[MS-OXWCONFIG]:
Web Service Configuration Protocol Specification

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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	3.0.0	Major	Updated and revised the technical content.
08/04/2010	3.1	Minor	Clarified the meaning of the technical content.
11/03/2010	3.2	Minor	Clarified the meaning of the technical content.
03/18/2011	3.2	No change	No changes to the meaning, language, or formatting of the technical content.
08/05/2011	3.3	Minor	Clarified the meaning of the technical content.
10/07/2011	3.3	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.

Table of Contents

1 Introduction

The Web Service Configuration Protocol sends the request-response messages that retrieve configuration information for a mailbox.

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]:

domain
Hypertext Transfer Protocol (HTTP)
Hypertext Transfer Protocol over Secure Sockets Layer (HTTPS)

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

mail tip
mailbox
recipient
Simple Mail Transfer Protocol (SMTP)
SOAP fault
Unified Messaging
Web Services Description Language (WSDL)
WSDL message
WSDL port type
XML namespace
XML schema

The following terms are specific to this document:

organization policy: A policy that is comprised of a condition part and an action part. The condition part is expressed as a sequence of predicates that are evaluated by an e-mail client. The action part specifies what action the e-mail client takes if the condition is met. Organization policies are sets of conditions and associated actions that apply within an organization.

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-OXWMT] Microsoft Corporation, "Mail Tips Web Service Extensions".

[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

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

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

1.3 Overview

The Web Service Configuration Protocol sends the request-response messages that retrieve **organization policy** configuration information for a **mailbox**. Clients use the SOAP protocol, as described in [SOAP1.1] to contact the Web Service Configuration service.

1.4 Relationship to Other Protocols

The Web Service Configuration Protocol uses SOAP over **HTTP** and SOAP over **HTTPS**, as shown in the following figure.

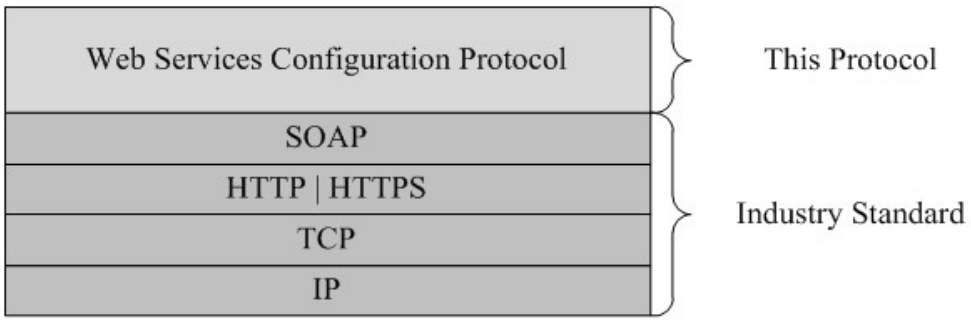

Figure 1: This protocol in relation to other protocols

1.5 Prerequisites/Preconditions

The URL of the Web Service Configuration Protocol can be retrieved by using the Autodiscover Publishing and Lookup SOAP-Based Web Service Protocol, as described in [MS-OXWSADISC].

1.6 Applicability Statement

This protocol accesses configuration information for an organization policy when that 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 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

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].

2.2 Common Message Syntax

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

2.2.1 Namespaces

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

Prefix	Namespace URI	Reference
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 Web Service Configuration Protocol defines a single port type with one operation, which gets the service configuration for a mailbox.

3.1.1 Abstract Data Model

The Web Service Configuration Protocol is a stateless protocol.

3.1.2 Timers

None.

3.1.3 Initialization

None.

3.1.4 Message Processing Events and Sequencing Rules

The following table summarizes the list of operations as defined by this specification.

Operation name	Description
GetServiceConfiguration	Gets information about the organization policy configuration for a mailbox.

3.1.4.1 GetServiceConfiguration Operation

The **GetServiceConfiguration** operation gets the service configuration for a mailbox.

