingSoapIn WSDL message** specifies the **PlayOnPhoneGreeting** operation request.

```
<wsdl:message name="PlayOnPhoneGreetingSoapIn">
  <wsdl:part name="parameters" element="tns:PlayOnPhoneGreeting" />
</wsdl:message>
```

The **PlayOnPhoneGreetingSoapIn** WSDL message is the input message for the **SOAP action** <http://schemas.microsoft.com/exchange/services/2006/messages/PlayOnPhoneGreeting>.

The parts of the **PlayOnPhoneGreetingSoapIn** WSDL message are described in the following table.

Part name	Element/type	Description
parameters	tns:PlayOnPhoneGreeting (section 3.1.4.9.2.1)	Specifies the SOAP body information required to play a Unified Messaging greeting on a telephone.

3.1.4.9.1.2 PlayOnPhoneGreetingSoapOut Message

The **PlayOnPhoneGreetingSoapOut WSDL message** specifies the **PlayOnPhoneGreeting** operation response.

```
<wsdl:message name="PlayOnPhoneGreetingSoapOut">
  <wsdl:part name="parameters" element="tns:PlayOnPhoneGreetingResponse" />
</wsdl:message>
```

</wsdl:message>

The parts of the **PlayOnPhoneGreetingSoapOut** WSDL message are described in the following table.

Part name	Element/type	Description
parameters	tns:PlayOnPhoneGreetingResponse (section 3.1.4.9.2.2)	Specifies the SOAP body response to a PlayOnPhoneGreeting operation request.

3.1.4.9.2 Elements

The following table lists the **XML schema** element definitions that are specific to this operation.

Element name	Description
PlayOnPhoneGreeting	Specifies a request to play a Unified Messaging greeting on a telephone.
PlayOnPhoneGreetingResponse	Specifies a response to a PlayOnPhoneGreeting operation request.

3.1.4.9.2.1 m:PlayOnPhoneGreeting Element

The **PlayOnPhoneGreeting** element specifies a request to play a **Unified Messaging** greeting on a telephone. This element **MUST** be present.

```
<xs:element name="PlayOnPhoneGreeting">
  <xs:complexType>
    <xs:sequence>
      <xs:element name="GreetingType"
        type="UMGreetingType"
        maxOccurs="1"
        minOccurs="1"
      />
      <xs:element name="DialString"
        type="s:string"
        maxOccurs="1"
        minOccurs="1"
      />
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

The following table lists the child elements of the **PlayOnPhoneGreeting** element.

Element name	Type	Description
GreetingType	m:UMGreetingType (section 3.1.4.9.3.1)	Specifies the type of greeting to play. This element MUST be present.
DialString	s:string [XMLSCHEMA2]	Specifies the telephone number, as defined in [RFC3966], to dial. This element MUST be present.

3.1.4.9.2.2 m:PlayOnPhoneGreetingResponse Element

The **PlayOnPhoneGreetingResponse** element specifies a response to a **PlayOnPhoneGreeting** operation request. This element **MUST** be present if the **PlayOnPhoneGreeting** operation request is successful.

```
<xs:element name="PlayOnPhoneGreetingResponse">
  <xs:complexType>
    <xs:sequence>
      <xs:element name="PlayOnPhoneGreetingResponse"
        type="s:string"
        maxOccurs="1"
        minOccurs="1"
      />
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

The following table lists the child elements of the **PlayOnPhoneGreetingResponse** element.

Element name	Type	Description
PlayOnPhoneGreetingResponse	s:string [XMLSCHEMA2]	Specifies the phone call identifier. This element MUST be present. The text value of this element MUST be used as the text value of the CallId element for the Disconnect operation (section 3.1.4.1) and the GetCallInfo operation (section 3.1.4.3) request.

3.1.4.9.3 Simple Types

The following table lists the **XML schema** simple type definitions that are specific to this operation.

Simple type name	Description
UMGreetingType	Specifies the greeting to be played.

3.1.4.9.3.1 m:UMGreetingType Simple Type

The **UMGreetingType** simple type specifies the greeting to be played. The text values represented by this type are restricted to a **string** type, as specified in [\[XMLSCHEMA2\]](#) section 3.2.

```
<xs:simpleType name="UMGreetingType">
  <xs:restriction
    base="s:string"
  >
    <xs:enumeration
      value="NormalCustom"
    />
    <xs:enumeration
      value="OofCustom"
    />
  </xs:restriction>
</xs:simpleType>
```

The following enumeration values are defined by the **UMGreetingType** simple type.

Value	Meaning
NormalCustom	Specifies the default greeting to be played to callers when the user is not Out of Office (OOF) .
OfCustom	Specifies the greeting to be played when the user is OOF.

3.1.4.9.4 Attributes

None.

3.1.4.9.5 Groups

None.

3.1.4.9.6 Attribute Groups

None.

3.1.4.10 ResetPIN Operation

The **ResetPIN** operation creates a new **Unified Messaging** password for the user who is making the request. A successful request results in the server creating a Unified Messaging password. [<23>](#) The **ResetPIN** operation uses the endpoint specified in [\[MS-OXDCLI\]](#) section 2.2.4.1.1.2.4.47.

The following is the WSDL port type specification of the operation.

```
<wsdl:operation name="ResetPIN">
  <wsdl:input message="tns:ResetPINSoapIn" />
  <wsdl:output message="tns:ResetPINSoapOut" />
</wsdl:operation>
```

The following is the WSDL binding specification of the operation.

```
<wsdl:operation name="ResetPIN">
  <soap:operation
soapAction="http://schemas.microsoft.com/exchange/services/2006/messages/ResetPIN"
style="document"/>
  <wsdl:input>
    <soap:body use="literal"/>
  </wsdl:input>
  <wsdl:output>
    <soap:body use="literal"/>
  </wsdl:output>
</wsdl:operation>
```

If the operation is successful, a **ResetPINResponse** element is returned.

If the operation fails, a **SOAP fault** response, as specified in [\[SOAP1.1\]](#), is returned that contains information about the failure. A SOAP fault MUST be returned if the **ResetPINSoapIn** message

request **XML** is malformed. The structure of a SOAP fault for a malformed request is specified in section [2.2.2.1](#).

3.1.4.10.1 Messages

The following table lists the **WSDL message** definitions that are specific to this operation.

Message name	Description
ResetPINSoapIn	Specifies the request that initiates an attempt to reset a user's Unified Messaging PIN.
ResetPINSoapOut	Specifies the response to a request to reset a user's Unified Messaging PIN.

3.1.4.10.1.1 ResetPINSoapIn Message

The **ResetPINSoapIn WSDL message** specifies the **ResetPIN** operation request.

```
<wsdl:message name="ResetPINSoapIn">
  <wsdl:part name="parameters" element="tns:ResetPIN" />
</wsdl:message>
```

The **ResetPINSoapIn** WSDL message is the input message for the SOAP action <http://schemas.microsoft.com/exchange/services/2006/messages/ResetPIN>.

The parts of the **ResetPINSoapIn** WSDL message are described in the following table.

Part name	Element/type	Description
parameters	tns:ResetPIN (section 3.1.4.10.2.1)	Specifies the information that is required to reset a user's Unified Messaging password.

3.1.4.10.1.2 ResetPINSoapOut Message

The **ResetPINSoapOut WSDL message** specifies the **ResetPIN** operation response.

```
<wsdl:message name="ResetPINSoapOut">
  <wsdl:part name="parameters" element="tns:ResetPINResponse" />
</wsdl:message>
```

The parts of the **ResetPINSoapOut** WSDL message are described in the following table.

Part name	Element/type	Description
parameters	tns:ResetPINResponse (section 3.1.4.10.2.2)	Specifies a response to a ResetPIN operation request.

3.1.4.10.2 Elements

The following table lists the **XML schema** element definitions that are specific to this operation.

Element name	Description
ResetPIN	Specifies a request to reset a user's Unified Messaging password.
ResetPINResponse	Specifies a response to a ResetPIN operation request.

3.1.4.10.2.1 m:ResetPIN Element

The **ResetPIN** element specifies a request to reset a user's **Unified Messaging** password. This element **MUST** be present.

```
<xs:element name="ResetPIN">
  <xs:complexType />
</xs:element>
```

3.1.4.10.2.2 m:ResetPINResponse Element

The **ResetPINResponse** element specifies a response to a **ResetPIN** operation request. This element **MUST** be present.

```
<xs:element name="ResetPINResponse">
  <xs:complexType />
</xs:element>
```

3.1.4.10.3 Complex Types

None.

3.1.4.10.4 Simple Types

None.

3.1.4.10.5 Attributes

None.

3.1.4.10.6 Groups

None.

3.1.4.10.7 Attribute Groups

None.

3.1.4.11 SetMissedCallNotificationEnabled Operation

The **SetMissedCallNotificationEnabled** operation sets a value that indicates whether missed call notifications are enabled for the user who is making the request. The **SetMissedCallNotificationEnabled** operation uses the **endpoint** specified in [\[MS-OXDCLI\]](#) section 2.2.4.1.1.2.4.47.

The following is the **WSDL port type** specification of the operation.

```

<wsdl:operation name="SetMissedCallNotificationEnabled">
  <wsdl:input message="tns:SetMissedCallNotificationEnabledSoapIn" />
  <wsdl:output message="tns:SetMissedCallNotificationEnabledSoapOut" />
</wsdl:operation>

```

The following is the **WSDL** binding specification of the operation.

```

<wsdl:operation name="SetMissedCallNotificationEnabled">
  <soap:operation
    soapAction="http://schemas.microsoft.com/exchange/services/2006/messages/SetMissedCallNotific
    ationEnabled" style="document"/>
  <wsdl:input>
    <soap:body use="literal"/>
  </wsdl:input>
  <wsdl:output>
    <soap:body use="literal"/>
  </wsdl:output>
</wsdl:operation>

```

If the operation succeeds, a **SetMissedCallNotificationEnabledResponse** element is returned.

If the operation fails, a **SOAP fault** response, as specified in [\[SOAP1.1\]](#), is returned that contains information about the failure. A SOAP fault MUST be returned if the **SetMissedCallNotificationEnabledSoapIn** request **XML** is malformed. The structure of a SOAP fault for a malformed request is specified in section [2.2.2.1](#).

3.1.4.11.1 Messages

The following table lists the **WSDL message** definitions that are specific to this operation.

Message name	Description
SetMissedCallNotificationEnabledSoapIn	Specifies the request that initiates an attempt to change a setting that allows missed call notifications to be sent.
SetMissedCallNotificationEnabledSoapOut	Specifies the response to a request to initiate a change to a setting that allows missed call notifications to be sent.

3.1.4.11.1.1 SetMissedCallNotificationEnabledSoapIn Message

The **SetMissedCallNotificationEnabledSoapIn WSDL message** specifies the **SetMissedCallNotificationEnabled** operation request.

```

<wsdl:message name="SetMissedCallNotificationEnabledSoapIn">
  <wsdl:part name="parameters" element="tns:SetMissedCallNotificationEnabled" />
</wsdl:message>

```

The **SetMissedCallNotificationEnabledSoapIn** WSDL message is the input message for the SOAP action <http://schemas.microsoft.com/exchange/services/2006/messages/SetMissedCallNotificationEnabled>.

The parts of the **SetMissedCallNotificationEnabledSoapIn** WSDL message are listed in the following table.

Part name	Element/type	Description
parameters	tns:SetMissedCallNotificationEnabled (section 3.1.4.11.2.1)	Specifies the SOAP body information that is required to set whether missed call notifications are enabled for the user who is making the request.

3.1.4.11.1.2 SetMissedCallNotificationEnabledSoapOut Message

The **SetMissedCallNotificationEnabledSoapOut WSDL message** specifies the **SetMissedCallNotificationEnabled** operation response.

```
<wsdl:message name="SetMissedCallNotificationEnabledSoapOut">
  <wsdl:part name="parameters" element="tns:SetMissedCallNotificationEnabledResponse" />
</wsdl:message>
```

The parts of the **SetMissedCallNotificationEnabledSoapOut** WSDL message are described in the following table.

Part name	Element/type	Description
parameters	tns:SetMissedCallNotificationEnabledResponse (section 3.1.4.11.2.2)	Specifies a response to a SetMissedCallNotificationEnabled operation request.

3.1.4.11.2 Elements

The following table lists the **XML schema** element definitions that are specific to this operation.

Element name	Description
SetMissedCallNotificationEnabled	Specifies the contents of a request to set whether missed call notifications are enabled for the user who is making the request.
SetMissedCallNotificationEnabledResponse	Specifies a response to a successful SetMissedCallNotificationEnabled operation request.

