# [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. |
| 05/05/2010 | 2.0.1 | Editorial | Revised and edited the technical content. |
| 08/04/2010 | 2.1 | Minor | Clarified the meaning of the technical content. |
| 11/03/2010 | 2.1 | No change | No changes to the meaning, language, or formatting of the technical content. |
| 03/18/2011 | 3.0 | Major | Significantly changed the technical content. |
| 08/05/2011 | 3.1 | Minor | Clarified the meaning of the technical content. |
| 10/07/2011 | 3.1 | No change | No changes to the meaning, language, or formatting of the technical content. |
| 01/20/2012 | 4.0 | Major | Significantly changed the technical content. |
| 04/27/2012 | 4.0 | No change | No changes to the meaning, language, or formatting of the technical content. |
| 07/16/2012 | 4.1 | Minor | Clarified the meaning of the technical content. |
| 10/08/2012 | 4.2 | Minor | Clarified the meaning of the technical content. |

# Table of Contents

# 1 Introduction

The Mail Tips Web Service Extensions are used to retrieve custom information and status updates for a mailbox and the recipients of an e-mail message.

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

## 1.1 Glossary

The following terms are defined in [MS-GLOS]:

**Active Directory**
**Hypertext Transfer Protocol (HTTP)**
**Hypertext Transfer Protocol over Secure Sockets Layer (HTTPS)**
**XML**

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

**endpoint**
**mail tip**
**mailbox**
**Out of Office (OOF)**
**recipient**
**Simple Mail Transfer Protocol (SMTP)**
**Simple Object Access Protocol (SOAP)**
**SOAP body**
**SOAP header**
**SOAP message**
**Uniform Resource Locator (URL)**
**Web Services Description Language (WSDL)**
**WSDL message**
**WSDL port type**
**XML namespace**
**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

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

### 1.2.1 Normative References

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

http://msdn2.microsoft.com/en-us/library/E4BD6494-06AD-4aed-9823-445E921C9624, as an additional source.

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

[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.ietf.org/rfc/rfc2818.txt

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

[SOAP1.1] Box, D., Ehnebuske, D., Kakivaya, G., et al., "Simple Object Access Protocol (SOAP) 1.1", 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.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

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

[MS-OXDSCLI] Microsoft Corporation, "Autodiscover Publishing and Lookup Protocol Specification".

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

[MS-OXPROTO] Microsoft Corporation, "Exchange Server Protocols System Overview".

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

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

## 1.3 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, as described in [SOAP1.1]. The **XML** that is returned in the response allows the client to present this information to the author.

## 1.4 Relationship to Other Protocols

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-OXDSCLI], to identify the target **endpoint (4)** to use for each operation.

This protocol uses the SOAP Protocol, as described in [SOAP1.1], to specify the structure information that is 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.

This protocol uses SOAP over **HTTP**, as described in [RFC2616], and SOAP over **HTTPS**, as described in [RFC2818], as shown in the following layering diagram.

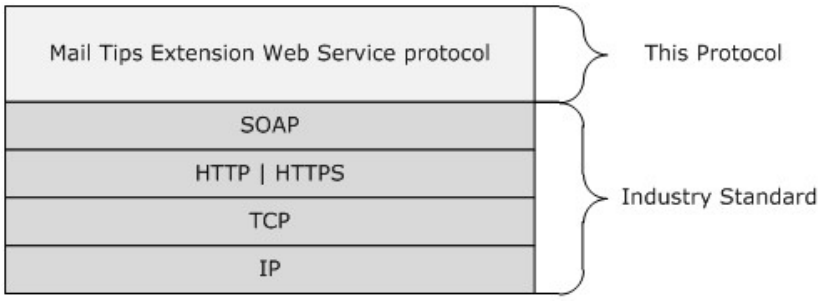


**Figure 1: This protocol in relation to other protocols**

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 (4) **URL** that is returned by either the Autodiscover Publishing Lookup SOAP-Based Web Service Protocol, as described in [MS-OXWSADISC], or the Autodiscover Publishing and Lookup Protocol, as described in [MS-OXDSCLI], is required to form the HTTP request to the Web server that hosts this protocol. The operations that this protocol defines cannot be accessed unless the correct endpoint (4) is identified in the HTTP Web requests that target this protocol.

