

# [MS-OXWMT]: Mail Tips Web Service Extensions

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## Revision Summary

Date	Revision History	Revision Class	Comments
04/10/2009	.1	Major	Initial Availability.
07/15/2009	1.0	Major	Revised and edited for technical content.
11/04/2009	1.1.0	Minor	Updated the technical content.
02/10/2010	2.0.0	Major	Updated and revised the technical content.

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# 1 Introduction

This document specifies the Mail Tips Web Service extensions, which are responsible for request-response **messages** for retrieving **mail tips** for a **mailbox**. Clients use the SOAP protocol [[SOAP1.1](#)] to contact the Mail Tips Web service.

## 1.1 Glossary

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

**Active Directory domain**  
**Hypertext Transfer Protocol (HTTP)**  
**Hypertext Transfer Protocol over Secure Sockets Layer (HTTPS)**  
**mail tip**  
**mailbox**  
**Out of Office (OOO)**  
**property**  
**recipient**  
**Simple Mail Transfer Protocol (SMTP)**  
**SOAP body**  
**SOAP fault**  
**SOAP header**  
**Web Services Description Language (WSDL)**  
**WSDL message**  
**WSDL port type**  
**XML**  
**XML schema**

The following terms are specific to this document:

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

## 1.2 References

### 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](mailto:dochelp@microsoft.com). We will assist you in finding the relevant information. Please check the archive site, <http://msdn2.microsoft.com/en-us/library/E4BD6494-06AD-4aed-9823-445E921C9624>, as an additional source.

[MS-OXGLOS] Microsoft Corporation, "[Exchange Server Protocols Master Glossary](#)", June 2008.

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

[RFC2396] Berners-Lee, T., Fielding, R., and Masinter, L., "Uniform Resource Identifiers (URI): Generic Syntax", RFC 2396, August 1998, <http://www.ietf.org/rfc/rfc2396.txt>.

[RFC2616] Fielding, R., et al., "Hypertext Transfer Protocol -- HTTP/1.1", RFC 2616, June 1999, <http://www.ietf.org/rfc/rfc2616.txt>.

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

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

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

[SOAP1.2/1] Gudgin, M., Hadley, M., Mendelsohn, N., Moreau, J., and Nielsen, H.F., "SOAP Version 1.2 Part 1: Messaging Framework", W3C Recommendation, June 2003, <http://www.w3.org/TR/2003/REC-soap12-part1-20030624>.

[SOAP1.2/2] Gudgin, M., Hadley, M., Mendelsohn, N., Moreau, J., and Nielsen, H.F., "SOAP Version 1.2 Part 2: Adjuncts", W3C Recommendation, June 2003, <http://www.w3.org/TR/2003/REC-soap12-part2-20030624>.

[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>.

[XML10] World Wide Web Consortium, "Extensible Markup Language (XML) 1.0 (Third Edition)", February 2004, <http://www.w3.org/TR/2004/REC-xml-20040204/>.

[XMLINFOSET] World Wide Web Consortium, "XML Information Set (Second Edition)", February 2004, <http://www.w3.org/TR/2004/REC-xml-infoset-20040204>.

[XMLNS] World Wide Web Consortium, "Namespaces in XML 1.0 (Second Edition)", August 2006, <http://www.w3.org/TR/REC-xml-names/>.

[XMLSCHEMA1] Thompson, H.S., Ed., Beech, D., Ed., Maloney, M., Ed., and Mendelsohn, N., Ed., "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

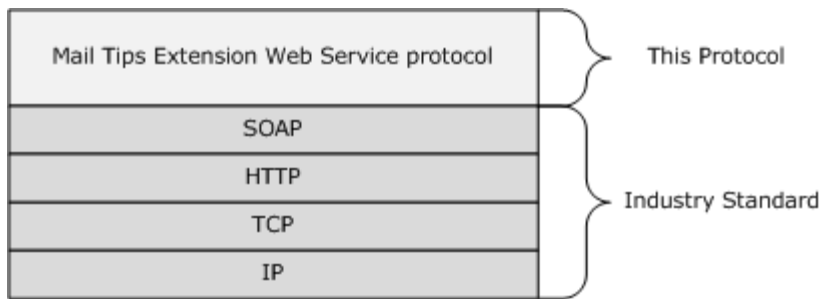
None.

## 1.3 Protocol Overview

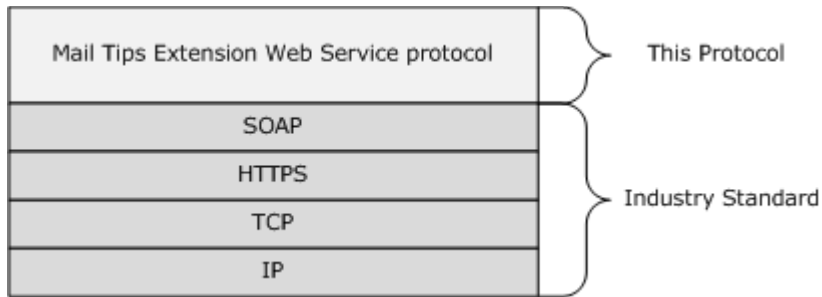
Mail tips are bits of information that are presented to the author of a message while they are composing, to help them understand what will happen when they send the message. The Mail Tips Web Service extensions enable e-mail clients to request information about **recipient** mailboxes from the server by using the SOAP protocol [\[SOAP 1.1\]](#). The **XML** that is returned in the response allows the client to present this information to the author.