3.1.4.11.2.1 m:SetMissedCallNotificationEnabled Element

The **SetMissedCallNotificationEnabled** element specifies the contents of a request to set whether missed call notifications are enabled for the user who is making the request. This element **MUST** be present.

```
<xs:element name="SetMissedCallNotificationEnabled">
  <xs:complexType>
    <xs:sequence>
      <xs:element name="status"
        type="s:boolean"
        maxOccurs="1"
        minOccurs="1"
      />
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

```

    </xs:sequence>
  </xs:complexType>
</xs:element>

```

The following table lists the child elements of the **SetMissedCallNotificationEnabled** element.

Element name	Type	Description
status	s:boolean [XMLSCHEMA2]	Specifies a value that indicates whether to enable or disable missed call notifications for the user who is making the request. This element MUST be present.

3.1.4.11.2.2 m:SetMissedCallNotificationEnabledResponse Element

The **SetMissedCallNotificationEnabledResponse** element specifies a response to a successful **SetMissedCallNotificationEnabled** operation request. This element **MUST** be present if the **SetMissedCallNotificationEnabled** operation request is successful.

```

<xs:element name="SetMissedCallNotificationEnabledResponse">
  <xs:complexType />
</xs:element>

```

3.1.4.11.3 Complex Types

None.

3.1.4.11.4 Simple Types

None.

3.1.4.11.5 Attributes

None.

3.1.4.11.6 Groups

None.

3.1.4.11.7 Attribute Groups

None.

3.1.4.12 SetOofStatus Operation

The **SetOofStatus** operation sets a value that indicates whether the **Out of Office (OOF)** greeting is played to callers who reach the user's voice mail. The **SetOofStatus** operation uses the **endpoint** specified in [\[MS-OXDSCLI\]](#) section 2.2.4.1.1.2.4.47.

The following is the **WSDL port type** specification of the operation.

```

<wsdl:operation name="SetOofStatus">

```

```

    <wsdl:input message="tns:SetOofStatusSoapIn" />
    <wsdl:output message="tns:SetOofStatusSoapOut" />
  </wsdl:operation>

```

The following is the **WSDL** binding specification of the operation.

```

<wsdl:operation name="SetOofStatus">
  <soap:operation
    soapAction="http://schemas.microsoft.com/exchange/services/2006/messages/SetOofStatus"
    style="document"/>
  <wsdl:input>
    <soap:body use="literal"/>
  </wsdl:input>
  <wsdl:output>
    <soap:body use="literal"/>
  </wsdl:output>
</wsdl:operation>

```

If the operation succeeds, a **SetOofStatusResponse** element is returned.

If the operation fails, a **SOAP fault** response, as specified in [\[SOAP1.1\]](#), is returned that contains information about the failure. A SOAP fault MUST be returned if the **SetOofStatusSoapIn** request **XML** is malformed. The structure of a SOAP fault for malformed request is specified in section [2.2.2.1](#).

3.1.4.12.1 Messages

The following table lists the **WSDL message** definitions that are specific to this operation.

Message name	Description
SetOofStatusSoapIn	Specifies the request that sets the Out of Office (OOF) status for the Unified Messaging feature.
SetOofStatusSoapOut	Specifies the response to a request to set the OOF status.

3.1.4.12.1.1 SetOofStatusSoapIn Message

The **SetOofStatusSoapIn WSDL message** specifies the **SetOofStatus** operation request.

```

<wsdl:message name="SetOofStatusSoapIn">
  <wsdl:part name="parameters" element="tns:SetOofStatus" />
</wsdl:message>

```

The **SetOofStatusSoapIn** WSDL message is the input message for the SOAP action <http://schemas.microsoft.com/exchange/services/2006/messages/SetOofStatus>.

The parts of the **SetOofStatusSoapIn** WSDL message are described in the following table.

Part name	Element/type	Description
Parameters	tns:SetOofStatus (section 3.1.4.12.2.1)	Specifies the information that is required to set whether the OOF greeting is enabled for the user who is making the request.

3.1.4.12.1.2 SetOofStatusSoapOut Message

The **SetOofStatusSoapOut WSDL message** specifies the **SetOofStatus** operation response.

```
<wsdl:message name="SetOofStatusSoapOut">
  <wsdl:part name="parameters" element="tns:SetOofStatusResponse" />
</wsdl:message>
```

The parts of the **SetOofStatusSoapOut** WSDL message are described in the following table.

Part name	Element/type	Description
parameters	tns:SetOofStatusResponse (section 3.1.4.12.2.2)	Specifies a response to a SetOofStatus operation request.

3.1.4.12.2 Elements

The following table lists the **XML schema** element definitions that are specific to this operation.

Element name	Description
SetOofStatus	Specifies the contents of a request to set whether the OOF greeting is enabled for the user who is making the request.
SetOofStatusResponse	Specifies a response to a SetOofStatus operation request.

3.1.4.12.2.1 m:SetOofStatus Element

The **SetOofStatus** element specifies the contents of a request to set whether the **OOF** greeting is enabled for the user who is making the request. This element **MUST** be present.

```
<xs:element name="SetOofStatus">
  <xs:complexType>
    <xs:sequence>
      <xs:element name="status"
        type="s:boolean"
        maxOccurs="1"
        minOccurs="1"
      />
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

The following table lists the child elements of the **SetOofStatus** element.

Element name	Type	Description
status	s:boolean [XMLSCHEMA2]	Specifies a value that indicates whether the OOF greeting is played to callers. A text value of "true" indicates that the OOF greeting is played to callers. This element MUST be present.

3.1.4.12.2 m:SetOofStatusResponse Element

The **SetOofStatusResponse** element specifies a response to a **SetOofStatus** operation request. This element **MUST** be present in a response to a successful **SetOofStatus** operation request.

```
<xs:element name="SetOofStatusResponse">
  <xs:complexType />
</xs:element>
```

3.1.4.12.3 Complex Types

None.

3.1.4.12.4 Simple Types

None.

3.1.4.12.5 Attributes

None.

3.1.4.12.6 Groups

None.

3.1.4.12.7 Attribute Groups

None.

3.1.4.13 SetPlayOnPhoneDialString Operation

The **SetPlayOnPhoneDialString** operation sets the default telephone number that is used in the **PlayOnPhone** operation, as specified in section [3.1.4.8](#), and in the **PlayOnPhoneGreeting** operation, as specified in section [3.1.4.9](#). The **SetPlayOnPhoneDialString** operation uses the **endpoint** specified in [\[MS-OXDCLI\]](#) section 2.2.4.1.1.2.4.47.

The following is the **WSDL port type** specification of the operation.

```
<wsdl:operation name="SetPlayOnPhoneDialString">
  <wsdl:input message="tns:SetPlayOnPhoneDialStringSoapIn" />
  <wsdl:output message="tns:SetPlayOnPhoneDialStringSoapOut" />
</wsdl:operation>
```

The following is the **WSDL** binding specification of the operation.

```
<wsdl:operation name="SetPlayOnPhoneDialString">
  <soap:operation
    soapAction="http://schemas.microsoft.com/exchange/services/2006/messages/SetPlayOnPhoneDialString"
    style="document"/>
  <wsdl:input>
    <soap:body use="literal"/>
  </wsdl:input>
  <wsdl:output>
    <soap:body use="literal"/>
  </wsdl:output>
</wsdl:operation>
```


If the operation succeeds, a **SetPlayOnPhoneDialStringResponse** element is returned.

If the operation fails, a **SOAP fault** response, as specified in [\[SOAP1.1\]](#), is returned that contains information about the failure. A SOAP fault MUST be returned if the **SetPlayOnPhoneDialStringSoapIn** request **XML** is malformed. The structure of a SOAP fault for a malformed request is specified in section [2.2.2.1](#).

3.1.4.13.1 Messages

The following table lists the **WSDL message** definitions that are specific to this operation.

Message name	Description
SetPlayOnPhoneDialStringSoapIn	Specifies the request that attempts to set the play on phone dial string.
SetPlayOnPhoneDialStringSoapOut	Specifies the response to a request to set the play on phone dial string.

3.1.4.13.1.1 SetPlayOnPhoneDialStringSoapIn Message

The **SetPlayOnPhoneDialStringSoapIn** **WSDL message** specifies the **SetPlayOnPhoneDialString** operation request.

```
<wsdl:message name="SetPlayOnPhoneDialStringSoapIn">
  <wsdl:part name="parameters" element="tns:SetPlayOnPhoneDialString"/>
</wsdl:message>
```

The **SetPlayOnPhoneDialStringSoapIn** WSDL message is the input message for the SOAP action <http://schemas.microsoft.com/exchange/services/2006/messages/SetPlayOnPhoneDialString>. The parts of the **SetPlayOnPhoneDialStringSoapIn** WSDL message are described in the following table.

Part name	Element/type	Description
parameters	tns: SetPlayOnPhoneDialString (section 3.1.4.13.2.1)	Specifies the information required to set the default telephone number to use in PlayOnPhone and PlayOnPhoneGreeting operation requests.

3.1.4.13.1.2 SetPlayOnPhoneDialStringSoapOut Message

The **SetPlayOnPhoneDialStringSoapOut** **WSDL message** specifies the **SetPlayOnPhoneDialString** operation response.

```
<wsdl:message name="SetPlayOnPhoneDialStringSoapOut">
  <wsdl:part name="parameters" element="tns:SetPlayOnPhoneDialStringResponse" />
</wsdl:message>
```

The parts of the **SetPlayOnPhoneDialStringSoapOut** WSDL message are described in the following table.

Part name	Element/type	Description
parameters	tns:SetPlayOnPhoneDialStringResponse (section 3.1.4.13.2.2)	Specifies a response to a SetPlayOnPhoneDialString operation

Part name	Element/type	Description
		request.

3.1.4.13.2 Elements

The following table lists **XML schema** element definitions that are specific to this operation.

Element name	Description
SetPlayOnPhoneDialString	Specifies a request to store the default telephone number to use in PlayOnPhone and PlayOnPhoneGreeting operations.
SetPlayOnPhoneDialStringResponse	Specifies a response to a SetPlayOnPhoneDialString operation request.

3.1.4.13.2.1 m:SetPlayOnPhoneDialString Element

The **SetPlayOnPhoneDialString** element specifies a request to store the default telephone number to use in **PlayOnPhone** operation, as specified in section [3.1.4.8](#), and **PlayOnPhoneGreeting** operation, as specified in section [3.1.4.9](#), requests. This element **MUST** be present.

```
<xs:element name="SetPlayOnPhoneDialString">
  <xs:complexType>
    <xs:sequence>
      <xs:element name="dialString"
        type="s:string"
        maxOccurs="1"
        minOccurs="1"
      />
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

The following table lists the child elements of the **SetPlayOnPhoneDialString** element.

Element name	Type	Description
dialString	s:string [XMLSCHEMA2]	Specifies a telephone number, as defined in [RFC3966] , that is used to set the default telephone number to use for PlayOnPhone and PlayOnPhoneGreeting operations. This element MUST be present.

3.1.4.13.2.2 m:SetPlayOnPhoneDialStringResponse Element

The **SetPlayOnPhoneDialStringResponse** element specifies a response to a **SetPlayOnPhoneDialString** operation request. This element **MUST** be present.

```
<xs:element name="SetPlayOnPhoneDialStringResponse">
  <xs:complexType />
</xs:element>
```

3.1.4.13.3 Complex Types

None.

3.1.4.13.4 Simple Types

None.

3.1.4.13.5 Attributes

None.

3.1.4.13.6 Groups

None.

3.1.4.13.7 Attribute Groups

None.

3.1.4.14 SetTelephoneAccessFolderEmail Operation

The **SetTelephoneAccessFolderEmail** operation sets the mailbox folder from which the **Unified Messaging** server provides access to the user over the telephone. The **SetTelephoneAccessFolderEmail** operation uses the **endpoint** specified in [\[MS-OXDCLI\]](#) section 2.2.4.1.1.2.4.47.

The following is the **WSDL port type** specification of the operation.

```
<wsdl:operation name="SetTelephoneAccessFolderEmail">
  <wsdl:input message="tns:SetTelephoneAccessFolderEmailSoapIn" />
  <wsdl:output message="tns:SetTelephoneAccessFolderEmailSoapOut" />
</wsdl:operation>
```

The following is the **WSDL binding** specification of the operation.