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

3.1.4.1.1 Simple Types

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

Simple Type	Description
ProtectionRuleActionKindType	Specifies the actions that are supported by the protection rules service.
ProtectionRuleAllInternalType	Specifies the AllInternal predicate.

Simple Type	Description
ProtectionRuleTrueType	Specifies the True predicate
ProtectionRuleValueType	Specifies additional arguments to the RecipientIs and SenderDepartments predicates.
ServiceConfigurationType	Specifies the service configurations that are returned in the response.

3.1.4.1.1.1 t:ProtectionRuleActionKindType Simple Type

The **ProtectionRuleActionKindType** simple type specifies the actions that are supported by the protection rules service.

```
<xs:simpleType name="ProtectionRuleActionKindType">
  <xs:restriction
    base="xs:string"
  >
    <xs:enumeration
      value="RightsProtectMessage"
     />
  </xs:restriction>
</xs:simpleType>
```

The following table lists the values that are defined by the **ProtectionRuleActionKindType** simple type.

Value	Meaning
RightsProtectMessage	The specific permission template to apply to the message.

Only the **RightsProtectMessage** action is supported. The value MUST be **RightsProtectMessage**. The protection rules are used to apply a specific set of permissions.

3.1.4.1.1.2 t:ProtectionRuleAllInternalType Simple Type

The **ProtectionRuleAllInternalType** simple type specifies the AllInternal predicate. The semantics of AllInternal is that the predicate matches if all recipients of the e-mail message are internal to the organization of the sender of that e-mail message.

```
<xs:simpleType name="ProtectionRuleAllInternalType">
  <xs:restriction
    base="xs:string"
  >
    <xs:length
      value="0"
     />
  </xs:restriction>
</xs:simpleType>
```

3.1.4.1.1.3 t:ProtectionRuleTrueType Simple Type

The **ProtectionRuleTrueType** simple type specifies the True predicate. The semantics of True is that the condition always matches.

```
<xs:simpleType name="ProtectionRuleTrueType">
  <xs:restriction
    base="xs:string"
  >
    <xs:length
      value="0"
     />
  </xs:restriction>
</xs:simpleType>
```

3.1.4.1.1.4 t:ProtectionRuleValueType Simple Type

The **ProtectionRuleValueType** simple type specifies additional arguments to the RecipientIs and SenderDepartments predicates. The value MUST be a string with a minimum length of one character.

```
<xs:simpleType name="ProtectionRuleValueType">
  <xs:restriction
    base="xs:string"
  >
    <xs:minLength
      value="1"
     />
  </xs:restriction>
</xs:simpleType>
```

3.1.4.1.1.5 t:ServiceConfigurationType Simple Type

Note *Some of the information in this section is subject to change because it applies to a preliminary implementation of the protocol or structure. For information about specific differences between versions, see the behavior notes that are provided in the Product Behavior appendix.*

The **ServiceConfigurationType** simple type specifies the service configurations that are returned in the response.

```
<xs:simpleType name="ServiceConfigurationType">
  <xs:list>
    <xs:simpleType>
      <xs:restriction
       base="xs:string"
      >
        <xs:enumeration
          value="MailTips"
         />
        <xs:enumeration
          value="UnifiedMessagingConfiguration"
         />
        <xs:enumeration
```

```
          value="ProtectionRules"
         />
        <xs:enumeration value="PolicyNudges" />
      </xs:restriction>
    </xs:simpleType>
  </xs:list>
</xs:simpleType>
```

The following table lists the values that are defined by the **ServiceConfigurationType** simple type.