## 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 2.1.
- **Protocol Versions:** This protocol has only one **WSDL port type** version. The **WSDL** version of the request is identified by using the **RequestServerVersion** element, as described in [MS-OXWSCDATA] section 2.2.4.7, and the version of the server responding to the request is identified by using the **ServerVersionInfo** element, as described in [MS-OXWSCDATA] section 2.2.4.8.
- **Security and Authentication Methods:** This protocol relies on the Web server that is hosting it to perform authentication.

- **Localization:** This protocol includes text strings in various messages. Localization considerations for such strings are specified in sections 2.2 and 3.1.4
- **Capability Negotiation:** This protocol does not support version negotiation.

## 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

The SOAP version supported is SOAP 1.1. For details, see [SOAP1.1].

This protocol relies on the Web server that hosts the application to perform authentication. The protocol SHOULD use secure communications via HTTPS, as defined in [RFC2818].

## 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 | http://schemas.xmlsoap.org/wsdl/soap/ | [SOAP1.1] |
| tns | http://schemas.microsoft.com/exchange/services/2006/messages | |
| xs | http://www.w3.org/2001/XMLSchema | [XMLSCHEMA1] |
| targetNamespace | http://schemas.microsoft.com/exchange/services/2006/messages | |
| wsdl | http://schemas.xmlsoap.org/wsdl/ | [WSDL] |
| t | http://schemas.microsoft.com/exchange/services/2006/types | |
| m | http://schemas.microsoft.com/exchange/services/2006/messages | |

### 2.2.2 Messages

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

### 2.2.3 Elements

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

### 2.2.4 Complex Types

This specification does not define any common XML schema complex type definitions.

### 2.2.5 Simple Types

This specification does not define any common XML schema simple type definitions.

### 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 with one operation. The operation enables client implementations to retrieve mail tips for an e-mail recipient.

### 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 specified in this document.

The Mail Tips Web Service Extensions are used to retrieve mail tips for a specified **mailbox** on the server. The server maintains the mail tips.

The client is not required to maintain the state of mail tips on the server and can retrieve the current set of mail tips at any time.

### 3.1.2 Timers

None.

### 3.1.3 Initialization

None.

### 3.1.4 Message Processing Events and Sequencing Rules

This protocol includes the operation listed in the following table.

| Operation name | Description |
|---|---|
| **GetMailTips** | Provides mail tips information for a mailbox. |

#### 3.1.4.1 GetMailTips

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

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

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

The following is the WSDL binding specification of the operation.

```
<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>
```

#### 3.1.4.1.1 Messages

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

| Message name | Description |
|---|---|
| **GetMailTipsSoapIn** | Specifies the **SOAP message** that gets the mail tips for the mailbox. |
| **GetMailTipsSoapOut** | Specifies the SOAP message that is returned by the server in response. |

##### 3.1.4.1.1.1 tns:GetMailTipsSoapIn Message

The **GetMailTipsSoapIn** WSDL message specifies the **GetMailTips** operation request to get the mail tips for a mailbox.

```
<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>
```

The **GetMailTipsSoapIn** WSDL message is the input message for the SOAP action http://schemas.microsoft.com/exchange/services/2006/messages/GetMailTips.