## 1.4 Relationship to Other Protocols

The Mail Tips Web Service extensions use SOAP over **HTTP** and SOAP over **HTTPS**, as shown in the following figures.



**Figure 1: SOAP over HTTP**



**Figure 2: SOAP over HTTPS**

## 1.5 Prerequisites/Preconditions

The URL of the Mailtips Web Service extensions can be retrieved by using the Autodiscover Publishing and Lookup SOAP-Based Web Service protocol [\[MS-OXWSADISC\]](#).

## 1.6 Applicability Statement

The Mailtips Web Service extensions can be used when access to helpful mailbox information is available and when communication with the server is enabled for SOAP over HTTP or SOAP over HTTPS.

## 1.7 Versioning and Capability Negotiation

This document covers versioning issues in the following areas:

- **Supported Transports:** This protocol uses SOAP 1.1, as specified in section [1.7](#).
- **Protocol Versions:** This protocol specifies only one **WSDL port type** version.
- **Security and Authentication Methods:** This protocol relies on the Web server that is hosting it to perform authentication.

**Capability Negotiation:** None.

## 1.8 Vendor-Extensible Fields

None.

## 1.9 Standards Assignments

None.



## 2 Messages

### 2.1 Transport

The SOAP version supported is SOAP 1.1. For details, see [\[SOAP1.1\]](#).

### 2.2 Common Message Syntax

This section specifies 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
soap	<a href="http://schemas.xmlsoap.org/wsdl/soap/">http://schemas.xmlsoap.org/wsdl/soap/</a>	<a href="#">[SOAP1.1]</a>
tns	<a href="http://schemas.microsoft.com/exchange/services/2006/messages">http://schemas.microsoft.com/exchange/services/2006/messages</a>	[MS-OXWMT]
xs	<a href="http://www.w3.org/2001/XMLSchema">http://www.w3.org/2001/XMLSchema</a>	<a href="#">[XMLSCHEMA1]</a>
targetNamespace	<a href="http://schemas.microsoft.com/exchange/services/2006/messages">http://schemas.microsoft.com/exchange/services/2006/messages</a>	[MS-OXWMT]
wsdl	<a href="http://schemas.xmlsoap.org/wsdl/">http://schemas.xmlsoap.org/wsdl/</a>	<a href="#">[WSDL]</a>
t	<a href="http://schemas.microsoft.com/exchange/services/2006/types">http://schemas.microsoft.com/exchange/services/2006/types</a>	[MS-OXWMT]
m	<a href="http://schemas.microsoft.com/exchange/services/2006/messages">http://schemas.microsoft.com/exchange/services/2006/messages</a>	[MS-OXWMT]

#### 2.2.2 Messages

This specification does not define any common **WSDL message** definitions.

#### 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 defined with the operation.

Element	Description
<b>t:MailboxCulture</b>	Specifies the mailbox language.

#### 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 defined with the operation.

Complex type	Description
<b>m:BaseRequestType</b>	The base request type.
<b>t:EmailAddressType</b>	Specifies the identity of the sender or recipient actor of the request.
<b>t:MailboxCultureType</b>	Specifies the mailbox language.
<b>t:RequestServerVersion</b>	Specifies the server version to target.
<b>m:ResponseMessageType</b>	Specifies the base type for the <b>GetMailTipsResponseMessageType</b> and <b>GetMailTipsConfigurationResponseMessageType</b> types.
<b>t:ServerVersionInfo</b>	Specifies the server version.

### 2.2.5 Simple Types

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

Simple type	Description
<b>t:NonEmptyStringType</b>	Specifies a string with a minimum length of one character.
<b>t:ExchangeVersionType</b>	Specifies the server version.
<b>m:ResponseCodeType</b>	Specifies the response codes that are returned in a response.

### 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

The client side of this protocol is simply a pass-through. That is, no additional timers or other state is required on the client side of this protocol. Calls made by the higher-layer protocol or application are passed directly to the transport, and the results returned by the transport are passed directly back to the higher-layer protocol or application.

### 3.1 ExchangeServicePortType Server Details

The Mail Tips Web Service extensions define a single port type.

```
<wsdl:portType name="ExchangeServicePortType">
  <wsdl:operation name="GetMailTips">
    <wsdl:input message="tns:GetMailTipsSoapIn" />
    <wsdl:output message="tns:GetMailTipsSoapOut" />
  </wsdl:operation>

  <wsdl:operation name="GetServiceConfiguration">
    <wsdl:input message="tns:GetServiceConfigurationSoapIn" />
    <wsdl:output message="tns:GetServiceConfigurationSoapOut" />
  </wsdl:operation>
</wsdl:portType>
```

#### 3.1.1 Abstract Data Model

The Mail Tips Web Service extensions extend a stateless protocol.

#### 3.1.2 Timers

None.

#### 3.1.3 Initialization

None.

#### 3.1.4 Message Processing Events and Sequencing Rules

This protocol includes the two operations listed in the following table.