Value	Meaning
MailTips	Represents the **mail tips** service configuration.
UnifiedMessagingConfiguration	Represents the unified messaging service configuration.
ProtectionRules	Represents the protection rules service configuration.
PolicyNudges	Represents the policy nudges service configuration.<1>

3.1.4.1.2 Complex Types

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

Complex Type	Description
ArrayOfProtectionRulesType	Specifies an array of protection rules.
ArrayOfServiceConfigurationResponseMessageType	Specifies an array of service configuration response messages.
ArrayOfServiceConfigurationType	Specifies the requested service configurations for a **GetServiceConfigurationSoapIn** message.
ConfigurationRequestDetailsType	Contains the details of the policy nudges.
GetServiceConfigurationResponseMessageType	Contains the response message for a **GetServiceConfiguration** operation.
GetServiceConfigurationType	Specifies the requested service configurations and identifies the sender or recipient actor who is making the request.
MailTipsServiceConfiguration	Contains service configuration information for the mail tips service.
PolicyNudgeRulesServiceConfiguration	Contains the policy nudges configuration. data.<2>
ProtectionRuleActionType	Specifies the action that the client can take if the condition part of the associated rule matches.
ProtectionRuleAndType	Specifies that there MUST be more than one protection rule condition.

Complex Type	Description
ProtectionRuleArgumentType	Specifies an attribute that is used to specify an argument to an action.
ProtectionRuleConditionType	Specifies the condition part of a protection rule.
ProtectionRuleRecipientIsType	Specifies a condition that matches if any recipients of the email message match any specified recipients in the child **Value** elements.
ProtectionRuleSenderDepartmentsType	Specifies a condition that matches if the department of the sender of the email message matches any of the specified departments in the child **Value** elements.
ProtectionRulesServiceConfiguration	Specifies the configuration of the protection rules service.
ProtectionRuleType	Specifies a single protection rule.
ServiceConfiguration	Specifies the base type for the service configuration types.
ServiceConfigurationResponseMessageType	Specifies service configuration settings.
SmtpDomain	Specifies a single domain.
SmtpDomainList	Specifies a list of internal domains in a user's organization.
UnifiedMessageServiceConfiguration	Specifies the configuration for the **Unified Messaging** service.

3.1.4.1.2.1 t:ArrayOfProtectionRulesType Complex Type

The **ArrayOfProtectionRulesType** complex type specifies an array of protection rules.

```
<xs:complexType name="ArrayOfProtectionRulesType">
  <xs:sequence>
    <xs:element name="Rule"
      type="t:ProtectionRuleType"
      minOccurs="0"
      maxOccurs="unbounded"
     />
  </xs:sequence>
</xs:complexType>
```

The following table lists the child element of the **ArrayOfProtectionRulesType** complex type.

Element name	Type	Description
Rule	**t:ProtectionRuleType** (section 3.1.4.1.2.16)	Contains a single protection rule. This element can occur zero or more times. This element occurs zero times when no

Element name	Type	Description
		protection rules are defined by the organization. It occurs one or more times if at least one rule is defined by the organization.

3.1.4.1.2.2 m:ArrayOfServiceConfigurationResponseMessageType Complex Type

The **ArrayOfServiceConfigurationResponseMessageType** complex type specifies an array of service configuration response messages.

```
<xs:complexType name="ArrayOfServiceConfigurationResponseMessageType">
  <xs:sequence>
    <xs:element name="ServiceConfigurationResponseMessageType"
      type="m:ServiceConfigurationResponseMessageType"
      maxOccurs="unbounded"
      minOccurs="0"
     />
  </xs:sequence>
</xs:complexType>
```

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

Element name	Type	Description
ServiceConfigurationResponseMessageType	**m:ServiceConfigurationResponseMessageType** (section 3.1.4.1.2.18)	Contains a service configuration response message. This element MUST occur at least once and can occur two or more times.

3.1.4.1.2.3 m:ArrayOfServiceConfigurationType Complex Type

The **ArrayOfServiceConfigurationType** complex type specifies the requested service configurations for a **GetServiceConfigurationSoapIn** message, as specified in section 3.1.4.1.7.1.

```
<xs:complexType name="ArrayOfServiceConfigurationType">
  <xs:choice
    maxOccurs="unbounded"
    minOccurs="1"
  >
    <xs:element name="ConfigurationName"
      type="t:ServiceConfigurationType"
```

```
    />
  </xs:choice>
</xs:complexType>
```

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

Element name	Type	Description
ConfigurationName	t:ServiceConfigurationType (section 3.1.4.1.1.5)	Specifies the service configuration that is returned in the response. This simple type MUST occur at least once.