```
<wsdl:operation name="SetTelephoneAccessFolderEmail">
  <soap:operation
soapAction="http://schemas.microsoft.com/exchange/services/2006/messages/SetTelephoneAccessFo
lderEmail" style="document"/>
  <wsdl:input>
    <soap:body use="literal"/>
  </wsdl:input>
  <wsdl:output>
    <soap:body use="literal"/>
  </wsdl:output>
</wsdl:operation>
```

If the operation succeeds, a **SetTelephoneAccessFolderEmailResponse** element is returned.

If the operation fails, a **SOAP fault** response, as specified in [\[SOAP1.1\]](#), is returned that contains information about the failure. A SOAP fault **MUST** be returned if the **SetTelephoneAccessFolderEmailSoapIn** request **XML** is malformed. The structure of a SOAP fault for a malformed request is specified section [2.2.2.1](#).

3.1.4.14.1 Messages

The following table lists the **WSDL message** definitions that are specific to this operation.

Message name	Description
SetTelephoneAccessFolderEmailSoapIn	Specifies the request that sets the telephone access folder.
SetTelephoneAccessFolderEmailSoapOut	Specifies the response to a request that sets the telephone access folder.

3.1.4.14.1.1 SetTelephoneAccessFolderEmailSoapIn Message

The **SetTelephoneAccessFolderEmailSoapIn WSDL message** specifies the **SetTelephoneAccessFolderEmail** operation request.

```
<wsdl:message name="SetTelephoneAccessFolderEmailSoapIn">
  <wsdl:part name="parameters" element="tns:SetTelephoneAccessFolderEmail" />
</wsdl:message>
```

The **SetTelephoneAccessFolderEmailSoapIn** WSDL message is the input message for the SOAP action

<http://schemas.microsoft.com/exchange/services/2006/messages/SetTelephoneAccessFolderEmail>.

The parts of the **SetTelephoneAccessFolderEmailSoapIn** WSDL message are described in the following table.

Part name	Element/type	Description
parameters	tns:SetTelephoneAccessFolderEmail (section 3.1.4.14.2.1)	Specifies the information that is required to set the folder that the Unified Messaging server will use to play e-mail messages over the telephone.

3.1.4.14.1.2 SetTelephoneAccessFolderEmailSoapOut Message

The **SetTelephoneAccessFolderEmailSoapOut WSDL message** specifies the **SetTelephoneAccessFolderEmail** operation response.

```
<wsdl:message name="SetTelephoneAccessFolderEmailSoapOut">
  <wsdl:part name="parameters" element="tns:SetTelephoneAccessFolderEmailResponse" />
</wsdl:message>
```

The parts of the **SetTelephoneAccessFolderEmailSoapOut** WSDL message are described in the following table.

Part name	Element/type	Description
parameters	tns:SetTelephoneAccessFolderEmailResponse (section 3.1.4.14.2.2)	Specifies a response to a SetTelephoneAccessFolderEmail operation request.

3.1.4.14.2 Elements

The following table lists the **XML schema** element definitions that are specific to this operation.

Element name	Description
SetTelephoneAccessFolderEmail	Specifies a request to set the folder that the Unified Messaging server will use to play items over the telephone.
SetTelephoneAccessFolderEmailResponse	Specifies a response to a SetTelephoneAccessFolderEmail operation request.

3.1.4.14.2.1 m:SetTelephoneAccessFolderEmail Element

The **SetTelephoneAccessFolderEmail** element specifies a request to set the folder that the **Unified Messaging** server will use to play items over the telephone. This element **MUST** be present.

```
<xs:element name="SetTelephoneAccessFolderEmail">
  <xs:complexType>
    <xs:sequence>
      <xs:element name="base64FolderId"
        type="s:string"
        maxOccurs="1"
        minOccurs="1"
      />
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

The following table lists the child elements of the **SetTelephoneAccessFolderEmail** element.

Element name	Type	Description
base64FolderId	s:string [XMLSCHEMA2]	Specifies the folder identifier of the target folder that will have items played over the phone. The folder identifier is an EntryID that is encoded as a base64 string, as specified in [RFC2045] section 6.8. This element MUST be present.

The EntryID that represents the folder identifier that is used in the **base64FolderId** element can be retrieved by using the Mailbox Search Web Service Protocol, as specified in [\[MS-OXWSSRCH\]](#), and the Convert Item Identifier Web Service Protocol, as specified in [\[MS-OXWSCVTID\]](#). Specifically, the **FindFolder** operation, as specified in [\[MS-OXWSSRCH\]](#) section 3.1.4.1, can return a folder identifier that can then be converted into an EntryID by using the **ConvertId** operation, as specified in [\[MS-OXWSCVTID\]](#) section 3.1.4.1.

3.1.4.14.2.2 m:SetTelephoneAccessFolderEmailResponse Element

The **SetTelephoneAccessFolderEmailResponse** element specifies a response to a **SetTelephoneAccessFolderEmail** operation request. This element **MUST** be present in response to a successful request.

```
<xs:element name="SetTelephoneAccessFolderEmailResponse">
  <xs:complexType />
</xs:element>
```

3.1.4.14.3 Complex Types

None.

3.1.4.14.4 Simple Types

None.

3.1.4.14.5 Attributes

None.

3.1.4.14.6 Groups

None.

3.1.4.14.7 Attribute Groups

None.

3.1.5 Timer Events

The **Call_timeout** timer, as specified in section [3.1.2](#), causes the state machine to go from the **Disconnected** state to **Idle** state after the timer has expired. For details about the state model, see section [3.1.1.1](#).

3.1.6 Other Local Events

None.

3.2 UMWebServiceSoap Client Details

The client side of this protocol includes no operations. For details about the server-side operations, see section [3.1](#).

3.2.1 Abstract Data Model

All state information is maintained by the server side of this protocol, as specified in section [3.1.1](#).

3.2.2 Timers

None.

3.2.3 Initialization

The client requests for the **PlayOnPhone** operation, as specified in section [3.1.4.8](#), **PlayOnPhone2** operation, as specified in section [3.1.4.7](#), and **PlayOnPhoneGreeting** operation, as specified in section [3.1.4.9](#), pass arguments that initialize the server state machine, as specified in section [3.1.1.1](#). Specifically, the required item identifiers and dial strings MUST be sent to the server so that it can initialize a phone call and the server state machine. The **PlayOnPhone** operation MUST send the item identifier in the **entryId** element and the phone number in the **DialString** element, as specified in section [3.1.4.8.2.1](#), which is used by the server to initialize the server state machine. The **PlayOnPhone2** operation MUST send the item identifier in the **ItemId** element and the phone number in the **DialString** element, as specified in section [3.1.4.7.2.1](#), which is used by the server to initialize the server state machine. The **PlayOnPhoneGreeting** operation MUST send the greeting

type in the **GreetingType** element and the phone number in the **DialString** element, as specified in section [3.1.4.9.2.1](#), which is used by the server to initialize the server state machine.

3.2.4 Message Processing Events and Sequencing Rules

Three client protocol interaction sequences, which use context handles and a specific order of operations, are required for the stateful parts of this protocol to operate. Although the client does not maintain state, requests that are sent by the client are used by the server to initiate state that is maintained on the server, as specified in section [3.1.1.1](#). Actions by the clients can also affect and get server state.

The **PlayOnPhone** operation, as specified in section [3.1.4.8](#), initiates the playing of an item or voice mail on a phone by providing the item identifier contained in the **entryId** element, as specified in section [3.1.4.8.2.1](#), and target phone number contained in the **DialString** element, as specified in section [3.1.4.8.2.1](#), arguments in the request. The **PlayOnPhone** operation response contains a phone call context handle that MUST be used by subsequent requests made by the **GetCallInfo** operation, as specified in section [3.1.4.3](#), and the **Disconnect** operation, as specified in section [3.1.4.1](#). The phone call context handle that is returned by the **PlayOnPhone** operation is specified by the text value of the **PlayOnPhoneResponse** child element of the **PlayOnPhoneResponse** element, as specified in section [3.1.4.8.2.2](#).

The **GetCallInfo** operation MUST use the phone call context handle provided by the **PlayOnPhoneResponse** element of the **PlayOnPhone** operation. The **GetCallInfo** operation can then be used to create a request to get the target phone call's status.

The **Disconnect** operation MUST use the phone call context handle provided by the **PlayOnPhoneResponse** element of the **PlayOnPhone** operation. The **Disconnect** operation can then be used to create a request to disconnect the target phone call.

The **PlayOnPhone2** operation, as specified in section [3.1.4.7](#), initiates playing an item or voice mail on a phone by providing the item identifier contained in the **ItemId** element, as specified in section [3.1.4.7.2.1](#), and target phone number contained in the **DialString** element, as specified in section [3.1.4.7.2.1](#). The **PlayOnPhone2** operation response contains a phone call context handle that MUST be used by subsequent requests made by the **GetPhoneCallInformation** operation, as specified in section [3.1.4.4](#), and the **DisconnectPhoneCall** operation, as specified in section [3.1.4.2](#). The phone call context handle that is returned by the **PlayOnPhone2** operation is specified by the **Id** attribute value of the **PhoneCallId** element, as specified in section [3.1.4.7.2.4](#).

The **GetPhoneCallInformation** operation MUST use the phone call context handle provided by the **Id** attribute value of the **PhoneCallId** element of the **PlayOnPhone2** operation. The **GetPhoneCallInformation** operation can then be used to create a request to get the target phone call's status.

The **DisconnectPhoneCall** operation MUST use the phone call context handle provided by the **Id** attribute value of the **PhoneCallId** element of the **PlayOnPhone2** operation. The **DisconnectPhoneCall** operation can then be used to create a request to disconnect the target phone call.

The **PlayOnPhoneGreeting** operation, as specified in section [3.1.4.9](#), initiates the playing of a greeting on a phone by providing the greeting type contained in the **GreetingType** element, as specified by section [3.1.4.9.2.1](#), and the target phone number contained in the **DialString** element, as specified by section [3.1.4.9.2.1](#). The **PlayOnPhoneGreeting** operation response contains a phone call context handle that MUST be used by subsequent requests made by the **GetCallInfo** operation and the **Disconnect** operation. The phone call context handle returned by the **PlayOnPhoneGreeting** operation is specified by the text value of the **PlayOnPhoneGreetingResponse** child element of the **PlayOnPhoneGreetingResponse** element, as specified in section [3.1.4.9.2.2](#).

The **GetCallInfo** operation MUST use the phone call context handle provided by **PlayOnPhoneGreetingResponse** element of the **PlayOnPhoneGreetingResponse** operation. The **GetCallInfo** operation can then be used to create a request to get the target phone call's status.

The **Disconnect** operation MUST use the phone call context handle provided by **PlayOnPhoneGreetingResponse** element of the **PlayOnPhoneGreetingResponse** operation. The **Disconnect** operation can then be used to create a request to disconnect the target phone call.

3.2.5 Timer Events

None.

3.2.6 Other Local Events

None.

4 Protocol Examples

4.1 Disconnect Operation

The following example shows how to form a request to disconnect a call that was previously initiated by a **PlayOnPhone** or **PlayOnPhoneGreeting** operation.

Before the **Disconnect** operation can be initiated, the following steps have to be performed:

1. Initiate a play-on-phone call by sending either a **PlayOnPhone** or **PlayOnPhoneGreeting** operation request. For more information, see the examples in sections [4.7](#) and [4.9](#).
2. Save the **PlayOnPhoneResponse** element value in a temporary variable. This value is the telephone identifier that will be used when making the **Disconnect** operation request.

The following is the request to disconnect a call.

```
<?xml version="1.0" encoding="utf-8"?>
<soap:Envelope xmlns:soap="http://schemas.xmlsoap.org/soap/envelope/">
  <soap:Body>
    <Disconnect xmlns="http://schemas.microsoft.com/exchange/services/2006/messages">
      <CallId>NDEzYjEzNmMtZTE2Zi00NTJlLWI3YzctNDhkMTE3MDE3YjlmQGRmLWV1bS0wMS5leGNoYW5nZS5jb3JwLmlpY
      3Jvc29mdC5jb20=</CallId>
    </Disconnect>
  </soap:Body>
</soap:Envelope>
```

The following is the response to a request to disconnect a call.

```
<?xml version="1.0" encoding="utf-8" ?>
<soap:Envelope xmlns:soap="http://schemas.xmlsoap.org/soap/envelope/"
  xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
  xmlns:xsd="http://www.w3.org/2001/XMLSchema">
  <soap:Body>
    <DisconnectResponse xmlns="http://schemas.microsoft.com/exchange/services/2006/messages"
    />
  </soap:Body>
</soap:Envelope>
```

4.2 DisconnectPhoneCall Operation

The following example shows how to form a request to disconnect a call that was previously initiated by the **PlayOnPhone2** operation.

Before the **DisconnectPhoneCall** operation can be initiated, the following steps have to be performed:

1. Initiate a play-on-phone call by sending a **PlayOnPhone2** request. For more information, see the example in section [4.8](#).
2. Save the phone call identifier that is returned in the response from the **PhoneCallId** element.