Operation	Description
<b>GetMailTips</b>	Provides mail tips information for a mailbox.
<a href="#">GetServiceConfiguration</a>	Provides policy configuration information for a mailbox.

##### 3.1.4.1 GetMailTips

The **GetMailTips** operation gets the mail tips information for a mailbox.

```
<wsdl:operation name="GetMailTips">
  <soap:operation
    soapAction="http://schemas.microsoft.com/exchange/services/2006/messages/GetMailTips" />
  <wsdl:input>
    <soap:body parts="request" use="literal"/>
  </wsdl:input>
</wsdl:operation>
```

```

    <soap:header message="tns:GetMailTipsSoapIn" part="RequestVersion" use="literal"/>
    <soap:header message="tns:GetMailTipsSoapIn" part="MailboxCulture" use="literal"/>
  </wsdl:input>
  <wsdl:output>
    <soap:body parts="GetMailTipsResult" use="literal" />
    <soap:header message="tns:GetMailTipsSoapOut" part="ServerVersion" use="literal"/>
  </wsdl:output>
</wsdl:operation>

```

### 3.1.4.1.1 Messages

The following WSDL message definitions are specific to this operation.

#### 3.1.4.1.1.1 GetMailTipsSoapIn

The **GetMailTipsSoapIn** message contains three parts.

Part Name	Element/Type	Description
request	<b>GetMailTips</b>	This part specifies the request.
RequestVersion	<b>RequestServerVersion</b>	This part specifies the schema version for the <b>GetMailTips</b> request.
MailboxCulture	<b>MailboxCulture</b>	This part specifies the culture to use for accessing the mailbox. The cultures are defined by <a href="#">RFC3066</a> .

#### 3.1.4.1.1.2 GetMailTipsSoapOut

The **GetMailTipsSoapOut** message contains two parts.

Part Name	Element/Type	Description
GetMailTipsResult	<b>GetMailTipsResponse</b>	This part specifies the response.
ServerVersion	<b>ServerVersionInfo</b>	This part specifies the server version for the response.

### 3.1.4.1.2 Elements

The following XML schema element definitions are specific to this operation.

#### 3.1.4.1.2.1 GetMailTips

The **GetMailTips** element specifies the base element for a **GetMailTips** request.

```
<xs:element name="GetMailTips" type="m:GetMailTipsType"/>
```

#### 3.1.4.1.2.2 GetMailTipsResponse

The **GetMailTipsResponse** element specifies the response message for a **GetMailTips** operation.

```
<xs:element name="GetMailTipsResponse" type="m:GetMailTipsResponseMessageType"/>
```

### 3.1.4.1.3 Complex Types

The following XML schema complex type definitions are specific to this operation.

#### 3.1.4.1.3.1 m:ArrayOfMailTipsResponseMessageType

The **ArrayOfMailTipsResponseMessageType** type specifies an array of mail tips response messages.

```
<xs:complexType name="ArrayOfMailTipsResponseMessageType">
  <xs:sequence>
    <xs:element name="MailTipsResponseMessageType" type="m:MailTipsResponseMessageType"
      minOccurs="1" maxOccurs="unbounded" />
  </xs:sequence>
</xs:complexType>
```

Element	Type	Definition
<b>MailTipsResponseMessageType</b>	<b>m:MailTipsResponseMessageType</b>	Contains a mail tips response message. This element <b>MUST</b> occur at least once and can occur two or more times.

#### 3.1.4.1.3.2 m:GetMailTipsResponseMessageType

The **GetMailTipsResponseMessageType** complex type contains the response message for a **GetMailTips** operation. The **GetMailTipsResponseMessageType** complex type extends the **ResponseMessageType** complex type ([\[MS-OXWSCDATA\]](#) section 2.2.3.52).

```
<xs:complexType name="GetMailTipsResponseMessageType">
  <xs:complexContent>
    <xs:extension base="m:ResponseMessageType">
      <xs:sequence>
        <xs:element name="ResponseMessages" type="m:ArrayOfMailTipsResponseMessageType"
          minOccurs="0" maxOccurs="1"/>
      </xs:sequence>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>
```

Element	Type	Definition
<b>ResponseMessages</b>	<b>m:ArrayOfMailTipsResponseMessageType</b>	Contains an array of mail tips response messages. This element <b>MUST</b> occur if there are mail tips.

#### 3.1.4.1.3.3 m:GetMailTipsType

The **GetMailTipsType** complex type specifies the requested mail tips and identifies the sender or recipient actor who is making the request. The recipient actor can be different from the user who authenticated with the server. The **GetMailTipsType** complex type extends the **BaseRequestType** complex type ([\[MS-OXWSCDATA\]](#) section 2.2.3.14).

```

<xs:complexType name="GetMailTipsType">
  <xs:complexContent>
    <xs:extension base="m:BaseRequestType">
      <xs:sequence>
        <xs:element name="SendingAs" type="t:EmailAddressType" minOccurs="1" maxOccurs="1" />
        <xs:element name="Recipients" type="t:ArrayOfRecipientsType" minOccurs="1"
maxOccurs="1" />
        <xs:element name="MailTipsRequested" type="t:MailTipTypes" minOccurs="1"
maxOccurs="1" />
      </xs:sequence>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>