3.1.4.1.2.4 t:ConfigurationRequestDetailsType

Note *All of the information in this section is subject to change because it applies to a preliminary implementation of the protocol or structure.*

The **ConfigurationRequestDetailsType** complex type contains the details of the policy nudges .<3>

```
<xs:complexType name="ConfigurationRequestDetailsType">
  <xs:choice minOccurs="1" maxOccurs="1">
    <xs:any processContents="skip" minOccurs="0" maxOccurs="unbounded" namespace="##any"/>
  </xs:choice>
</xs:complexType>
```

3.1.4.1.2.5 m:GetServiceConfigurationResponseMessageType Complex Type

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

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

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

Element name	Type	Description
ResponseMessages	**m:ArrayOfServiceConfigurationResponseMessageType** (section 3.1.4.1.2.2)	Contains an array of service configuration response messages. This element MUST occur if there are configuration settings.

3.1.4.1.2.6 m:GetServiceConfigurationType Complex Type

Note *Some of the information in this section is subject to change because it applies to a preliminary implementation of the protocol or structure. For information about specific differences between versions, see the behavior notes that are provided in the Product Behavior appendix.*

The **GetServiceConfigurationType** complex type specifies the requested service configurations 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 **GetServiceConfigurationType** complex type extends the **m:BaseRequestType** complex type, as specified in [MS-OXWSCDATA] section 2.2.4.15.

```
<xs:complexType name="GetServiceConfigurationType">
  <xs:complexContent>
    <xs:extension
      base="m:BaseRequestType"
    >
      <xs:sequence>
        <xs:element name="ActingAs"
          type="t:EmailAddressType"
          maxOccurs="1"
          minOccurs="0"
         />
        <xs:element name="RequestedConfiguration"
          type="m:ArrayOfServiceConfigurationType"
          maxOccurs="1"
          minOccurs="1"
         />
        <xs:element minOccurs="0" maxOccurs="1" name="ConfigurationRequestDetails"
type="t:ConfigurationRequestDetailsType" />
      </xs:sequence>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>
```

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

Element name	Type	Description
ActingAs	**t:EmailAddressType** ([MS-OXWSCDATA]	Specifies who the caller

Element name	Type	Description
	section 2.2.4.27)	is sending as. If this element is not present, the authenticated user is assumed to be the sender. The **ActingAs** element MUST be included for requesting sender hints. This element is optional.
RequestedConfiguration	**m:ArrayOfServiceConfigurationType** (section 3.1.4.1.2.3)	Specifies the requested service configurations. This element MUST be present.
ConfigurationRequestDetails	**t:ConfigurationRequestDetailsType**	<4>

3.1.4.1.2.7 t:MailTipsServiceConfiguration Complex Type

The **MailTipsServiceConfiguration** complex type contains service configuration information for the mail tips service. The **MailTipsServiceConfiguration** complex type extends the **ServiceConfigurationType** simple type, as specified in section 3.1.4.1.1.5.

```
<xs:complexType name="MailTipsServiceConfiguration">
    <xs:complexContent>
        <xs:extension base="t:ServiceConfiguration">
            <xs:sequence>
                <xs:element minOccurs="1" maxOccurs="1"
name="MaxRecipientsPerGetMailTipsRequest" type="xs:int"/>
                <xs:element minOccurs="1" maxOccurs="1" name="MaxMessageSize" type="xs:int"/>
                <xs:element minOccurs="1" maxOccurs="1" name="LargeAudienceThreshold"
type="xs:int"/>
                <xs:element minOccurs="1" maxOccurs="1" name="ShowExternalRecipientCount"
type="xs:boolean"/>
                <xs:element minOccurs="1" maxOccurs="1" name="InternalDomains"
type="t:SmtpDomainList"/>
                <xs:element minOccurs="1" maxOccurs="1" name="PolicyTipsEnabled"
type="xs:boolean" />
                <xs:element minOccurs="1" maxOccurs="1" name="LargeAudienceCap" type="xs:int"
/>
            </xs:sequence>
        </xs:extension>
    </xs:complexContent>
</xs:complexType>
```