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

| Part name | Element/type | Description |
|---|---|---|
| **request** | **tns:GetMailTips** (section 3.1.4.1.2.1) | Specifies the **SOAP body** of the request to get mail tips for a mailbox. |
| **RequestVersion** | **t:RequestServerVersion** ([MS-OXWSCDATA] section 2.2.5.9) | Specifies a **SOAP header** that identifies the schema version for the **GetMailTips** operation request. |
| **MailboxCulture** | **t:MailboxCulture** ([MS-OXWSCDATA] section 2.2.5.6) | Specifies a SOAP header that identifies the culture to use for accessing the mailbox. The cultures are defined by [RFC3066]. |

#### 3.1.4.1.1.2 tns:GetMailTipsSoapOut Message

The **GetMailTipsSoapOut** WSDL message specifies the server response to the **GetMailTips** operation request to get mail tips for a mailbox.

```
<wsdl:message name="GetMailTipsSoapOut">
    <wsdl:part name="GetMailTipsResult" element="tns:GetMailTipsResponse"/>
    <wsdl:part name="ServerVersion" element="t:ServerVersionInfo"/>
</wsdl:message>
```

The **GetMailTipsSoapOut** WSDL message is the output message for the SOAP action http://schemas.microsoft.com/exchange/services/2006/messages/GetMailTips.

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

| Part name | Element/yype | Description |
|---|---|---|
| **GetMailTipsResult** | **tns:GetMailTipsResponse** (section 3.1.4.1.2.2) | Specifies the SOAP body of the response to a **GetMailTips** operation request. |
| **ServerVersion** | **t:ServerVersionInfo** ([MS-OXWSCDATA] section 2.2.5.10) | Specifies a SOAP header that identifies the server version of the response. |

### 3.1.4.1.2 Elements

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

| Element name | Description |
|---|---|
| **GetMailTips** | Specifies a request to get mail tips for a mailbox. |
| **GetMailTipsResponse** | Specifies the response body content from a request to get mail tips for a mailbox. |

#### 3.1.4.1.2.1 GetMailTips Element

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

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

#### 3.1.4.1.2.2 GetMailTipsResponse Element

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

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

### 3.1.4.1.3 Complex Types

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

| Complex type name | Description |
|---|---|
| **ArrayOfMailTipsResponseMessageType** | Specifies a list of mail tips response messages. |
| **GetMailTipsResponseMessageType** | Specifies the response message for the **GetMailTips** operation. |
| **GetMailTipsType** | Specifies the requested mail tips and identifies the sender or recipient actor who is making the request. |
| **MailTips** | Contains the mail tips values that are returned for a mailbox. |
| **MailTipsResponseMessageType** | Specifies mail tips settings. |
| **OutOfOfficeMailTip** | Contains the response message and a duration time for sending the response message for an **Out of Office (OOF)** message. |

#### 3.1.4.1.3.1 m:ArrayOfMailTipsResponseMessageType Complex Type

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

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

| Element name | Type | Description |
|---|---|---|
| **MailTipsResponseMessageType** | **m:MailTipsResponseMessageType** (section 3.1.4.1.3.5) | Contains a mail tips response message. This element can occur one or more times. |

#### 3.1.4.1.3.2 m:GetMailTipsResponseMessageType Complex Type

The **GetMailTipsResponseMessageType** complex type contains the response message for a **GetMailTips** operation. The **GetMailTipsResponseMessageType** complex type extends the **ResponseMessageType** complex type, as specified in [MS-OXWSCDATA] section 2.2.4.57.

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

| Element name | Type | Description |
|---|---|---|
| **ResponseMessages** | **m:ArrayOfMailTipsResponseMessageType** (section 3.1.4.1.3.1) | Contains an array of mail tips response messages.<br>This element MUST occur if there are mail tips. |

### 3.1.4.1.3.3 m:GetMailTipsType Complex Type

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, as specified in [MS-OXWSCDATA] section 2.2.4.15.