```

### 3.1.4.1.3.4 t:MailTips

The **MailTips** complex type contains values for the Mail Tips Web service.

```

<xs:complexType name="MailTips">
  <xs:sequence>
    <xs:element minOccurs="1" maxOccurs="1" name="RecipientAddress" type="t:EmailAddressType"
/>
    <xs:element minOccurs="1" maxOccurs="1" name="PendingMailTips" type="t:MailTipTypes" />
    <xs:element minOccurs="0" maxOccurs="1" name="OutOfOffice" type="t:OutOfOfficeMailTip" />
    <xs:element minOccurs="0" maxOccurs="1" name="OutOfOfficeMessage" type="xs:string" />
    <xs:element minOccurs="0" maxOccurs="1" name="MailboxFull" type="xs:boolean" />
    <xs:element minOccurs="0" maxOccurs="1" name="CustomMailTip" type="xs:string" />
    <xs:element minOccurs="0" maxOccurs="1" name="TotalMemberCount" type="xs:int" />
    <xs:element minOccurs="0" maxOccurs="1" name="ExternalMemberCount" type="xs:int" />
    <xs:element minOccurs="0" maxOccurs="1" name="MaxMessageSize" type="xs:int" />
    <xs:element minOccurs="0" maxOccurs="1" name="DeliveryRestricted" type="xs:boolean" />
    <xs:element minOccurs="0" maxOccurs="1" name="IsModerated" type="xs:boolean" />
    <xs:element minOccurs="0" maxOccurs="1" name="InvalidRecipient" type="xs:boolean" />
  </xs:sequence>
</xs:complexType>

```

Element	Type	Definition
<RecipientAddress>	<a href="#">t:EmailAddressType</a>	Specifies the mailbox of the recipient.
<PendingMailTips>	<a href="#">t:MailTipTypes</a>	Indicates that the mail tips in this element could not be evaluated before the server's processing timeout expired.
<OutOfOffice>	<a href="#">t:OutOfOfficeMailTip</a>	Specifies the response message for <b>OOF</b> and the duration for sending this message.
<MailboxFull>	xs:boolean	Specifies whether the mailbox for the recipient is full.
<CustomMailTip>	xs:string	Specifies a custom mail tip.
<TotalMemberCount>	xs:int	Specifies the total number of members in a group. This value <b>MUST</b> be a non-negative integer.
<ExternalMemberCount>	xs:int	Specifies the number of external members in a group. This value <b>MUST</b> be a non-negative integer.

Element	Type	Definition
<MaxMessageSize>	xs:int	Specifies the maximum message size the recipient can accept. This value MUST be a non-negative integer.
<DeliveryRestricted>	xs:boolean	Indicates whether delivery restrictions will prevent the sender's message from reaching the recipient.
<IsModerated>	xs:boolean	Specifies whether the recipient's mailbox is being moderated.
<InvalidRecipient>	xs:boolean	Specifies whether the recipient is invalid.

When the <InvalidRecipient> **MailTips** element is sent by the client to the server, the server will indicate which of the given recipients are invalid. A recipient is considered "invalid" in the following cases:

- The recipient's address has a routing type of "EX" and the recipient does not exist in the directory.
- The recipient's address has a routing type of **SMTP**, and the **domain** part of the SMTP address is empty.
- The recipient's address has a routing type of SMTP, and the domain part of the SMTP address is a domain for which the organization is authoritative, and the recipient does not exist in the directory.

### 3.1.4.1.3.5 m:MailTipsResponseMessageType

The **MailTipsResponseMessageType** complex type specifies mail tips settings. The **MailTipsResponseMessageType** complex type extends the **ResponseMessageType** complex type ([\[MS-OXWSCDATA\]](#) section 2.2.3.52).

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

Element	Type	Definition
<b>MailTips</b>	<b>t:MailTips</b>	Contains values for the mail tips service. This element MUST occur for sender hints configuration.

### 3.1.4.1.3.6 t:OutOfOfficeMailTip

The **OutOfOfficeMailTip** complex type contains the response message and a duration time for sending the response message.

```
<xs:complexType name="OutOfOfficeMailTip">
```

```

<xs:sequence>
  <xs:element minOccurs="1" maxOccurs="1" name="ReplyBody" type="t:ReplyBody"/>
  <xs:element minOccurs="0" maxOccurs="1" name="Duration" type="t:Duration"/>
</xs:sequence>
</xs:complexType>

```

Element	Type	Definition
<ReplyBody>	<a href="#">t:ReplyBody</a>	Contains the OOF message response. This element is required and MUST only occur once.
<Duration>	<a href="#">t:Duration</a>	Contains the start and end time for sending OOF messages. This element is optional, and if present MUST only occur once.

### 3.1.4.1.3.7 t:ReplyBody

The **ReplyBody** type specifies the OOF message response.

```

<xs:complexType name="ReplyBody">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="1" name="Message" type="xs:string" />
  </xs:sequence>
  <xs:attribute ref="xml:lang" use="optional" />
</xs:complexType>

```

Element	Type	Definition
<b>Message</b>	<b>xs:string</b>	Contains the OOF message response.
<b>Lang</b>	<b>xml:lang</b>	Indicates the language that the OOF message was written in. This element is optional.