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

Element name	Type	Description
MailTipsEnabled	**xs:boolean**	Specifies whether the mail tips service is available.
MaxRecipientsPerGetMailTipsRequest	**xs:int**	Specifies the maximum number of

Element name	Type	Description
		recipients that can be passed to the **GetMailTips** operation ([MS-OXWMT] section 3.1.4.1). This element MUST be included if the **MailTipsServiceConfiguration** complex type is used and MUST be a non-negative integer.
MaxMessageSize	**xs:int**	Specifies the maximum message size that the user identified by the **ActingAs** element can send. This element MUST be included if the **MailTipsServiceConfiguration** complex type is used and MUST be a non-negative integer.
LargeAudienceThreshold	**xs:int**	Specifies the large audience threshold for clients. This element MUST be included if the **MailTipsServiceConfiguration** complex type is used and MUST be a non-negative integer.
ShowExternalRecipientCount	**xs:boolean**	Specifies whether consumers of the **GetMailTips** operation have to show mail tips that indicate the number of external recipients to which a message is addressed. This element MUST be included if the **MailTipsServiceConfiguration** complex type is used.
InternalDomains	**t:SmtpDomainList** (section 3.1.4.1.2.20)	Specifies a list of **SMTP domains** that are considered internal to an organization. This information is provided so that mail client software can provide external recipient mail tips when offline. This element MUST be included if the **MailTipsServiceConfiguration** complex type is used.
PolicyTipsEnabled	**xs:boolean**	Specifies whether policy tips are enabled.<5>
LargeAudienceCap	**xs:int**	Specifies the maximum number of recipients for a mailbox item.<6>

3.1.4.1.2.8 t:PolicyNudgeRulesServiceConfiguration

Note *All of the information in this section is subject to change because it applies to a preliminary implementation of the protocol or structure.*

The **PolicyNudgeRulesServiceConfiguration** complex type contains the policy nudges configuration data.<7>

```
<xs:complexType name="PolicyNudgeRulesServiceConfiguration">
  <xs:sequence>
    <xs:any processContents="skip" minOccurs="0" maxOccurs="unbounded" namespace="##any"/>
  </xs:sequence>
</xs:complexType>
```

3.1.4.1.2.9 t:ProtectionRuleActionType Complex Type

The **ProtectionRuleActionType** complex type specifies the action that the client can take if the condition part of the associated rule matches.

```
<xs:complexType name="ProtectionRuleActionType">
  <xs:sequence>
    <xs:element name="Argument"
      type="t:ProtectionRuleArgumentType"
      maxOccurs="unbounded"
      minOccurs="0"
     />
  </xs:sequence>
  <xs:attribute name="Name"
    type="t:ProtectionRuleActionKindType"
    use="required"
   />
</xs:complexType>
```

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

Element name	Type	Description
Argument	**t:ProtectionRuleArgumentType**	Specifies arguments to the action. This element MUST NOT occur if the specified action does not require arguments to be specified. This element can occur one or more times if an action requires one or more arguments. The **RightsProtectMessage** action MUST contain a single argument.

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

Attribute name	Type	Description
Name	**t:ProtectionRuleActionKindType** (section 3.1.4.1.1.1)	Specifies the name of the action. This attribute MUST be present.

3.1.4.1.2.10 t:ProtectionRuleAndType Complex Type

The **ProtectionRuleAndType** complex type specifies that there MUST be more than one protection rule condition. Elements of type **ProtectionRuleAndType** MUST contain at least one child element.