The following is the request to disconnect a call.

```
<?xml version="1.0" encoding="utf-8"?>
<soap:Envelope xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
  xmlns:m="http://schemas.microsoft.com/exchange/services/2006/messages">
```

```

        xmlns:t="http://schemas.microsoft.com/exchange/services/2006/types"
        xmlns:soap="http://schemas.xmlsoap.org/soap/envelope/"
        xmlns:xs="http://www.w3.org/2001/XMLSchema">
    <soap:Header>
      <t:RequestServerVersion Version="Exchange2013" />
    </soap:Header>
    <soap:Body>
      <m:DisconnectPhoneCall>
        <m:PhoneCallId Id="OWV14NWb3N29t"/>
      </m:DisconnectPhoneCall>
    </soap:Body>
  </soap:Envelope>

```

The following is the response to a request to disconnect a call.

```

<?xml version="1.0" encoding="utf-8"?>
<s:Envelope xmlns:s="http://schemas.xmlsoap.org/soap/envelope/">
  <s:Header>
    <h:ServerVersionInfo MajorVersion="14"
      MinorVersion="0"
      MajorBuildNumber="639"
      MinorBuildNumber="20"
      Version="Exchange2013"
      xmlns:h="http://schemas.microsoft.com/exchange/services/2006/types"
      xmlns="http://schemas.microsoft.com/exchange/services/2006/types"
      xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
      xmlns:xsd="http://www.w3.org/2001/XMLSchema"/>
  </s:Header>
  <s:Body xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
    xmlns:xsd="http://www.w3.org/2001/XMLSchema">
    <DisconnectPhoneCallResponse ResponseClass="Success"

xmlns="http://schemas.microsoft.com/exchange/services/2006/messages">
      <ResponseCode>NoError</ResponseCode>
    </DisconnectPhoneCallResponse>
  </s:Body>
</s:Envelope>

```

4.3 GetCallInfo Operation

The following example shows how to get information about a specified outbound call that was previously initiated through a **PlayOnPhone** or **PlayOnPhoneGreeting** operation.

Before the **GetCallInfo** operation can be initiated, the following steps have to be performed:

1. Initiate a play-on-phone call by sending either a **PlayOnPhone** or **PlayOnPhoneGreeting** request. For more information, see the examples in sections [4.7](#) and [4.9](#).
2. Save the **PlayOnPhoneResponse** element text value in a temporary variable. This value is the text value of the **CallId** element that will be used when making the **GetCallInfo** request.

The following is the request to get information about an outbound call.

```

<?xml version="1.0" encoding="utf-8"?>
<soap:Envelope xmlns:soap="http://schemas.xmlsoap.org/soap/envelope/">
  <soap:Body>
    <GetCallInfo xmlns="http://schemas.microsoft.com/exchange/services/2006/messages">
      <CallId>NDEzYjEzNmMtZTE2Zi00NTJlLWI3YzctNDhkMTE3MDE3YjlmQGRmLWV1bS0wMS5leGNoYW5nZS5jb3JwLm1pY
      3Jvc29mdC5jb20=</CallId>
    </GetCallInfo>
  </soap:Body>
</soap:Envelope>

```

The following is the response to the request to get information about an outbound call.

```
<?xml version="1.0" encoding="utf-8" ?>
<soap:Envelope xmlns:soap="http://schemas.xmlsoap.org/soap/envelope/"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:xsd="http://www.w3.org/2001/XMLSchema">
  <soap:Body>
    <GetCallInfoResponse
xmlns="http://schemas.microsoft.com/exchange/services/2006/messages">
      <GetCallInfoResponse>
        <CallState>Connected</CallState>
        <EventCause>None</EventCause>
      </GetCallInfoResponse>
    </GetCallInfoResponse>
  </soap:Body>
</soap:Envelope>
```

4.4 GetPhoneCallInformation Operation

The following example shows how to get phone call status information about a specified outbound call that was initiated through the **PlayOnPhone2** operation.

Before the **GetPhoneCallInformation** operation can be initiated, the following steps have to be performed:

1. Initiate a play-on-phone call by sending a **PlayOnPhone2** operation request. For more information, see the example in section [4.8](#).
2. Save the phone call identifier that is returned in the response from the **PhoneCallId** element.

The following is the request to get status information about an outbound call.

```
<?xml version="1.0" encoding="utf-8"?>
<soap:Envelope xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:m="http://schemas.microsoft.com/exchange/services/2006/messages"
xmlns:t="http://schemas.microsoft.com/exchange/services/2006/types"
xmlns:soap="http://schemas.xmlsoap.org/soap/envelope/"
xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <soap:Header>
    <t:RequestServerVersion Version="Exchange2013" />
  </soap:Header>
  <soap:Body>
    <m:GetPhoneCallInformation>
      <m:PhoneCallId Id="NDDY5uY29y9t"/>
    </m:GetPhoneCallInformation>
  </soap:Body>
</soap:Envelope>
```

The following is the response to the request to get status information about an outbound call.

```
<?xml version="1.0" encoding="utf-8"?>
<s:Envelope xmlns:s="http://schemas.xmlsoap.org/soap/envelope/">
  <s:Header>
    <h:ServerVersionInfo MajorVersion="14"
      MinorVersion="0"
      MajorBuildNumber="639"
      MinorBuildNumber="20"
      Version="Exchange2013"
      xmlns:h="http://schemas.microsoft.com/exchange/services/2006/types"
      xmlns="http://schemas.microsoft.com/exchange/services/2006/types"
      xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
      xmlns:xsd="http://www.w3.org/2001/XMLSchema"/>
  </s:Header>
  <s:Body>
    <h:ServerVersionInfo MajorVersion="14"
      MinorVersion="0"
      MajorBuildNumber="639"
      MinorBuildNumber="20"
      Version="Exchange2013"
      xmlns:h="http://schemas.microsoft.com/exchange/services/2006/types"
      xmlns="http://schemas.microsoft.com/exchange/services/2006/types"
      xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
      xmlns:xsd="http://www.w3.org/2001/XMLSchema"/>
  </s:Body>
</s:Envelope>
```

```

</s:Header>
<s:Body xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
  xmlns:xsd="http://www.w3.org/2001/XMLSchema">
  <GetPhoneCallInformationResponse ResponseClass="Success"

xmlns="http://schemas.microsoft.com/exchange/services/2006/messages">
  <ResponseCode>NoError</ResponseCode>
  <m:PhoneCallInformation
xmlns:m="http://schemas.microsoft.com/exchange/services/2006/messages">
  <t:PhoneCallState
xmlns:t="http://schemas.microsoft.com/exchange/services/2006/types">Connected</t:PhoneCallSta
te>
  <t:ConnectionFailureCause
xmlns:t="http://schemas.microsoft.com/exchange/services/2006/types">None</t:ConnectionFailure
Cause>
  </m:PhoneCallInformation>
</GetPhoneCallInformationResponse>
</s:Body>
</s:Envelope>

```

4.5 GetUMProperties Operation

The following example shows how to retrieve the list of **Unified Messaging** properties for the **mailbox** of the user who is making the request.

The following is the request to retrieve the list of properties.

```

<?xml version="1.0" encoding="utf-8"?>
<soap:Envelope xmlns:soap="http://schemas.xmlsoap.org/soap/envelope/">
  <soap:Body>
    <GetUMProperties xmlns="http://schemas.microsoft.com/exchange/services/2006/messages" />
  </soap:Body>
</soap:Envelope>

```

The following is the response to the request to retrieve the list of properties.

```

<?xml version="1.0" encoding="utf-8" ?>
<soap:Envelope xmlns:soap="http://schemas.xmlsoap.org/soap/envelope/"
  xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
  xmlns:xsd="http://www.w3.org/2001/XMLSchema">
  <soap:Body>
    <GetUMPropertiesResponse
xmlns="http://schemas.microsoft.com/exchange/services/2006/messages">
  <GetUMPropertiesResponse>
    <OutOfStatus>>false</OutOfStatus>
    <MissedCallNotificationEnabled>>true</MissedCallNotificationEnabled>
    <PlayOnPhoneDialString>12345</PlayOnPhoneDialString>
    <TelephoneAccessNumbers>54321</TelephoneAccessNumbers>
    <TelephoneAccessFolderEmail>AAAAAGsd2rbQLVtLobUGbrq/9IUBAEX2ikn/L8JtI5WHI0FAW8AAAFXHhsAAA==<
  /TelephoneAccessFolderEmail>
  </GetUMPropertiesResponse>
</GetUMPropertiesResponse>
</soap:Body>
</soap:Envelope>

```

4.6 IsUMEnabled Operation

The following example shows how to determine whether the **mailbox** of the user who is making the request is enabled for **Unified Messaging**.

The following is the request to determine whether a mailbox is enabled for Unified Messaging.

```
<?xml version="1.0" encoding="utf-8"?>
<soap:Envelope xmlns:soap="http://schemas.xmlsoap.org/soap/envelope/">
  <soap:Body>
    <IsUMEnabled xmlns="http://schemas.microsoft.com/exchange/services/2006/messages" />
  </soap:Body>
</soap:Envelope>
```

The following is the response to the request to determine whether a mailbox is enabled for Unified Messaging.

```
<?xml version="1.0" encoding="utf-8" ?>
<soap:Envelope xmlns:soap="http://schemas.xmlsoap.org/soap/envelope/"
  xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
  xmlns:xsd="http://www.w3.org/2001/XMLSchema">
  <soap:Body>
    <IsUMEnabledResponse xmlns="http://schemas.microsoft.com/exchange/services/2006/messages">
      <IsUMEnabledResponse>true</IsUMEnabledResponse>
    </IsUMEnabledResponse>
  </soap:Body>
</soap:Envelope>
```

4.7 PlayOnPhone Operation

The following example shows how to form a request to make an outbound call and play a message.

The following is the request to play a message.

```
<?xml version="1.0" encoding="utf-8"?>
<soap:Envelope xmlns:soap="http://schemas.xmlsoap.org/soap/envelope/">
  <soap:Body>
    <PlayOnPhone xmlns="http://schemas.microsoft.com/exchange/services/2006/messages">
      <entryId>AAAAAGsd2rbQLVtLobUGbrq/9IUHAEX2ikn/L8JJtI5WHI0FAW8AAAFXHhsAACxVpE1+KVVL1957wp//x6UA
      GAetcDUAAA=</entryId>
      <DialString>12345</DialString>
    </PlayOnPhone>
  </soap:Body>
</soap:Envelope>
```

The following is the response to a request to play a message.

```
<?xml version="1.0" encoding="utf-8" ?>
<soap:Envelope xmlns:soap="http://schemas.xmlsoap.org/soap/envelope/"
  xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
  xmlns:xsd="http://www.w3.org/2001/XMLSchema">
  <soap:Body>
    <PlayOnPhoneResponse
  xmlns="http://schemas.microsoft.com/exchange/services/2006/messages">
      <PlayOnPhoneResponse>NDEzYjEzNmMtZTE2Zi00NTJlLWl3YzctNDhkMTE3MDE3YjlmQGRmLWV1bS0wMS5leGNoYW5n
      ZS5jb3JwLmlpY3Jvc29mdC5jb20=</PlayOnPhoneResponse>
    </PlayOnPhoneResponse>
  </soap:Body>
</soap:Envelope>
```

4.8 PlayOnPhone2 Operation

The following example shows how to form a request to play a message or voice mail on an outbound phone call.

The following is the request to play a message or voice mail on an outbound call.

```
<?xml version="1.0" encoding="utf-8"?>
<soap:Envelope xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
  xmlns:m="http://schemas.microsoft.com/exchange/services/2006/messages"
  xmlns:t="http://schemas.microsoft.com/exchange/services/2006/types"
  xmlns:soap="http://schemas.xmlsoap.org/soap/envelope/"
  xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <soap:Header>
    <t:RequestServerVersion Version="Exchange2013" />
  </soap:Header>
  <soap:Body>
    <m:PlayOnPhone>
      <m:ItemId Id="AkAjzQTbY/i=" />
      <m:DialString>5555551212</m:DialString>
    </m:PlayOnPhone>
  </soap:Body>
</soap:Envelope>
```

The following is the response to a request to play a message or voice mail on an outbound call.

```
<?xml version="1.0" encoding="utf-8"?>
<s:Envelope xmlns:s="http://schemas.xmlsoap.org/soap/envelope/">
  <s:Header>
    <h:ServerVersionInfo MajorVersion="14"
      MinorVersion="0"
      MajorBuildNumber="639"
      MinorBuildNumber="20"
      Version="Exchange2013"
      xmlns:h="http://schemas.microsoft.com/exchange/services/2006/types"
      xmlns="http://schemas.microsoft.com/exchange/services/2006/types"
      xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
      xmlns:xsd="http://www.w3.org/2001/XMLSchema"/>
  </s:Header>
  <s:Body xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
    xmlns:xsd="http://www.w3.org/2001/XMLSchema">
    <PlayOnPhoneResponse ResponseClass="Success"
      xmlns="http://schemas.microsoft.com/exchange/services/2006/messages">
      <ResponseCode>NoError</ResponseCode>
      <PhoneCallId Id="ZWMtWYtMY29t"/>
    </PlayOnPhoneResponse>
  </s:Body>
</s:Envelope>
```

4.9 PlayOnPhoneGreeting Operation

The following example of a **PlayOnPhoneGreeting** operation request shows how to form a request to make an outbound call and play the greeting message on a telephone.