### 3.1.4.1.4 Simple Types

The following XML schema simple definitions are specific to this operation.

#### 3.1.4.1.4.1 t:MailTipTypes

The **MailTipsType** simple type describes the types of mail tips that are supported by the service.

```

<xs:simpleType name="MailTipTypes">
  <xs:list>
    <xs:simpleType>
      <xs:restriction base="xs:string">
        <xs:enumeration value="All" />
        <xs:enumeration value="OutOfOfficeMessage" />
        <xs:enumeration value="MailboxFullStatus" />
        <xs:enumeration value="CustomMailTip" />
        <xs:enumeration value="ExternalMemberCount" />
        <xs:enumeration value="TotalMemberCount" />
        <xs:enumeration value="MaxMessageSize" />
        <xs:enumeration value="DeliveryRestriction" />
        <xs:enumeration value="ModerationStatus" />
        <xs:enumeration value="InvalidRecipient" />
      </xs:restriction>
    </xs:simpleType>
  </xs:list>
</xs:simpleType>

```



```

    </xs:simpleType>
  </xs:list>
</xs:simpleType>

```

Value	Description
All	Represents all available mail tips.
OutOfOfficeMessage	Represents the Out of Office (OOF) message.
MailboxFullStatus	Represents the status for a mailbox being full.
CustomMailTip	Represents a custom mail tip.
ExternalMemberCount	Represents the count of external members.
TotalMemberCount	Represents the count of all members.
MaxMessageSize	Represents the maximum message size a recipient can accept.
DeliveryRestriction	Indicates whether delivery <b>restrictions</b> will prevent the sender's message from reaching the recipient.
ModerationStatus	Indicates whether the sender's message will be reviewed by a moderator.
InvalidRecipient	Indicates whether the recipient is valid.

When the InvalidRecipient **MailTipsType** is sent by the client to the server, the server will indicate which of the given recipients are invalid. A recipient is considered "invalid" in the following cases:

- The recipient's address has a routing type of "EX" and the recipient does not exist in the directory.
- The recipient's address has a routing type of SMTP, and the domain part of the SMTP address is empty.
- The recipient's address has a routing type of SMTP, and the domain part of the SMTP address is a domain for which the organization is authoritative, and the recipient does not exist in the directory.

#### 3.1.4.1.5 Attributes

This specification does not define any specific XML schema attribute definitions for this operation.

#### 3.1.4.1.6 Groups

This specification does not define any specific XML schema group definitions for this operation.

#### 3.1.4.1.7 Attribute Groups

This specification does not define any specific XML schema attribute group definitions for this operation.

### 3.1.5 Timer Events

None.

### **3.1.6 Other Local Events**

None.

## **3.2 Client Details**

The client side of this protocol is simply a pass-through. That is, no additional timers or other state is required on the client side of this protocol. Calls made by the higher-layer protocol or application are passed directly to the transport, and the results that are returned by the transport are passed directly back to the higher-layer protocol or application.

### **3.2.1 Abstract Data Model**

None.

### **3.2.2 Timers**

None.

### **3.2.3 Initialization**

None.

### **3.2.4 Message Processing Events and Sequencing Rules**

None.

### **3.2.5 Timer Events**

None.

### **3.2.6 Other Local Events**

None.

## 4 Protocol Examples

### 4.1 GetMailTips Request

The following example shows how to get mail tips for a user.

```
<?xml version="1.0" encoding="utf-8" ?>
<soap:Envelope xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
  xmlns:xsd="http://www.w3.org/2001/XMLSchema"
  xmlns:soap="http://schemas.xmlsoap.org/soap/envelope/"
  xmlns:t="http://schemas.microsoft.com/exchange/services/2006/types">
  <soap:Header>
    <t:RequestServerVersion Version="Exchange2010" />
  </soap:Header>

  <soap:Body>
    <GetMailTips xmlns="http://schemas.microsoft.com/exchange/services/2006/messages">
      <SendingAs>
        <t:EmailAddress> user1@contoso.com </t:EmailAddress>
        <t:RoutingType>SMTP</t:RoutingType>
      </SendingAs>
      <Recipients>
        <t:Mailbox>
          <t:EmailAddress> user2@contoso.com </t:EmailAddress>
          <t:RoutingType>SMTP</t:RoutingType>
        </t:Mailbox>
      </Recipients>
      <MailTipsRequested>All</MailTipsRequested>
    </GetMailTips>
  </soap:Body>
</soap:Envelope>
```