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

```
    <xs:sequence>
      <xs:choice
        minOccurs="1"
        maxOccurs="unbounded"
      >
        <xs:element name="AllInternal"
          type="t:ProtectionRuleAllInternalType"
         />
        <xs:element name="And"
          type="t:ProtectionRuleAndType"
         />
        <xs:element name="RecipientIs"
          type="t:ProtectionRuleRecipientIsType"
         />
        <xs:element name="SenderDepartments"
          type="t:ProtectionRuleSenderDepartmentsType"
         />
        <xs:element name="True"
          type="t:ProtectionRuleTrueType"
         />
      </xs:choice>
    </xs:sequence>
  </xs:complexType>
```

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

Element name	Type	Description
AllInternal	**t:ProtectionRuleAllInternalType** (section 3.1.4.1.1.2)	Evaluates to **true** if all recipients of an email message are internal to the sender's organization.
And	**t:ProtectionRuleAndType**	Specifies that all child elements MUST match to evaluate to **true**.
RecipientIs	**t:ProtectionRuleRecipientIsType** (section 3.1.4.1.2.13)	Evaluates to **true** if any recipient of the email message matches any of the specified recipients in the child **Value** elements.
SenderDepartments	**t:ProtectionRuleSenderDepartmentsType** (section 3.1.4.1.2.14)	Evaluates to **true** if the department of the sender matches any specified department in the child **Value** elements.
True	**t:ProtectionRuleTrueType** (section 3.1.4.1.1.3)	Specifies a condition that always matches.

3.1.4.1.2.11 t:ProtectionRuleArgumentType Complex Type

The **ProtectionRuleArgumentType** complex type specifies an attribute that is used to specify an argument to an action. The protection is identified by the **Value** attribute.

```
<xs:complexType name="ProtectionRuleArgumentType">
  <xs:attribute name="Value"
    use="required"
  >
    <xs:simpleType>
      <xs:restriction
        base="xs:string"
      >
        <xs:minLength
          value="1"
        />
      </xs:restriction>
    </xs:simpleType>
  </xs:attribute>
</xs:complexType>
```

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

Attribute name	Type	Description
Value	**xs:string** [XMLSCHEMA2]	Specifies the value of an argument to the action part of a protection rule. This attribute value MUST be a string of at least one character in length.

3.1.4.1.2.12 t:ProtectionRuleConditionType Complex Type

The **ProtectionRuleConditionType** complex type specifies the condition part of a protection rule.

```
<xs:complexType name="ProtectionRuleConditionType">
  <xs:choice
    maxOccurs="1"
    minOccurs="1"
  >
    <xs:element name="AllInternal"
      type="t:ProtectionRuleAllInternalType"
    />
    <xs:element name="And"
      type="t:ProtectionRuleAndType"
    />
    <xs:element name="RecipientIs"
      type="t:ProtectionRuleRecipientIsType"
    />
    <xs:element name="SenderDepartments"
      type="t:ProtectionRuleSenderDepartmentsType"
    />
    <xs:element name="True"
      type="t:ProtectionRuleAllInternalType"
    />
  </xs:choice>
</xs:complexType>
```