The following is the request to play a greeting on a telephone.

```
<?xml version="1.0" encoding="utf-8"?>
<soap:Envelope xmlns:soap="http://schemas.xmlsoap.org/soap/envelope/">
  <soap:Body>
    <PlayOnPhoneGreeting
      xmlns="http://schemas.microsoft.com/exchange/services/2006/messages">
```

```

    <GreetingType>NormalCustom</GreetingType>
    <DialString>12345</DialString>
  </PlayOnPhoneGreeting>
</soap:Body>
</soap:Envelope>

```

The following is the response to a request to play a greeting on a telephone.

```

<?xml version="1.0" encoding="utf-8" ?>
<soap:Envelope xmlns:soap="http://schemas.xmlsoap.org/soap/envelope/"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:xsd="http://www.w3.org/2001/XMLSchema">
  <soap:Body>
    <PlayOnPhoneGreetingResponse
xmlns="http://schemas.microsoft.com/exchange/services/2006/messages">

    <PlayOnPhoneGreetingResponse>MjA4MTQ5MmItMTBmZC00ZGFmLThiMzEtND1lNDJjM2Y3MjIxQGRmLWV1bS0wMS51
eGNoYW5nZS5jb3JwLmlpY3Jvc29mdC5jb20=</PlayOnPhoneGreetingResponse>
    </PlayOnPhoneGreetingResponse>
  </soap:Body>
</soap:Envelope>

```

4.10 ResetPIN Operation

The following example shows how to form a request to reset the password of the user who is making the request.

The following is the request to reset the password.

```

<?xml version="1.0" encoding="utf-8"?>
<soap:Envelope xmlns:soap="http://schemas.xmlsoap.org/soap/envelope/">
  <soap:Body>
    <ResetPIN xmlns="http://schemas.microsoft.com/exchange/services/2006/messages" />
  </soap:Body>
</soap:Envelope>

```

The following is the response to the request to reset the password.

```

<?xml version="1.0" encoding="utf-8" ?>
<soap:Envelope xmlns:soap="http://schemas.xmlsoap.org/soap/envelope/"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:xsd="http://www.w3.org/2001/XMLSchema">
  <soap:Body>
    <ResetPINResponse xmlns="http://schemas.microsoft.com/exchange/services/2006/messages" />
  </soap:Body>
</soap:Envelope>

```

4.11 SetMissedCallNotificationEnabled Operation

The following example shows how to form a request to enable missed-call notifications for the user who is making the request.

The following is the request to enable missed-call notifications.

```

<?xml version="1.0" encoding="utf-8"?>
<soap:Envelope xmlns:soap="http://schemas.xmlsoap.org/soap/envelope/">
  <soap:Body>

```

```

    <SetMissedCallNotificationEnabled
xmlns="http://schemas.microsoft.com/exchange/services/2006/messages">
    <status>true</status>
  </SetMissedCallNotificationEnabled>
</soap:Body>
</soap:Envelope>

```

The following is the response to the request to enable missed-call notifications.

```

<?xml version="1.0" encoding="utf-8" ?>
<soap:Envelope xmlns:soap="http://schemas.xmlsoap.org/soap/envelope/"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:xsd="http://www.w3.org/2001/XMLSchema">
  <soap:Body>
    <SetMissedCallNotificationEnabledResponse
xmlns="http://schemas.microsoft.com/exchange/services/2006/messages" />
  </soap:Body>
</soap:Envelope>

```

4.12 SetOoofStatus Operation

The **SetOoofStatus** operation sets a value that indicates whether the **Out of Office (OOF)** greeting is enabled for the user who is making the request.

The following is the request to set the OOF greeting.

```

<?xml version="1.0" encoding="utf-8"?>
<soap:Envelope xmlns:soap="http://schemas.xmlsoap.org/soap/envelope/">
  <soap:Body>
    <SetOoofStatus xmlns="http://schemas.microsoft.com/exchange/services/2006/messages">
      <status>true</status>
    </SetOoofStatus>
  </soap:Body>
</soap:Envelope>

```

The following is the response to the request to set the OOF greeting.

```

<?xml version="1.0" encoding="utf-8" ?>
<soap:Envelope xmlns:soap="http://schemas.xmlsoap.org/soap/envelope/"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:xsd="http://www.w3.org/2001/XMLSchema">
  <soap:Body>
    <SetOoofStatusResponse
xmlns="http://schemas.microsoft.com/exchange/services/2006/messages" />
  </soap:Body>
</soap:Envelope>

```

4.13 SetPlayOnPhoneDialString Operation

The following example shows how to form a request to set the default telephone number for the user who is making the request.

The following is the request to set the default telephone number.

```

<?xml version="1.0" encoding="utf-8"?>
<soap:Envelope xmlns:soap="http://schemas.xmlsoap.org/soap/envelope/">
  <soap:Body>

```



```

    <SetPlayOnPhoneDialString
xmlns="http://schemas.microsoft.com/exchange/services/2006/messages">
    <dialString>12345</dialString>
  </SetPlayOnPhoneDialString>
</soap:Body>
</soap:Envelope>

```

The following is the response to the request to set the default telephone number.

```

<?xml version="1.0" encoding="utf-8" ?>
<soap:Envelope xmlns:soap="http://schemas.xmlsoap.org/soap/envelope/"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:xsd="http://www.w3.org/2001/XMLSchema">
  <soap:Body>
    <SetPlayOnPhoneDialStringResponse
xmlns="http://schemas.microsoft.com/exchange/services/2006/messages" />
  </soap:Body>
</soap:Envelope>

```

4.14 SetTelephoneAccessFolderEmail Operation

The following example shows how to form a request to set the folder from which a **Unified Messaging** server will read back to the user over the telephone.

The following is the request to set the folder.

```

<?xml version="1.0" encoding="utf-8"?>
<soap:Envelope xmlns:soap="http://schemas.xmlsoap.org/soap/envelope/">
  <soap:Body>
    <SetTelephoneAccessFolderEmail
xmlns="http://schemas.microsoft.com/exchange/services/2006/messages">

    <base64FolderID>AAAAAGsd2rbQLVtLobUGbrq/9IUBAEX2ikn/L8JJtI5WHI0FAW8AAAFXHhsAAA==</base64FolderID>
  </SetTelephoneAccessFolderEmail>
</soap:Body>
</soap:Envelope>

```

The following is the response to the request to set the folder.

```

<?xml version="1.0" encoding="utf-8" ?>
<soap:Envelope xmlns:soap="http://schemas.xmlsoap.org/soap/envelope/"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:xsd="http://www.w3.org/2001/XMLSchema">
  <soap:Body>
    <SetTelephoneAccessFolderEmailResponse
xmlns="http://schemas.microsoft.com/exchange/services/2006/messages" />
  </soap:Body>
</soap:Envelope>

```

4.15 SOAP Fault

Any of the Voice Mail Settings Web Service Protocol operations can return a **SOAP fault**. A SOAP fault element is used to carry error and/or status information within a **SOAP message** when there is an incorrectly formatted request or where there are configuration failures. The following example shows a SOAP fault message in response to an invalid **PlayOnPhone** operation request.

The following is an invalid **PlayOnPhone** operation request.

```
<?xml version="1.0" encoding="utf-8"?>
<soap:Envelope xmlns:soap="http://schemas.xmlsoap.org/soap/envelope/">
  <soap:Body>
    <PlayOnPhone xmlns="http://schemas.microsoft.com/exchange/services/2006/messages">
      <entryId>INVALID_ENTRY_ID</entryId>
      <DialString>12345</DialString>
    </PlayOnPhone>
  </soap:Body>
</soap:Envelope>
```

The following is the SOAP fault response to the invalid **PlayOnPhone** operation request.

```
<?xml version="1.0" encoding="utf-8"?>
<soap:Envelope xmlns:soap="http://schemas.xmlsoap.org/soap/envelope/"
  xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
  xmlns:xsd="http://www.w3.org/2001/XMLSchema">
  <soap:Body>
    <soap:Fault>
      <faultcode>a:InvalidObjectIdException</faultcode>
      <faultstring>The object identifier isn't valid</faultstring>
      <detail>
        <ExceptionType
  xmlns="http://schemas.microsoft.com/exchange/services/2006/messages">InvalidObjectIdException
</ExceptionType>
        </detail>
      </soap:Fault>
    </soap:Body>
  </soap:Envelope>
```

5 Security

5.1 Security Considerations for Implementers

The Voice Mail Settings Web Service Protocol relies on the Web server that hosts the application to perform authentication.

Use of the Voice Mail Settings Web Service Protocol requires the use of secure communication via HTTPS, as described in [\[RFC2818\]](#).

5.2 Index of Security Parameters

None.

6 Appendix A: Full WSDL

The XML files that are listed in the following table are required in order to implement the functionality specified in this document.

File name	Description	Section
MS-OXWUMS.wsdl	Contains the WSDL for the implementation of this protocol.	6
MS-OXWUMS-messages.xsd	Contains the XML schema message definitions that are used in this protocol.	7.1
MS-OXWUMS-types.xsd	Contains the XML schema type definitions that are used in this protocol.	7.2

These files have to be placed in a common folder in order for the WSDL to validate and operate. Also, any schema files that are included in or imported into the MS-OXWUMS-types.xsd or MS-OXWUMS-messages.xsd schemas have to be placed in the common folder with these files.