### 4.2 GetMailTips Response

The following is an example of a successful response from the **GetMailTips** service.

```
<?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="536"
      MinorBuildNumber="0" Version="Exchange2010"
      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">
    <GetMailTipsResponse ResponseClass="Success"
      xmlns="http://schemas.microsoft.com/exchange/services/2006/messages">
      <ResponseCode>NoError</ResponseCode>
      <ResponseMessages>
        <MailTipsResponseMessageType ResponseClass="Success">
          <ResponseCode>NoError</ResponseCode>
          <m:MailTips xmlns:m="http://schemas.microsoft.com/exchange/services/2006/messages">
```

```

        <t:RecipientAddress
xmlns:t="http://schemas.microsoft.com/exchange/services/2006/types">
        <t:Name />
        <t:EmailAddress>user2@contoso.com</t:EmailAddress>
        <t:RoutingType>SMTP</t:RoutingType>
        </t:RecipientAddress>
        <t:PendingMailTips
xmlns:t="http://schemas.microsoft.com/exchange/services/2006/types"/>
        <t:OutOfOffice
xmlns:t="http://schemas.microsoft.com/exchange/services/2006/types">
        <t:ReplyBody>
        <t:Message />
        </t:ReplyBody>
        </t:OutOfOffice>
        <t:MailboxFull
xmlns:t="http://schemas.microsoft.com/exchange/services/2006/types">false</t:MailboxFull>
        <t:CustomMailTip
xmlns:t="http://schemas.microsoft.com/exchange/services/2006/types">Hello World
Mailtips</t:CustomMailTip>
        <t:TotalMemberCount
xmlns:t="http://schemas.microsoft.com/exchange/services/2006/types">1</t:TotalMemberCount>
        <t:ExternalMemberCount
xmlns:t="http://schemas.microsoft.com/exchange/services/2006/types">0</t:ExternalMemberCount>
        <t:MaxMessageSize
xmlns:t="http://schemas.microsoft.com/exchange/services/2006/types">10485760</t:MaxMessageSize>
        <t:DeliveryRestricted
xmlns:t="http://schemas.microsoft.com/exchange/services/2006/types">false</t:DeliveryRestricted>
        <t:IsModerated
xmlns:t="http://schemas.microsoft.com/exchange/services/2006/types">false</t:IsModerated>
        <t:InvalidRecipient
xmlns:t="http://schemas.microsoft.com/exchange/services/2006/types">false</t:InvalidRecipient>
        </m:MailTips>
        </MailTipsResponseMessageType>
    </ResponseMessages>
</GetMailTipsResponse>
</s:Body>
</s:Envelope>

```

## **5 Security**

### **5.1 Security Considerations for Implementers**

The Mailtips Extensions to Web Service protocol does not use additional security mechanisms.

### **5.2 Index of Security Parameters**

None.

## 6 Appendix A: Full WSDL

The following table lists the XML files that are required to implement the functionality that is specified in this document. The contents of each file are included in this section.

Section	File name	Description
<a href="#">WSDL</a>	MS-OXWMT.wsdl	Contains the WSDL for the implementation of this protocol.
<a href="#">Types Schema</a>	MS-OXWMT-types.xsd	Contains the XML schema type definitions that are used in this protocol.
<a href="#">Messages Schema</a>	MS-OXWMT-messages.xsd	Contains the XML schema message definitions that are used in this protocol.

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

### 6.1 WSDL

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

```
<?xml version="1.0" encoding="utf-8"?>
<wsdl:definitions xmlns:soap="http://schemas.xmlsoap.org/wsdl/soap/"
xmlns:tns="http://schemas.microsoft.com/exchange/services/2006/messages"
targetNamespace="http://schemas.microsoft.com/exchange/services/2006/messages"
xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/"
xmlns:t="http://schemas.microsoft.com/exchange/services/2006/types">
<wsdl:types>
<xs:schema id="messages" elementFormDefault="qualified" version="Exchange2010"
xmlns:xs="http://www.w3.org/2001/XMLSchema"
targetNamespace="http://schemas.microsoft.com/exchange/services/2006/messages">
<xs:include schemaLocation="MS-OXWMT-messages.xsd" />
</xs:schema>
</wsdl:types>
<wsdl:message name="GetMailTipsSoapIn">
<wsdl:part name="request" element="tns:GetMailTips"/>
<wsdl:part name="RequestVersion" element="t:RequestServerVersion"/>
<wsdl:part name="MailboxCulture" element="t:MailboxCulture"/>
</wsdl:message>
<wsdl:message name="GetMailTipsSoapOut">
<wsdl:part name="GetMailTipsResult" element="tns:GetMailTipsResponse"/>
<wsdl:part name="ServerVersion" element="t:ServerVersionInfo"/>
</wsdl:message>
<wsdl:portType name="ExchangeServicePortType">
<wsdl:operation name="GetMailTips">
<wsdl:input message="tns:GetMailTipsSoapIn"/>
<wsdl:output message="tns:GetMailTipsSoapOut"/>
</wsdl:operation>
</wsdl:portType>
<wsdl:binding name="ExchangeServiceBinding" type="tns:ExchangeServicePortType">
<wsdl:documentation>
<wsi:Claim conformsTo="http://ws-i.org/profiles/basic/1.0" xmlns:wsi="http://ws-
i.org/schemas/conformanceClaim"/>
</wsdl:documentation>
<soap:binding transport="http://schemas.xmlsoap.org/soap/http" style="document"/>
<wsdl:operation name="GetMailTips">
```

```

<soap:operation
soapAction="http://schemas.microsoft.com/exchange/services/2006/messages/GetMailTips"/>
<wsdl:input>
<soap:body parts="request" use="literal"/>
<soap:header message="tns:GetMailTipsSoapIn" part="RequestVersion" use="literal"/>
<soap:header message="tns:GetMailTipsSoapIn" part="MailboxCulture" use="literal"/>
</wsdl:input>
<wsdl:output>
<soap:body parts="GetMailTipsResult" use="literal"/>
<soap:header message="tns:GetMailTipsSoapOut" part="ServerVersion" use="literal"/>
</wsdl:output>
</wsdl:operation>
</wsdl:binding>
</wsdl:definitions>