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

Element name	Type	Description
AllInternal	**t:ProtectionRuleAllInternalType** (section 3.1.4.1.1.2)	The **AllInternal** element evaluates to **true** if all recipients of an email message are internal to the sender's organization. If this element exists, the **And**, **RecipientsIs**, **SenderDeprtments**, and **True** elements MUST NOT be a direct child node of elements of type **ProtectionRuleConditionType**.
And	**t:ProtectionRuleAndType** (section 3.1.4.1.2.10)	Specifies that all child elements MUST match to evaluate to **true**. Specifies that there MUST be more than one protection rule child condition. If this element exists, the **AllInternal**, **RecipientsIs**, **SenderDeprtments**, and **True** elements MUST NOT be a direct child node of elements of type **ProtectionRuleConditionType**.
RecipientIs	**t:ProtectionRuleRecipientIsType** (section 3.1.4.1.2.13)	Specifies that any recipient of the e-mail message matches any of the specified recipients in the child **Value** elements. If this element exists, the **And**, **AllInternal**, **SenderDeprtments**, and **True** elements MUST NOT be a direct child node of elements of type **ProtectionRuleConditionType**.
SenderDepartments	**t:ProtectionRuleSenderDepartmentsType** (section 3.1.4.1.2.14)	Specifies that the department of the sender matches any of the specified departments in the child **Value** elements. If this element exists, the **And**, **RecipientsIs**, **AllInternal**, and **True** elements MUST NOT be a direct child node of elements of type **ProtectionRuleConditionType**.
True	**t:ProtectionRuleAllInternalType** (section 3.1.4.1.1.2)	Specifies a condition that always matches. If this element exists, the **And**, **RecipientsIs**, **SenderDeprtments**, and **AllInternal** elements MUST NOT be a direct child node of elements of type **ProtectionRuleConditionType**.

3.1.4.1.2.13 t:ProtectionRuleRecipientIsType Complex Type

The **ProtectionRuleRecipientIsType** complex type specifies a condition that matches if any recipients of the email message match any specified recipients in the child **Value** elements.

```
<xs:complexType name="ProtectionRuleRecipientIsType">
  <xs:sequence>
    <xs:element name="Value"
      type="t:ProtectionRuleValueType"
      minOccurs="1"
      maxOccurs="unbounded"
     />
  </xs:sequence>
</xs:complexType>
```

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

Element name	Type	Description
Value	**t:ProtectionRuleValueType** (section 3.1.4.1.1.4)	Specifies an argument to the **RecipientIs** condition. This element MUST occur at least once.

3.1.4.1.2.14 t:ProtectionRuleSenderDepartmentsType Complex Type

The **ProtectionRuleSenderDepartmentsType** type specifies a condition that matches if the department of the sender of the email message matches any of the specified departments in the child **Value** elements.

```
<xs:complexType name="ProtectionRuleSenderDepartmentsType">
  <xs:sequence>
    <xs:element name="Value"
      type="t:ProtectionRuleValueType"
      minOccurs="1"
      maxOccurs="unbounded"
     />
  </xs:sequence>
</xs:complexType>
```

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

Element name	Type	Description
Value	**t:ProtectionRuleValueType** (section 3.1.4.1.1.4)	Specifies an argument to the **SenderDepartments** condition. This element MUST occur at least once.

3.1.4.1.2.15 t:ProtectionRulesServiceConfiguration Complex Type

The **ProtectionRulesServiceConfiguration** complex type specifies the configuration of the protection rules service. The configuration is comprised of a list of rules, internal domains, and a refresh interval. The **ProtectionRulesServiceConfiguration** complex type extends the **t:ServiceConfiguration** complex type, as specified in section 3.1.4.1.2.17.

```
<xs:complexType name="ProtectionRulesServiceConfiguration">
  <xs:complexContent>
    <xs:extension
      base="t:ServiceConfiguration"
    >
      <xs:sequence>
        <xs:element name="Rules"
          type="t:ArrayOfProtectionRulesType"
          maxOccurs="1"
          minOccurs="1"
         />
        <xs:element name="InternalDomains"
          type="t:SmtpDomainList"
          maxOccurs="1"
          minOccurs="1"
         />
      </xs:sequence>
      <xs:attribute name="RefreshInterval"
        use="required"
      >
        <xs:simpleType>
          <xs:restriction
            base="xs:int"
          >
            <xs:minInclusive
              value="1"
             />
          </xs:restriction>
        </xs:simpleType>
      </xs:attribute>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>
```

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

Element name	Type	Description
Rules	**t:ArrayOfProtectionRulesType** (section 3.1.4.1.2.1)	Specifies the collection of rules to be evaluated. This element MUST be included if the **ProtectionRulesServiceConfiguration** complex type is used.
InternalDomains	**t:SmtpDomainList** (section 3.1.4.1.2.20)	Specifies the list of internal SMTP domains of the organization. This element MUST be included if the **ProtectionRulesServiceConfiguration**

Element name	Type	Description
		complex type is used.