This section contains the contents of the MS-OXWUMS.wsdl file.

```
<?xml version="1.0" encoding="utf-8"?>
<wsdl:definitions xmlns:s="http://www.w3.org/2001/XMLSchema"
xmlns:tns="http://schemas.microsoft.com/exchange/services/2006/messages"
xmlns:soap="http://schemas.xmlsoap.org/wsdl/soap/"
xmlns:wSDL="http://schemas.xmlsoap.org/wsdl/"
xmlns:t="http://schemas.microsoft.com/exchange/services/2006/types"
targetNamespace="http://schemas.microsoft.com/exchange/services/2006/messages">
  <wsdl:types>
    <s:schema elementFormDefault="qualified"
targetNamespace="http://schemas.microsoft.com/exchange/services/2006/messages">
      <s:include schemaLocation="MS-OXWUMS-messages.xsd"/>
    </s:schema>
  </wsdl:types>
  <wsdl:message name="IsUMEnabledSoapIn">
    <wsdl:part name="parameters" element="tns:IsUMEnabled"/>
  </wsdl:message>
  <wsdl:message name="IsUMEnabledSoapOut">
    <wsdl:part name="parameters" element="tns:IsUMEnabledResponse"/>
  </wsdl:message>
  <wsdl:message name="GetUMPropertiesSoapIn">
    <wsdl:part name="parameters" element="tns:GetUMProperties"/>
  </wsdl:message>
  <wsdl:message name="GetUMPropertiesSoapOut">
    <wsdl:part name="parameters" element="tns:GetUMPropertiesResponse"/>
  </wsdl:message>
  <wsdl:message name="SetOofStatusSoapIn">
    <wsdl:part name="parameters" element="tns:SetOofStatus"/>
  </wsdl:message>
  <wsdl:message name="SetOofStatusSoapOut">
    <wsdl:part name="parameters" element="tns:SetOofStatusResponse"/>
  </wsdl:message>
  <wsdl:message name="SetPlayOnPhoneDialStringSoapIn">
    <wsdl:part name="parameters" element="tns:SetPlayOnPhoneDialString"/>
  </wsdl:message>
  <wsdl:message name="SetPlayOnPhoneDialStringSoapOut">
    <wsdl:part name="parameters" element="tns:SetPlayOnPhoneDialStringResponse"/>
  </wsdl:message>
  <wsdl:message name="SetTelephoneAccessFolderEmailSoapIn">
    <wsdl:part name="parameters" element="tns:SetTelephoneAccessFolderEmail"/>
  </wsdl:message>
  <wsdl:message name="SetTelephoneAccessFolderEmailSoapOut">
    <wsdl:part name="parameters" element="tns:SetTelephoneAccessFolderEmailResponse"/>
  </wsdl:message>
  <wsdl:message name="SetMissedCallNotificationEnabledSoapIn">
    <wsdl:part name="parameters" element="tns:SetMissedCallNotificationEnabled"/>
  </wsdl:message>
</wsdl:definitions>
```

```

</wsdl:message>
<wsdl:message name="SetMissedCallNotificationEnabledSoapOut">
  <wsdl:part name="parameters" element="tns:SetMissedCallNotificationEnabledResponse"/>
</wsdl:message>
<wsdl:message name="ResetPINSoapIn">
  <wsdl:part name="parameters" element="tns:ResetPIN"/>
</wsdl:message>
<wsdl:message name="ResetPINSoapOut">
  <wsdl:part name="parameters" element="tns:ResetPINResponse"/>
</wsdl:message>
<wsdl:message name="PlayOnPhoneSoapIn">
  <wsdl:part name="parameters" element="tns:PlayOnPhone"/>
</wsdl:message>
<wsdl:message name="PlayOnPhoneSoapOut">
  <wsdl:part name="parameters" element="tns:PlayOnPhoneResponse"/>
</wsdl:message>
<wsdl:message name="GetCallInfoSoapIn">
  <wsdl:part name="parameters" element="tns:GetCallInfo"/>
</wsdl:message>
<wsdl:message name="GetCallInfoSoapOut">
  <wsdl:part name="parameters" element="tns:GetCallInfoResponse"/>
</wsdl:message>
<wsdl:message name="DisconnectSoapIn">
  <wsdl:part name="parameters" element="tns:Disconnect"/>
</wsdl:message>
<wsdl:message name="DisconnectSoapOut">
  <wsdl:part name="parameters" element="tns:DisconnectResponse"/>
</wsdl:message>
<wsdl:message name="PlayOnPhoneGreetingSoapIn">
  <wsdl:part name="parameters" element="tns:PlayOnPhoneGreeting"/>
</wsdl:message>
<wsdl:message name="PlayOnPhoneGreetingSoapOut">
  <wsdl:part name="parameters" element="tns:PlayOnPhoneGreetingResponse"/>
</wsdl:message>
<wsdl:message name="DisconnectPhoneCallSoapIn">
  <wsdl:part name="request" element="tns:DisconnectPhoneCall"/>
  <wsdl:part name="Impersonation" element="t:ExchangeImpersonation"/>
  <wsdl:part name="MailboxCulture" element="t:MailboxCulture"/>
  <wsdl:part name="RequestVersion" element="t:RequestServerVersion"/>
</wsdl:message>
<wsdl:message name="DisconnectPhoneCallSoapOut">
  <wsdl:part name="DisconnectPhoneCallResult" element="tns:DisconnectPhoneCallResponse"/>
  <wsdl:part name="ServerVersion" element="t:ServerVersionInfo"/>
</wsdl:message>
<wsdl:message name="GetPhoneCallInformationSoapIn">
  <wsdl:part name="request" element="tns:GetPhoneCallInformation"/>
  <wsdl:part name="Impersonation" element="t:ExchangeImpersonation"/>
  <wsdl:part name="MailboxCulture" element="t:MailboxCulture"/>
  <wsdl:part name="RequestVersion" element="t:RequestServerVersion"/>
</wsdl:message>
<wsdl:message name="GetPhoneCallInformationSoapOut">
  <wsdl:part name="GetPhoneCallInformationResult"
element="tns:GetPhoneCallInformationResponse"/>
  <wsdl:part name="ServerVersion" element="t:ServerVersionInfo"/>
</wsdl:message>
<wsdl:message name="PlayOnPhoneSoapIn2">
  <wsdl:part name="request" type="tns:PlayOnPhone2Type"/>
  <wsdl:part name="Impersonation" element="t:ExchangeImpersonation"/>
  <wsdl:part name="MailboxCulture" element="t:MailboxCulture"/>
  <wsdl:part name="RequestVersion" element="t:RequestServerVersion"/>
</wsdl:message>
<wsdl:message name="PlayOnPhoneSoapOut2">
  <wsdl:part name="PlayOnPhoneResult" type="tns:PlayOnPhoneResponse2Type"/>
  <wsdl:part name="ServerVersion" element="t:ServerVersionInfo"/>
</wsdl:message>
<wsdl:portType name="UMWebServiceSoap">
  <wsdl:operation name="IsUMEnabled">
    <wsdl:input message="tns:IsUMEnabledSoapIn"/>
    <wsdl:output message="tns:IsUMEnabledSoapOut"/>
  </wsdl:operation>

```

```

</wsdl:operation>
<wsdl:operation name="GetUMProperties">
  <wsdl:input message="tns:GetUMPropertiesSoapIn"/>
  <wsdl:output message="tns:GetUMPropertiesSoapOut"/>
</wsdl:operation>
<wsdl:operation name="SetOofStatus">
  <wsdl:input message="tns:SetOofStatusSoapIn"/>
  <wsdl:output message="tns:SetOofStatusSoapOut"/>
</wsdl:operation>
<wsdl:operation name="SetPlayOnPhoneDialString">
  <wsdl:input message="tns:SetPlayOnPhoneDialStringSoapIn"/>
  <wsdl:output message="tns:SetPlayOnPhoneDialStringSoapOut"/>
</wsdl:operation>
<wsdl:operation name="SetTelephoneAccessFolderEmail">
  <wsdl:input message="tns:SetTelephoneAccessFolderEmailSoapIn"/>
  <wsdl:output message="tns:SetTelephoneAccessFolderEmailSoapOut"/>
</wsdl:operation>
<wsdl:operation name="SetMissedCallNotificationEnabled">
  <wsdl:input message="tns:SetMissedCallNotificationEnabledSoapIn"/>
  <wsdl:output message="tns:SetMissedCallNotificationEnabledSoapOut"/>
</wsdl:operation>
<wsdl:operation name="ResetPIN">
  <wsdl:input message="tns:ResetPINSoapIn"/>
  <wsdl:output message="tns:ResetPINSoapOut"/>
</wsdl:operation>
<wsdl:operation name="PlayOnPhone">
  <wsdl:input message="tns:PlayOnPhoneSoapIn"/>
  <wsdl:output message="tns:PlayOnPhoneSoapOut"/>
</wsdl:operation>
<wsdl:operation name="GetCallInfo">
  <wsdl:input message="tns:GetCallInfoSoapIn"/>
  <wsdl:output message="tns:GetCallInfoSoapOut"/>
</wsdl:operation>
<wsdl:operation name="Disconnect">
  <wsdl:input message="tns:DisconnectSoapIn"/>
  <wsdl:output message="tns:DisconnectSoapOut"/>
</wsdl:operation>
<wsdl:operation name="PlayOnPhoneGreeting">
  <wsdl:input message="tns:PlayOnPhoneGreetingSoapIn"/>
  <wsdl:output message="tns:PlayOnPhoneGreetingSoapOut"/>
</wsdl:operation>
<wsdl:operation name="DisconnectPhoneCall">
  <wsdl:input message="tns:DisconnectPhoneCallSoapIn"/>
  <wsdl:output message="tns:DisconnectPhoneCallSoapOut"/>
</wsdl:operation>
<wsdl:operation name="GetPhoneCallInformation">
  <wsdl:input message="tns:GetPhoneCallInformationSoapIn"/>
  <wsdl:output message="tns:GetPhoneCallInformationSoapOut"/>
</wsdl:operation>
<wsdl:operation name="PlayOnPhone2">
  <wsdl:input message="tns:PlayOnPhoneSoapIn2"/>
  <wsdl:output message="tns:PlayOnPhoneSoapOut2"/>
</wsdl:operation>
</wsdl:portType>
<wsdl:binding name="UMWebServiceSoap" type="tns:UMWebServiceSoap">
  <wsdl:documentation>
    <wsi:Claim conformsTo="http://ws-i.org/profiles/basic/1.1" xmlns:wsi="http://ws-
i.org/schemas/conformanceClaim/" />
  </wsdl:documentation>
  <soap:binding transport="http://schemas.xmlsoap.org/soap/http"/>
  <wsdl:operation name="IsUMEnabled">
    <soap:operation
soapAction="http://schemas.microsoft.com/exchange/services/2006/messages/IsUMEnabled"
style="document"/>
    <wsdl:input>
      <soap:body use="literal"/>
    </wsdl:input>
    <wsdl:output>
      <soap:body use="literal"/>
    </wsdl:output>
  </wsdl:operation>

```

```

        </wsdl:output>
    </wsdl:operation>
    <wsdl:operation name="GetUMProperties">
        <soap:operation
soapAction="http://schemas.microsoft.com/exchange/services/2006/messages/GetUMProperties"
style="document"/>
        <wsdl:input>
            <soap:body use="literal"/>
        </wsdl:input>
        <wsdl:output>
            <soap:body use="literal"/>
        </wsdl:output>
    </wsdl:operation>
    <wsdl:operation name="SetOofStatus">
        <soap:operation
soapAction="http://schemas.microsoft.com/exchange/services/2006/messages/SetOofStatus"
style="document"/>
        <wsdl:input>
            <soap:body use="literal"/>
        </wsdl:input>
        <wsdl:output>
            <soap:body use="literal"/>
        </wsdl:output>
    </wsdl:operation>
    <wsdl:operation name="SetPlayOnPhoneDialString">
        <soap:operation
soapAction="http://schemas.microsoft.com/exchange/services/2006/messages/SetPlayOnPhoneDialSt
ring" style="document"/>
        <wsdl:input>
            <soap:body use="literal"/>
        </wsdl:input>
        <wsdl:output>
            <soap:body use="literal"/>
        </wsdl:output>
    </wsdl:operation>
    <wsdl:operation name="SetTelephoneAccessFolderEmail">
        <soap:operation
soapAction="http://schemas.microsoft.com/exchange/services/2006/messages/SetTelephoneAccessFo
lderEmail" style="document"/>
        <wsdl:input>
            <soap:body use="literal"/>
        </wsdl:input>
        <wsdl:output>
            <soap:body use="literal"/>
        </wsdl:output>
    </wsdl:operation>
    <wsdl:operation name="SetMissedCallNotificationEnabled">
        <soap:operation
soapAction="http://schemas.microsoft.com/exchange/services/2006/messages/SetMissedCallNotific
ationEnabled" style="document"/>
        <wsdl:input>
            <soap:body use="literal"/>
        </wsdl:input>
        <wsdl:output>
            <soap:body use="literal"/>
        </wsdl:output>
    </wsdl:operation>
    <wsdl:operation name="ResetPIN">
        <soap:operation
soapAction="http://schemas.microsoft.com/exchange/services/2006/messages/ResetPIN"
style="document"/>
        <wsdl:input>
            <soap:body use="literal"/>
        </wsdl:input>
        <wsdl:output>
            <soap:body use="literal"/>
        </wsdl:output>
    </wsdl:operation>
    <wsdl:operation name="PlayOnPhone">

```

```

        <soap:operation
soapAction="http://schemas.microsoft.com/exchange/services/2006/messages/PlayOnPhone"
style="document"/>
        <wsdl:input>
            <soap:body use="literal"/>
        </wsdl:input>
        <wsdl:output>
            <soap:body use="literal"/>
        </wsdl:output>
    </wsdl:operation>
    <wsdl:operation name="GetCallInfo">
        <soap:operation
soapAction="http://schemas.microsoft.com/exchange/services/2006/messages/GetCallInfo"
style="document"/>
        <wsdl:input>
            <soap:body use="literal"/>
        </wsdl:input>
        <wsdl:output>
            <soap:body use="literal"/>
        </wsdl:output>
    </wsdl:operation>
    <wsdl:operation name="Disconnect">
        <soap:operation
soapAction="http://schemas.microsoft.com/exchange/services/2006/messages/Disconnect"
style="document"/>
        <wsdl:input>
            <soap:body use="literal"/>
        </wsdl:input>
        <wsdl:output>
            <soap:body use="literal"/>
        </wsdl:output>
    </wsdl:operation>
    <wsdl:operation name="PlayOnPhoneGreeting">
        <soap:operation
soapAction="http://schemas.microsoft.com/exchange/services/2006/messages/PlayOnPhoneGreeting"
style="document"/>
        <wsdl:input>
            <soap:body use="literal"/>
        </wsdl:input>
        <wsdl:output>
            <soap:body use="literal"/>
        </wsdl:output>
    </wsdl:operation>
    <wsdl:operation name="PlayOnPhone2">
        <soap:operation
soapAction="http://schemas.microsoft.com/exchange/services/2006/messages/PlayOnPhone"/>
        <wsdl:input>
            <soap:body parts="request" use="literal"/>
            <soap:header message="tns:PlayOnPhoneSoapIn2" part="Impersonation"
use="literal"/>
            <soap:header message="tns:PlayOnPhoneSoapIn2" part="MailboxCulture"
use="literal"/>
            <soap:header message="tns:PlayOnPhoneSoapIn2" part="RequestVersion"
use="literal"/>
        </wsdl:input>
        <wsdl:output>
            <soap:body parts="PlayOnPhoneResult" use="literal"/>
            <soap:header message="tns:PlayOnPhoneSoapOut2" part="ServerVersion"
use="literal"/>
        </wsdl:output>
    </wsdl:operation>
    <wsdl:operation name="GetPhoneCallInformation">
        <soap:operation
soapAction="http://schemas.microsoft.com/exchange/services/2006/messages/GetPhoneCallInformat
ion"/>
        <wsdl:input>
            <soap:body parts="request" use="literal"/>
            <soap:header message="tns:GetPhoneCallInformationSoapIn" part="Impersonation"
use="literal"/>

```



```

        <soap:header message="tns:GetPhoneCallInformationSoapIn" part="MailboxCulture"
use="literal"/>
        <soap:header message="tns:GetPhoneCallInformationSoapIn" part="RequestVersion"
use="literal"/>
        </wsdl:input>
        <wsdl:output>
            <soap:body parts="GetPhoneCallInformationResult" use="literal"/>
            <soap:header message="tns:GetPhoneCallInformationSoapOut" part="ServerVersion"
use="literal"/>
        </wsdl:output>
    </wsdl:operation>
    <wsdl:operation name="DisconnectPhoneCall">
        <soap:operation
soapAction="http://schemas.microsoft.com/exchange/services/2006/messages/DisconnectPhoneCall"
/>
        <wsdl:input>
            <soap:body parts="request" use="literal"/>
            <soap:header message="tns:DisconnectPhoneCallSoapIn" part="Impersonation"
use="literal"/>
            <soap:header message="tns:DisconnectPhoneCallSoapIn" part="MailboxCulture"
use="literal"/>
            <soap:header message="tns:DisconnectPhoneCallSoapIn" part="RequestVersion"
use="literal"/>
        </wsdl:input>
        <wsdl:output>
            <soap:body parts="DisconnectPhoneCallResult" use="literal"/>
            <soap:header message="tns:DisconnectPhoneCallSoapOut" part="ServerVersion"
use="literal"/>
        </wsdl:output>
    </wsdl:operation>
</wsdl:binding>
</wsdl:definitions>

```

7 Appendix B: Full XML Schema

For ease of implementation, the following sections provide the full XML schema for this protocol.