```

## 6.2 Types Schema

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

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

Defining specification	File name
<a href="#">[MS-OXWSCDATA]</a> , section <a href="#">6.2</a>	MS-OXWSCDATA-types.xsd

```

<?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="Exchange2010" id="types">
<xs:include schemaLocation="MS-OXWSCDATA-types.xsd"/>
<xs:simpleType name="MailTipTypes">
<xs:list>
<xs:simpleType>
<xs:restriction base="xs:string">
<xs:enumeration value="All"/>
<xs:enumeration value="OutOfOfficeMessage"/>
<xs:enumeration value="MailboxFullStatus"/>
<xs:enumeration value="CustomMailTip"/>
<xs:enumeration value="ExternalMemberCount"/>
<xs:enumeration value="TotalMemberCount"/>
<xs:enumeration value="MaxMessageSize"/>
<xs:enumeration value="DeliveryRestriction"/>
<xs:enumeration value="ModerationStatus"/>
<xs:enumeration value="InvalidRecipient"/>
</xs:restriction>
</xs:simpleType>
</xs:list>
</xs:simpleType>
<xs:complexType name="OutOfOfficeMailTip">
<xs:sequence>
<xs:element minOccurs="1" maxOccurs="1" name="ReplyBody" type="t:ReplyBody"/>
<xs:element minOccurs="0" maxOccurs="1" name="Duration" type="t:Duration"/>

```

```

</xs:sequence>
</xs:complexType>
<xs:complexType name="MailTips">
<xs:sequence>
<xs:element minOccurs="1" maxOccurs="1" name="RecipientAddress" type="t:EmailAddressType"/>
<xs:element minOccurs="1" maxOccurs="1" name="PendingMailTips" type="t:MailTipTypes"/>
<xs:element minOccurs="0" maxOccurs="1" name="OutOfOffice" type="t:OutOfOfficeMailTip"/>
<xs:element minOccurs="0" maxOccurs="1" name="OutOfOfficeMessage" type="xs:string"/>
<xs:element minOccurs="0" maxOccurs="1" name="MailboxFull" type="xs:boolean"/>
<xs:element minOccurs="0" maxOccurs="1" name="CustomMailTip" type="xs:string"/>
<xs:element minOccurs="0" maxOccurs="1" name="TotalMemberCount" type="xs:int"/>
<xs:element minOccurs="0" maxOccurs="1" name="ExternalMemberCount" type="xs:int"/>
<xs:element minOccurs="0" maxOccurs="1" name="MaxMessageSize" type="xs:int"/>
<xs:element minOccurs="0" maxOccurs="1" name="DeliveryRestricted" type="xs:boolean"/>
<xs:element minOccurs="0" maxOccurs="1" name="IsModerated" type="xs:boolean"/>
<xs:element minOccurs="0" maxOccurs="1" name="InvalidRecipient" type="xs:boolean"/>
</xs:sequence>
</xs:complexType>
</xs:schema>

```

### 6.3 Messages Schema

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

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

Defining specification	File name
<a href="#">[MS-OXWSCDATA]</a> , section <a href="#">6.2</a>	MS-OXWSCDATA-messages.xsd

```

<?xml version="1.0" encoding="utf-8"?>
<xs:schema xmlns:m="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"
targetNamespace="http://schemas.microsoft.com/exchange/services/2006/messages"
elementFormDefault="qualified" version="Exchange2010" id="messages">
<xs:import namespace="http://schemas.microsoft.com/exchange/services/2006/types"
schemaLocation="MS-OXWMT-types.xsd"/>
<xs:include schemaLocation="MS-OXWSCDATA-messages.xsd"/>
<xs:complexType name="ArrayOfMailTipsResponseMessageType">
<xs:sequence>
<xs:element name="MailTipsResponseMessageType" type="m:MailTipsResponseMessageType"
minOccurs="1" maxOccurs="unbounded"/>
</xs:sequence>
</xs:complexType>
<xs:complexType name="GetMailTipsResponseMessageType">
<xs:complexContent>
<xs:extension base="m:ResponseMessageType">
<xs:sequence>
<xs:element name="ResponseMessages" type="m:ArrayOfMailTipsResponseMessageType" minOccurs="0"
maxOccurs="1"/>
</xs:sequence>
</xs:extension>
</xs:complexContent>
</xs:complexType>

```



```
<xs:complexType name="GetMailTipsType">
  <xs:complexContent>
    <xs:extension base="m:BaseRequestType">
      <xs:sequence>
        <xs:element name="SendingAs" type="t:EmailAddressType" minOccurs="1" maxOccurs="1"/>
        <xs:element name="Recipients" type="t:ArrayOfRecipientsType" minOccurs="1" maxOccurs="1"/>
        <xs:element name="MailTipsRequested" type="t:MailTipTypes" minOccurs="1" maxOccurs="1"/>
      </xs:sequence>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>
<xs:complexType name="MailTipsResponseMessageType">
  <xs:complexContent>
    <xs:extension base="m:ResponseMessageType">
      <xs:sequence>
        <xs:element name="MailTips" type="t:MailTips" minOccurs="0" maxOccurs="1"/>
      </xs:sequence>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>
<xs:element name="GetMailTipsResponse" type="m:GetMailTipsResponseMessageType"/>
<xs:element name="GetMailTips" type="m:GetMailTipsType"/>
</xs:schema>
```

## 7 Appendix B: Product Behavior

The information in this specification is applicable to the following product versions. References to product versions include released service packs.