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

The following table lists the child elements of the GetMailTipsType complext type.

| Element name | Type | Description |
|---|---|---|
| **SendingAs** | **t:EmailAddressType** ([MS-OXWSCDATA] section 2.2.4.27) | Specifies an e-mail address that defines who the user is trying to send as. |
| **Recipients** | **t:ArrayOfRecipientsType** ([MS-OXWSCDATA] section 2.2.4.9) | Contains a list of recipients to check for mail tips. |
| **MailTipsRequested** | **t:MailTipTypes** (section 3.1.4.1.4.1) | Contains the types of mail tips requested from the service. |

### 3.1.4.1.3.4 t:MailTips Complex Type

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

```
  <xs:complexType name="MailTips">
<xs:sequence>
  <xs:element name="RecipientAddress" type="t:EmailAddressType"
    minOccurs="1" maxOccurs="1"/>
  <xs:element name="PendingMailTips" type="t:MailTipTypes"
    minOccurs="1" maxOccurs="1"/>
  <xs:element name="OutOfOffice" type="t:OutOfOfficeMailTip"
    minOccurs="0" maxOccurs="1"/>
  <xs:element name="MailboxFull" type="xs:boolean"
```

```
        minOccurs="0" maxOccurs="1"/>
      <xs:element name="CustomMailTip" type="xs:string"
        minOccurs="0" maxOccurs="1"/>
      <xs:element name="TotalMemberCount" type="xs:int"
        minOccurs="0" maxOccurs="1"/>
      <xs:element name="ExternalMemberCount" type="xs:int"
        minOccurs="0" maxOccurs="1"/>
      <xs:element name="MaxMessageSize" type="xs:int"
        minOccurs="0" maxOccurs="1"/>
      <xs:element name="DeliveryRestricted" type="xs:boolean"
        minOccurs="0" maxOccurs="1"/>
      <xs:element name="IsModerated" type="xs:boolean"
        minOccurs="0" maxOccurs="1"/>
      <xs:element name="InvalidRecipient" type="xs:boolean"
        minOccurs="0" maxOccurs="1"/>
      <xs:element name="Scope" type="xs:int" minOccurs="0" maxOccurs="1"/>
    </xs:sequence>
  </xs:complexType>
```

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

| Element name | Type | Description |
|---|---|---|
| **RecipientAddress** | **t:EmailAddressType** ([MS-OXWSCDATA] section 2.2.4.27) | Specifies the mailbox of the recipient. |
| **PendingMailTips** | **t:MailTipTypes** (section 3.1.4.1.4.1) | Indicates that the mail tips in this element could not be evaluated before the server's processing timeout expired. |
| **OutOfOffice** | **t:OutOfOfficeMailTip** (section 3.1.4.1.3.6) | Specifies the response message for OOF and the duration for sending this message. |
| **MailboxFull** | **xs:boolean** [XMLSCHEMA2] | Specifies whether the mailbox for the recipient is full. Returns "true" if the mailbox is full; otherwise, returns "false". |
| **CustomMailTip** | **xs:string** [XMLSCHEMA2] | Specifies a custom mail tip. |
| **TotalMemberCount** | **xs:int** [XMLSCHEMA2] | Specifies the total number of members in a group. This value MUST be a non-negative integer. |
| **ExternalMemberCount** | **xs:int** | Specifies the number of external members in a group. This value MUST be a non-negative integer. |
| **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. Returns "true" if the delivery is restricted; otherwise, returns" false. |
| **IsModerated** | **xs:boolean** | Specifies whether the recipient's mailbox is |

| Element name | Type | Description |
|---|---|---|
| | | being moderated. Returns "true" if the mailbox is moderated; otherwise, returns "false". |
| **InvalidRecipient** | **xs:boolean** | Specifies whether the recipient is invalid. Returns "true" if the recipient is invalid; otherwise, returns "false". |
| **Scope** | **xs:int** | Specifies the relationship of the recipient to **Active Directory**. |

When the **InvalidRecipient** element is sent by the server to the client, 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", an address internal to the server's organization, 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.

The allowable values of the **Scope** element are described in the following table.

| Value | Meaning |
|---|---|
| 0 | None |
| 2 | Internal recipient |
| 4 | External recipient |
| 8 | External partner recipient |
| 16 | Non-external partner recipient |

### 3.1.4.1.3.5 m:MailTipsResponseMessageType Complex Type

The **MailTipsResponseMessageType** complex type specifies mail tips settings. The **MailTipsResponseMessageType** complex type extends the **ResponseMessageType** complex type ([MS-OXWSCDATA] section 2.2.4.57).