Schema name	Prefix	Section
Messages schema	m:	7.1
Types schema	t:	7.2

These files have to be placed in a common folder in order for the WSDL to validate and operate. Also, any schema files that are included in or imported into the MS-OXWUMS-types.xsd or MS-OXWUMS-messages.xsd schemas have to be placed in the common folder along with the files listed in the table.

7.1 Messages Schema

This section contains the contents of the MS-OXWUMS-messages.xsd file and information about additional files that this schema file requires to operate correctly.

MS-OXWUMS-messages.xsd includes the file listed in the following table. To operate correctly, this file has to be present in the folder that contains the WSDL, types schema, and messages schema files for this protocol.

File name	Defining specification/section
MS-OXWSCDATA-messages.xsd	[MS-OXWSCDATA] section 7.1
MS-OXWUMS-types.xsd	Section 7.2

```
<?xml version="1.0" encoding="utf-8"?>
<xs:schema xmlns:m="http://schemas.microsoft.com/exchange/services/2006/messages"
xmlns:tns="http://schemas.microsoft.com/exchange/services/2006/messages"
xmlns:t="http://schemas.microsoft.com/exchange/services/2006/types"
xmlns:xs="http://www.w3.org/2001/XMLSchema" xmlns:s="http://www.w3.org/2001/XMLSchema"
targetNamespace="http://schemas.microsoft.com/exchange/services/2006/messages"
elementFormDefault="qualified" version="Exchange2016" id="messages">
  <xs:include schemaLocation="MS-OXWSCDATA-messages.xsd"/>
  <xs:import namespace="http://schemas.microsoft.com/exchange/services/2006/types"
schemaLocation="MS-OXWUMS-types.xsd"/>
  <s:element name="IsUMEnabled">
    <s:complexType/>
  </s:element>
  <s:element name="IsUMEnabledResponse">
    <s:complexType>
      <s:sequence>
        <s:element minOccurs="1" maxOccurs="1" name="IsUMEnabledResponse"
type="s:boolean"/>
      </s:sequence>
    </s:complexType>
  </s:element>
  <s:element name="GetUMProperties">
    <s:complexType/>
  </s:element>
  <s:element name="GetUMPropertiesResponse">
    <s:complexType>
      <s:sequence>
        <s:element minOccurs="0" maxOccurs="1" name="GetUMPropertiesResponse"
type="tns:UMProperties"/>
      </s:sequence>
    </s:complexType>
  </s:element>
  <s:complexType name="UMProperties">
    <s:sequence>
```

```

        <s:element minOccurs="1" maxOccurs="1" name="OofStatus" type="s:boolean"/>
        <s:element minOccurs="1" maxOccurs="1" name="MissedCallNotificationEnabled"
type="s:boolean"/>
        <s:element minOccurs="0" maxOccurs="1" name="PlayOnPhoneDialString"
type="s:string"/>
        <s:element minOccurs="0" maxOccurs="1" name="TelephoneAccessNumbers"
type="s:string"/>
        <s:element minOccurs="0" maxOccurs="1" name="TelephoneAccessFolderEmail"
type="s:string"/>
    </s:sequence>
</s:complexType>
<s:element name="SetOofStatus">
    <s:complexType>
        <s:sequence>
            <s:element minOccurs="1" maxOccurs="1" name="status" type="s:boolean"/>
        </s:sequence>
    </s:complexType>
</s:element>
<s:element name="SetOofStatusResponse">
    <s:complexType/>
</s:element>
<s:element name="SetPlayOnPhoneDialString">
    <s:complexType>
        <s:sequence>
            <s:element minOccurs="0" maxOccurs="1" name="dialString" type="s:string"/>
        </s:sequence>
    </s:complexType>
</s:element>
<s:element name="SetPlayOnPhoneDialStringResponse">
    <s:complexType/>
</s:element>
<s:element name="SetTelephoneAccessFolderEmail">
    <s:complexType>
        <s:sequence>
            <s:element minOccurs="0" maxOccurs="1" name="base64FolderId" type="s:string"/>
        </s:sequence>
    </s:complexType>
</s:element>
<s:element name="SetTelephoneAccessFolderEmailResponse">
    <s:complexType/>
</s:element>
<s:element name="SetMissedCallNotificationEnabled">
    <s:complexType>
        <s:sequence>
            <s:element minOccurs="1" maxOccurs="1" name="status" type="s:boolean"/>
        </s:sequence>
    </s:complexType>
</s:element>
<s:element name="SetMissedCallNotificationEnabledResponse">
    <s:complexType/>
</s:element>
<s:element name="ResetPIN">
    <s:complexType/>
</s:element>
<s:element name="ResetPINResponse">
    <s:complexType/>
</s:element>
<s:element name="PlayOnPhone">
    <s:complexType>
        <s:sequence>
            <s:element minOccurs="0" maxOccurs="1" name="entryId" type="s:string"/>
            <s:element minOccurs="0" maxOccurs="1" name="DialString" type="s:string"/>
        </s:sequence>
    </s:complexType>
</s:element>
<s:element name="PlayOnPhoneResponse">
    <s:complexType>
        <s:sequence>

```

```

        <s:element minOccurs="0" maxOccurs="1" name="PlayOnPhoneResponse"
type="s:string"/>
    </s:sequence>
</s:complexType>
</s:element>
<s:element name="GetCallInfo">
    <s:complexType>
        <s:sequence>
            <s:element minOccurs="0" maxOccurs="1" name="CallId" type="s:string"/>
        </s:sequence>
    </s:complexType>
</s:element>
<s:element name="GetCallInfoResponse">
    <s:complexType>
        <s:sequence>
            <s:element minOccurs="0" maxOccurs="1" name="GetCallInfoResponse"
type="tns:UMCallInfo"/>
        </s:sequence>
    </s:complexType>
</s:element>
<s:complexType name="UMCallInfo">
    <s:sequence>
        <s:element minOccurs="1" maxOccurs="1" name="CallState" type="tns:UMCallState"/>
        <s:element minOccurs="1" maxOccurs="1" name="EventCause" type="tns:UMEventCause"/>
    </s:sequence>
</s:complexType>
<s:simpleType name="UMCallState">
    <s:restriction base="s:string">
        <s:enumeration value="Idle"/>
        <s:enumeration value="Connecting"/>
        <s:enumeration value="Alerted"/>
        <s:enumeration value="Connected"/>
        <s:enumeration value="Disconnected"/>
        <s:enumeration value="Incoming"/>
        <s:enumeration value="Transferring"/>
        <s:enumeration value="Forwarding"/>
    </s:restriction>
</s:simpleType>
<s:simpleType name="UMEventCause">
    <s:restriction base="s:string">
        <s:enumeration value="None"/>
        <s:enumeration value="UserBusy"/>
        <s:enumeration value="NoAnswer"/>
        <s:enumeration value="Unavailable"/>
        <s:enumeration value="Other"/>
    </s:restriction>
</s:simpleType>
<s:element name="Disconnect">
    <s:complexType>
        <s:sequence>
            <s:element minOccurs="0" maxOccurs="1" name="CallId" type="s:string"/>
        </s:sequence>
    </s:complexType>
</s:element>
<s:element name="DisconnectResponse">
    <s:complexType/>
</s:element>
<s:element name="PlayOnPhoneGreeting">
    <s:complexType>
        <s:sequence>
            <s:element minOccurs="1" maxOccurs="1" name="GreetingType"
type="tns:UMGreetingType"/>
            <s:element minOccurs="0" maxOccurs="1" name="DialString" type="s:string"/>
        </s:sequence>
    </s:complexType>
</s:element>
<s:simpleType name="UMGreetingType">
    <s:restriction base="s:string">
        <s:enumeration value="NormalCustom"/>
    </s:restriction>

```

```

        <s:enumeration value="OofCustom"/>
    </s:restriction>
</s:simpleType>
<s:element name="PlayOnPhoneGreetingResponse">
    <s:complexType>
        <s:sequence>
            <s:element minOccurs="0" maxOccurs="1" name="PlayOnPhoneGreetingResponse"
type="s:string"/>
        </s:sequence>
    </s:complexType>
</s:element>
<xs:complexType name="DisconnectPhoneCallResponseMessageType">
    <xs:complexContent>
        <xs:extension base="m:ResponseMessageType"/>
    </xs:complexContent>
</xs:complexType>
<xs:complexType name="DisconnectPhoneCallType">
    <xs:complexContent>
        <xs:extension base="m:BaseRequestType">
            <s:sequence>
                <s:element name="PhoneCallId" type="t:PhoneCallIdType" minOccurs="1"
maxOccurs="1"/>
            </s:sequence>
        </xs:extension>
    </xs:complexContent>
</xs:complexType>
<xs:element name="DisconnectPhoneCall" type="m:DisconnectPhoneCallType"/>
<s:element name="DisconnectPhoneCallResponse"
type="m:DisconnectPhoneCallResponseMessageType"/>
<xs:complexType name="GetPhoneCallInformationType">
    <xs:complexContent>
        <xs:extension base="m:BaseRequestType">
            <s:sequence>
                <s:element name="PhoneCallId" type="t:PhoneCallIdType" minOccurs="1"
maxOccurs="1"/>
            </s:sequence>
        </xs:extension>
    </xs:complexContent>
</xs:complexType>
<xs:complexType name="GetPhoneCallInformationResponseMessageType">
    <xs:complexContent>
        <xs:extension base="m:ResponseMessageType">
            <s:sequence>
                <s:element name="PhoneCallInformation" type="t:PhoneCallInformationType"
minOccurs="0" maxOccurs="1"/>
            </s:sequence>
        </xs:extension>
    </xs:complexContent>
</xs:complexType>
<xs:element name="GetPhoneCallInformation" type="m:GetPhoneCallInformationType"/>
<xs:element name="GetPhoneCallInformationResponse"
type="m:GetPhoneCallInformationResponseMessageType"/>
<xs:complexType name="PlayOnPhoneType">
    <xs:complexContent>
        <xs:extension base="m:BaseRequestType">
            <s:sequence>
                <s:element name="ItemId" type="t:ItemIdType" minOccurs="1" maxOccurs="1"/>
                <s:element name="DialString" type="xs:string" minOccurs="1" maxOccurs="1"/>
            </s:sequence>
        </xs:extension>
    </xs:complexContent>
</xs:complexType>
<xs:complexType name="PlayOnPhone2Type">
    <s:sequence>
        <s:element name="PlayOnPhone" type="m:PlayOnPhoneType"/>
    </s:sequence>
</xs:complexType>
<xs:complexType name="PlayOnPhoneResponseMessageType">
    <xs:complexContent>

```

```

        <xs:extension base="m:ResponseMessageType">
            <xs:sequence>
                <xs:element name="PhoneCallId" type="t:PhoneCallIdType" minOccurs="0"
maxOccurs="1"/>
            </xs:sequence>
        </xs:extension>
    </xs:complexContent>
</xs:complexType>
<xs:complexType name="PlayOnPhoneResponse2Type">
    <xs:sequence>
        <xs:element name="PlayOnPhoneResponse" type="m:PlayOnPhoneResponseMessageType"/>
    </xs:sequence>
</xs:complexType>
</xs:schema>