- Microsoft Exchange Server 2010
- Microsoft Outlook 2010

Exceptions, if any, are noted below. If a service pack number appears with the product version, behavior changed in that service pack. The new behavior also applies to subsequent service packs of the product unless otherwise specified.

Unless otherwise specified, any statement of optional behavior in this specification 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 product does not follow the prescription.

## 8 Change Tracking

This section identifies changes made to [MS-OXWMT] protocol documentation between November 2009 and February 2010 releases. Changes are classed as major, minor, or editorial.

**Major** changes affect protocol interoperability or implementation. Examples of major changes are:

- A document revision that incorporates changes to interoperability requirements or functionality.
- An extensive rewrite, addition, or deletion of major portions of content.
- A protocol is deprecated.
- The removal of a document from the documentation set.
- Changes made for template compliance.

**Minor** changes do not affect protocol interoperability or implementation. Examples are updates to fix technical accuracy or ambiguity at the sentence, paragraph, or table level.

**Editorial** changes apply to grammatical, formatting, and style issues.

**No changes** means that the document is identical to its last release.

Major and minor changes can be described further using the following revision types:

- New content added.
- Content update.
- Content removed.
- New product behavior note added.
- Product behavior note updated.
- Product behavior note removed.
- New protocol syntax added.
- Protocol syntax updated.
- Protocol syntax removed.
- New content added due to protocol revision.
- Content updated due to protocol revision.
- Content removed due to protocol revision.
- New protocol syntax added due to protocol revision.
- Protocol syntax updated due to protocol revision.
- Protocol syntax removed due to protocol revision.
- New content added for template compliance.
- Content updated for template compliance.

- Content removed for template compliance.
- Obsolete document removed.

Editorial changes always have the revision type "Editorially updated."

Some important terms used in revision type descriptions are defined as follows:

**Protocol syntax** refers to data elements (such as packets, structures, enumerations, and methods) as well as interfaces.

**Protocol revision** refers to changes made to a protocol that affect the bits that are sent over the wire.

Changes are listed in the following table. If you need further information, please contact [protocol@microsoft.com](mailto:protocol@microsoft.com).

Section	Tracking number (if applicable) and description	Major change (Y or N)	Revision Type
<a href="#">1.1 Glossary</a>	Added "WSDL port type" to the list of terms that are defined in [MS-OXGLOS].	N	Content update.
<a href="#">1.7 Versioning and Capability Negotiation</a>	Added a glossary term link for the term "WSDL port type".	N	Content update.
<a href="#">1.7 Versioning and Capability Negotiation</a>	52475 Added a link to the section that specifies the SOAP version.	N	Content update.
<a href="#">3.1.4.1.3.5 m:MailTipsResponseMessage Type</a>	50294 Changed the term "sender hints" to "mail tips".	N	Content update.
<a href="#">6 Appendix A: Full WSDL</a>	54021 Moved WSDL to a separate section and added xsd files.	Y	Content update.
<a href="#">6 Appendix A: Full WSDL</a>	54021 Removed WSDL file and added table that describes the schema and WSDL files used for this protocol.	N	Content update.
<a href="#">6.1 WSDL</a>	54021 Added updated WSDL.	N	Content update.
<a href="#">6.2 Types Schema</a>	54021 Added updated Types schema.	N	New content added.
<a href="#">6.3 Messages Schema</a>	54021 Added updated messages schema.	N	New content added.
<a href="#">8</a>	54021	N	Content

Section	Tracking number (if applicable) and description	Major change (Y or N)	Revision Type
<a href="#">Change Tracking</a>	Removed the following sections from this document and schema files: MailboxCulture, BaseRequestType, EmailAddressType, MailboxCultureType, RequestServerVersion, ResponseMessageType, ServerVersionInfo, NonEmptyStringType, ExchangeVersionType, ResponseCodeType, ArrayOfRecipientsType, BaseEmailAddressType, Duration, GetServiceConfiguration, GetServiceConfigurationSoapIn, GetServiceConfigurationSoapOut, ExchangeImpersonation, GetServiceConfigurationResponse, ArrayOfServiceConfigurationResponseMessageType, ArrayOfServiceConfigurationType, ConnectingSIDType, ExchangeImpersonationType, GetServiceConfigurationResponseMessageType, GetServiceConfigurationType, MailTipsServiceConfiguration, ServiceConfigurationResponseMessageType, SmtDomain, SmtDomainList, and ServiceConfigurationType.		removed .
<a href="#">8 Change Tracking</a>	Changed "Maitips" to "Mail Tips" in the document title.	N	Content update.

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