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

| Element name | Type | Description |
|---|---|---|
| **MailTips** | **t:MailTips** (section 3.1.4.1.3.4) | Contains values for the mail tips service. This element is optional and can be blank if there are no mail tips to return for the mailbox. |

### 3.1.4.1.3.6 t:OutOfOfficeMailTip Complex Type

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

| Element name | Type | Description |
|---|---|---|
| **ReplyBody** | **t:ReplyBody** ([MS-OXWSCDATA] section 2.2.4.55) | Contains the OOF message response. |
| **Duration** | **t:Duration** ([MS-OXWSCDATA] section 2.2.4.24) | Contains the start and end time for sending OOF messages. This element is optional. |

### 3.1.4.1.4 Simple Types

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

| Simple type name | Description |
|---|---|
| **MailTipTypes** | Specifies the types of mail tips that are supported by this service. |

### 3.1.4.1.4.1 t:MailTipTypes Simple Type

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:enumeration value="Scope"/>
            </xs:restriction>
```

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

| Value | Meaning |
|---|---|
| **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 restrictions 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. |
| **Scope** | Indicates the relationship of the recipient to Active Directory. |

When the **InvalidRecipient** 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", an address internal to the server’s organization, 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.

# 4 Protocol Examples

## 4.1 GetMailTips Request

The following example shows a **GetMailTips** operation request.

```
 <?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 to a **GetMailTips** operation request.

```
<?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"><div>Hello World
  Mailtips</div></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:MaxMessageSiz
  e>
            <t:DeliveryRestricted
  xmlns:t="http://schemas.microsoft.com/exchange/services/2006/types">false</t:DeliveryRestrict
  ed>
            <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 Web Service Extensions do not use additional security mechanisms.

## 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 described in this document.

| File name | Description | Section |
|---|---|---|
| MS-OXWMT.wsdl | Contains the WSDL for the implementation of this protocol. | 6 |
| MS-OXWMT-messages.xsd | Contains the XML schema message definitions that are used in this protocol. | 7.1 |
| MS-OXWMT-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-OXWSNTIF-types.xsd or MS-OXWSNTIF-messages.xsd schemas have to be placed in the common folder along with the files listed in the table.

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="Exchange2013"
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>
```

# 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-OXWMT-types.xsd or MS-OXWMT-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-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 has to be in the folder that contains the WSDL, types schema, and messages schema files for this protocol.

| File name | Defining specification |
|---|---|
| MS-OXWSCDATA-messages.xsd | [MS-OXWSCDATA] section 7.1 |

```
<?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="Exchange2013" 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="GetMailTipsType">
    <xs:complexContent>
      <xs:extension base="m:BaseRequestType">
        <xs:sequence>
          <xs:element name="SendingAs" type="t:EmailAddressType"/>
          <xs:element name="Recipients" type="t:ArrayOfRecipientsType"/>
          <xs:element name="MailTipsRequested" type="t:MailTipTypes"/>
        </xs:sequence>
      </xs:extension>
    </xs:complexContent>
  </xs:complexType>
  <xs:element name="GetMailTips" type="m:GetMailTipsType"/>
  <xs:element name="GetMailTipsResponse" type="m:GetMailTipsResponseMessageType"/>
  <xs:complexType name="GetMailTipsResponseMessageType">
    <xs:complexContent>
      <xs:extension base="m:ResponseMessageType">
        <xs:sequence>
          <xs:element name="ResponseMessages" type="m:ArrayOfMailTipsResponseMessageType"
minOccurs="0"/>
        </xs:sequence>
```