```

7.2 Types Schema

This section contains the contents of the MS-OXWUMS-types.xsd file.

```

<?xml version="1.0" encoding="utf-8"?>
<xs:schema xmlns:t="http://schemas.microsoft.com/exchange/services/2006/types"
xmlns:xs="http://www.w3.org/2001/XMLSchema"
targetNamespace="http://schemas.microsoft.com/exchange/services/2006/types"
elementFormDefault="qualified" version="Exchange2016" id="types">
    <xs:complexType name="PhoneCallIdType">
        <xs:attribute name="Id" type="xs:string" use="required"/>
    </xs:complexType>
    <xs:simpleType name="ConnectionFailureCauseType">
        <xs:restriction base="xs:string">
            <xs:enumeration value="None"/>
            <xs:enumeration value="UserBusy"/>
            <xs:enumeration value="NoAnswer"/>
            <xs:enumeration value="Unavailable"/>
            <xs:enumeration value="Other"/>
        </xs:restriction>
    </xs:simpleType>
    <xs:simpleType name="PhoneCallStateType">
        <xs:restriction base="xs:string">
            <xs:enumeration value="Idle"/>
            <xs:enumeration value="Connecting"/>
            <xs:enumeration value="Alerted"/>
            <xs:enumeration value="Connected"/>
            <xs:enumeration value="Disconnected"/>
            <xs:enumeration value="Incoming"/>
            <xs:enumeration value="Transferring"/>
            <xs:enumeration value="Forwarding"/>
        </xs:restriction>
    </xs:simpleType>
    <xs:complexType name="PhoneCallInformationType">
        <xs:sequence>
            <xs:element name="PhoneCallState" type="t:PhoneCallStateType" minOccurs="1"
maxOccurs="1"/>
            <xs:element name="ConnectionFailureCause" type="t:ConnectionFailureCauseType"
minOccurs="1" maxOccurs="1"/>
            <xs:element name="SIPResponseText" type="xs:string" minOccurs="0" maxOccurs="1"/>
            <xs:element name="SIPResponseCode" type="xs:int" minOccurs="0" maxOccurs="1"/>
        </xs:sequence>
    </xs:complexType>
</xs:schema>

```

8 Appendix C: Product Behavior

The information in this specification is applicable to the following Microsoft products or supplemental software. References to product versions include updates to those products.

- Microsoft Exchange Server 2007
- Microsoft Exchange Server 2010
- Microsoft Exchange Server 2013
- Microsoft Exchange Server 2016
- Microsoft Exchange Server 2019
- Microsoft Office Outlook 2007
- Microsoft Outlook 2010
- Microsoft Outlook 2013
- Microsoft Outlook 2016
- Microsoft Outlook 2019

Exceptions, if any, are noted in this section. If an update version, service pack or Knowledge Base (KB) number appears with a product name, the behavior changed in that update. The new behavior also applies to subsequent updates 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.

<1> [Section 3.1.4](#): Exchange 2007 does not implement the **DisconnectPhoneCall** operation.

<2> [Section 3.1.4](#): Exchange 2007 does not implement the **GetPhoneCallInformation** operation.

<3> [Section 3.1.4](#): Exchange 2007 does not implement the **PlayOnPhone2** operation.

<4> [Section 3.1.4.1](#): Exchange 2007 returns the **faultcode** element with a text string of "soap:Server" and a **faultstring** element with a text string of "The caller ID is not valid. ---> The caller ID is not valid. ---> Invalid character in a Base-64 string."

<5> [Section 3.1.4.1](#): Exchange 2007 returns the **faultcode** element with a text string of "soap:Server".

<6> [Section 3.1.4.1](#): Exchange 2007 returns the **faultstring** element with a text string of "The caller ID is not valid. ---> The caller ID is not valid. ---> Invalid character in a Base-64 string."

<7> [Section 3.1.4.2](#): Exchange 2007 does not implement and Office Outlook 2007 does not use the **DisconnectPhoneCall** operation

<8> [Section 3.1.4.3](#): Exchange 2007 returns the **faultcode** element with a text value of "soap:Server" and the **faultstring** element with a text value of "The caller ID is not valid. ---> The caller ID is not valid. ---> Invalid character in a Base-64 string."

<9> [Section 3.1.4.3](#): Exchange 2007 returns the **faultcode** element with a text value of "soap:Server".

<10> [Section 3.1.4.3](#): Exchange 2007 returns the **faultstring** element with a text value of "The caller ID is not valid. ---> The caller ID is not valid. ---> Invalid character in a Base-64 string."

<11> [Section 3.1.4.4](#): Exchange 2007 does not implement and Office Outlook 2007 does not use the **GetPhoneCallInformation** operation.

<12> [Section 3.1.4.6](#): Office Outlook 2007 and Outlook 2010 do not use the **IsUMEnabled** operation.

<13> [Section 3.1.4.7](#): Exchange 2007 does not implement and Office Outlook 2007 does not use the **PlayOnPhone2** operation.

<14> [Section 3.1.4.8](#): Exchange 2007 returns the **faultcode** element with a text string of "soap:Server" and the **faultstring** element with a text string of "The caller ID is not valid. ---> The caller ID is not valid. ---> Invalid character in a Base-64 string."

<15> [Section 3.1.4.8](#): Exchange 2007 returns the **faultcode** element with a text string of "soap:Server".

<16> [Section 3.1.4.8](#): Exchange 2007 returns the **faultstring** element with a text string of "The caller ID is not valid. ---> The caller ID is not valid. ---> Invalid character in a Base-64 string."

<17> [Section 3.1.4.8](#): Exchange 2007 returns the **faultcode** element with a text string of "soap:Server" and the **faultstring** element with a text string of "The object identifier is not valid. ---> The object identifier is not valid. ---> Invalid character in a Base-64 string."

<18> [Section 3.1.4.8](#): Exchange 2007 returns the **faultcode** element with a text string of "soap:Server".

<19> [Section 3.1.4.8](#): Exchange 2007 returns the **faultstring** element with a text string of "The object identifier is not valid. ---> The object identifier is not valid. ---> Invalid character in a Base-64 string."

<20> [Section 3.1.4.9](#): Exchange 2007 returns the **faultcode** element with a text value of "soap:Server" and the **faultstring** element with a text value of "The telephone number cannot be dialed as specified. Check the outbound dialing configuration. ---> The telephone number cannot be dialed as specified. Check the outbound dialing configuration."

<21> [Section 3.1.4.9](#): Exchange 2007 returns the **faultcode** element with a text value of "soap:Server".

<22> [Section 3.1.4.9](#): Exchange 2007 returns the **faultstring** element with a text value of "The telephone number cannot be dialed as specified. Check the outbound dialing configuration. ---> The telephone number cannot be dialed as specified. Check the outbound dialing configuration."

<23> [Section 3.1.4.10](#): Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016, and Exchange 2019 send an e-mail message with the new **Unified Messaging** password to the mailbox user after a successful **ResetPIN** operation.

9 Change Tracking

This section identifies changes that were made to this document since the last release. Changes are classified as Major, Minor, or None.

The revision class **Major** means that the technical content in the document was significantly revised. Major changes affect protocol interoperability or implementation. Examples of major changes are:

- A document revision that incorporates changes to interoperability requirements.
- A document revision that captures changes to protocol functionality.

The revision class **Minor** means that the meaning of the technical content was clarified. Minor changes do not affect protocol interoperability or implementation. Examples of minor changes are updates to clarify ambiguity at the sentence, paragraph, or table level.

The revision class **None** means that no new technical changes were introduced. Minor editorial and formatting changes may have been made, but the relevant technical content is identical to the last released version.

The changes made to this document are listed in the following table. For more information, please contact dochelp@microsoft.com.

Section	Description	Revision class
All	Updated supported products throughout document.	Major
8 Appendix C: Product Behavior	Updated list of products.	Major

10 Index

A

Abstract data model
[client](#) 78
[server](#) 19
[Applicability](#) 12
[Attribute groups](#) 18
[Attributes](#) 17

C

[Capability negotiation](#) 12
[Change tracking](#) 105
Client
[abstract data model](#) 78
[initialization](#) 78
[local events](#) 80
[message processing](#) 79
[sequencing rules](#) 79
[timer events](#) 80
[timers](#) 78
[Complex types](#) 17
[t:PhoneCallIdType Complex Type](#) 17

D

Data model - abstract
[client](#) 78
[server](#) 19

E

Elements
[m:ExceptionType Element](#) 16
[m:Message Element](#) 16
[m:ResponseCode Element](#) 16
Events
[local - client](#) 80
[local - server](#) 78
[timer - client](#) 80
[timer - server](#) 78

F

[Fields - vendor-extensible](#) 13
[Full WSDL](#) 92
[Full XML schema](#) 98
[Messages Schema](#) 98
[Types Schema](#) 102

G

[Glossary](#) 9
[Groups](#) 17

I

[Implementer - security considerations](#) 91
[Index of security parameters](#) 91
[Informative references](#) 11
Initialization

[client](#) 78
[server](#) 22
[Introduction](#) 9

L

Local events
[client](#) 80
[server](#) 78

M

[m:ExceptionType Element element](#) 16
[m:Message Element element](#) 16
[m:ResponseCode Element element](#) 16
Message processing
[client](#) 79
[server](#) 22
Messages
[attribute groups](#) 18
[attributes](#) 17
[complex types](#) 17
[elements](#) 15
[enumerated](#) 14
[groups](#) 17
[m:ExceptionType Element element](#) 16
[m:Message Element element](#) 16
[m:ResponseCode Element element](#) 16
[Malformed XML SOAP Fault](#) 15
[Malformed XML SOAP Fault message](#) 15
[namespaces](#) 14
[simple types](#) 17
[syntax](#) 14
[t:PhoneCallIdType Complex Type complex type](#) 17
[transport](#) 14

N

[Namespaces](#) 14
[Normative references](#) 10

O

Operations
[Disconnect Operation](#) 23
[DisconnectPhoneCall Operation](#) 26
[GetCallInfo Operation](#) 30
[GetPhoneCallInformation Operation](#) 36
[GetUMProperties Operation](#) 43
[IsUMEnabled Operation](#) 47
[PlayOnPhone Operation](#) 55
[PlayOnPhone2 Operation](#) 50
[PlayOnPhoneGreeting Operation](#) 60
[ResetPIN Operation](#) 64
[SetMissedCallNotificationEnabled Operation](#) 66
[SetOofStatus Operation](#) 69
[SetPlayOnPhoneDialString Operation](#) 72
[SetTelephoneAccessFolderEmail Operation](#) 75
[Overview \(synopsis\)](#) 11

P

[Parameters - security index](#) 91
[Preconditions](#) 12
[Prerequisites](#) 12
[Product behavior](#) 103

R

[References](#) 10
 [informative](#) 11
 [normative](#) 10
[Relationship to other protocols](#) 11

S

Security
 [implementer considerations](#) 91
 [parameter index](#) 91
Sequencing rules
 [client](#) 79
 [server](#) 22
Server
 [abstract data model](#) 19
 [Disconnect Operation operation](#) 23
 [DisconnectPhoneCall Operation operation](#) 26
 [GetCallInfo Operation operation](#) 30
 [GetPhoneCallInformation Operation operation](#) 36
 [GetUMProperties Operation operation](#) 43
 [initialization](#) 22
 [IsUMEnabled Operation operation](#) 47
 [local events](#) 78
 [message processing](#) 22
 [PlayOnPhone Operation operation](#) 55
 [PlayOnPhone2 Operation operation](#) 50
 [PlayOnPhoneGreeting Operation operation](#) 60
 [ResetPIN Operation operation](#) 64
 [sequencing rules](#) 22
 [SetMissedCallNotificationEnabled Operation operation](#) 66
 [SetOutOfStatus Operation operation](#) 69
 [SetPlayOnPhoneDialString Operation operation](#) 72
 [SetTelephoneAccessFolderEmail Operation operation](#) 75
 [timer events](#) 78
 [timers](#) 22
[Simple types](#) 17
[Standards assignments](#) 13
Syntax
 [messages - overview](#) 14

T

[t:PhoneCallIdType Complex Type complex type](#) 17
Timer events
 [client](#) 80
 [server](#) 78
Timers
 [client](#) 78
 [server](#) 22
[Tracking changes](#) 105
[Transport](#) 14
Types
 [complex](#) 17
 [simple](#) 17

V

[Vendor-extensible fields](#) 13
[Versioning](#) 12

W

[WSDL](#) 92

X

[XML schema](#) 98
 [Messages Schema](#) 98
 [Types Schema](#) 102