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

## 7.2 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.

| File name | Defining specification |
|---|---|
| MS-OXWSCDATA-types.xsd | [MS-OXWSCDATA] section 7.2 |

```
<?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="Exchange2013" 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:enumeration value="Scope"/>
        </xs:restriction>
      </xs:simpleType>
    </xs:list>
```

```
    </xs:simpleType>
    <xs:complexType name="OutOfOfficeMailTip">
      <xs:sequence>
        <xs:element name="ReplyBody" type="t:ReplyBody"/>
        <xs:element name="Duration" type="t:Duration" minOccurs="0"/>
      </xs:sequence>
    </xs:complexType>
    <xs:complexType name="MailTips">
      <xs:sequence>
        <xs:element name="RecipientAddress" type="t:EmailAddressType"
          minOccurs="1" maxOccurs="1"/>
        <xs:element name="PendingMailTips" type="t:MailTipTypes"
          minOccurs="1" maxOccurs="1"/>
        <xs:element name="OutOfOffice" type="t:OutOfOfficeMailTip"
          minOccurs="0" maxOccurs="1"/>
        <xs:element name="MailboxFull" type="xs:boolean"
          minOccurs="0" maxOccurs="1"/>
        <xs:element name="CustomMailTip" type="xs:string"
          minOccurs="0" maxOccurs="1"/>
        <xs:element name="TotalMemberCount" type="xs:int"
          minOccurs="0" maxOccurs="1"/>
        <xs:element name="ExternalMemberCount" type="xs:int"
          minOccurs="0" maxOccurs="1"/>
        <xs:element name="MaxMessageSize" type="xs:int"
          minOccurs="0" maxOccurs="1"/>
        <xs:element name="DeliveryRestricted" type="xs:boolean"
          minOccurs="0" maxOccurs="1"/>
        <xs:element name="IsModerated" type="xs:boolean"
          minOccurs="0" maxOccurs="1"/>
        <xs:element name="InvalidRecipient" type="xs:boolean"
          minOccurs="0" maxOccurs="1"/>
        <xs:element name="Scope" 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 released service packs:

- Microsoft® Exchange Server 2010
- Microsoft® Exchange Server 2013
- Microsoft® Outlook® 2010
- Microsoft® Outlook® 2013

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

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

# 9 Change Tracking

This section identifies changes that were made to the [MS-OXWMT] protocol document between the July 2012 and October 2012 releases. Changes are classified as New, Major, Minor, Editorial, or No change.

The revision class **New** means that a new document is being released.

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 or functionality.
- An extensive rewrite, addition, or deletion of major portions of content.
- The removal of a document from the documentation set.
- Changes made for template compliance.

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 **Editorial** means that the language and formatting in the technical content was changed. Editorial changes apply to grammatical, formatting, and style issues.

The revision class **No change** means that no new technical or language changes were introduced. The technical content of the document is identical to the last released version, but minor editorial and formatting changes, as well as updates to the header and footer information, and to the revision summary, may have been made.

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

- New content added.
- Content updated.
- 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 are always classified with the change type **Editorially updated.**

Some important terms used in the change 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.

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

| Section | Tracking number (if applicable) and description | Major change (Y or N) | Change type |
|---|---|---|---|
| 1.2.2 Informative References | Added the reference [MS-OXPROTO]. | N | Content updated. |
| 1.4 Relationship to Other Protocols | Added informative reference information for overview of relationships between this and other protocols. | N | Content updated. |
| 3.1.4.1.3.4 t:MailTips Complex Type | Updated MailTips complex type and added Scope element | N | Content updated. |
| 3.1.4.1.4.1 t:MailTipTypes Simple Type | Added the Scope enumeration value. | N | Content updated. |
| 6 Appendix A: Full WSDL | Changed the version identifier from Exchange2012 to Exchange2013. | N | Content updated. |
| 7.1 Messages Schema | Changed the version identifier from Exchange2012 to Exchange2013. | N | Content updated. |
| 7.2 Types Schema | Updated schema. | N | Content updated. |
| 7.2 Types Schema | Changed the version identifier from Exchange2012 to Exchange2013. | N | Content updated. |

# 10 Index

## V



## W



## X