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

Attribute name	Type	Description
RefreshInterval	**xs:int**	Specifies how often, in whole hours, the client SHOULD request protection rules from the server. This element MUST be included if the **ProtectionRulesServiceConfiguration** complex type is used.

3.1.4.1.2.16 t:ProtectionRuleType Complex Type

The **ProtectionRuleType** complex type specifies a single protection rule.

```
<xs:complexType name="ProtectionRuleType">
  <xs:sequence>
    <xs:element name="Condition" type="t:ProtectionRuleConditionType" minOccurs="1"
maxOccurs="1"/>
    <xs:element name="Action" type="t:ProtectionRuleActionType" minOccurs="1" maxOccurs="1"/>
  </xs:sequence>
  <xs:attribute name="Name" use="required">
    <xs:simpleType>
      <xs:restriction base="xs:string">
        <xs:minLength value="1"/>
      </xs:restriction>
    </xs:simpleType>
  </xs:attribute>
  <xs:attribute name="UserOverridable" type="xs:boolean" use="required" />
  <xs:attribute name="Priority" use="required" >
    <xs:simpleType>
      <xs:restriction base="xs:int">
        <xs:minInclusive value="1"/>
      </xs:restriction>
    </xs:simpleType>
  </xs:attribute>
</xs:complexType>
```

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

Element name	Type	Definition
Condition	**t:ProtectionRuleConditionType** (section 3.1.4.1.2.12)	Specifies the condition that MUST be satisfied for the action part of the rule to be executed. This element MUST be included if the **ProtectionRuleType** complex type is used.
Action	**t:ProtectionRuleActionType**	Specifies what action MUST be executed if the condition part of the rule matches. This element MUST be included if the **ProtectionRuleType** complex type is used.

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

Attribute name	Type	Definition
Name	**xs:string**	Specifies the name of the rule. This attribute MUST be included if the **ProtectionRuleType** complex type is used. This attribute value MUST contain a string of at least one character.
UserOverridable	**xs:boolean**	Specifies whether the rule is mandatory. If the rule is mandatory, this attribute value MUST be **false**. This attribute MUST be included if the **ProtectionRuleType** complex type is used.
Priority	**xs:int**	Specifies the rule priority. The lower bound MUST be 1. This attribute MUST be included if the **ProtectionRuleType** complex type is used. This attribute value MUST contain an integer value of at least 1.

3.1.4.1.2.17 t:ServiceConfiguration Complex Type

The **ServiceConfiguration** type specifies the base type for the service configuration types.

```
<xs:complexType name="ServiceConfiguration">
</xs:complexType>
```

3.1.4.1.2.18 ServiceConfigurationResponseMessageType Complex Type

Note *Some of the information in this section is subject to change because it applies to a preliminary implementation of the protocol or structure. For information about specific differences between versions, see the behavior notes that are provided in the Product Behavior appendix.*

The **ServiceConfigurationResponseMessageType** complex type specifies service configuration settings. The **ServiceConfigurationResponseMessageType** complex type extends the **ResponseMessageType** complex type ([MS-OXWSCDATA] section 2.2.4.57).

```
<xs:complexType>
  <xs:complexContent>
    <xs:extension
      base="m:ResponseMessageType"
    >
      <xs:sequence>
        <xs:element name="MailTipsConfiguration"
          type="t:MailTipsServiceConfiguration"
          minOccurs="0"
          maxOccurs="1"
        />
        <xs:element name="UnifiedMessagingConfiguration"
          type="t:UnifiedMessageServiceConfiguration"
          maxOccurs="1"
          minOccurs="0"
        />
        <xs:element name="ProtectionRulesConfiguration"
          type="t:ProtectionRulesServiceConfiguration"
          maxOccurs="1"
```

```
          minOccurs="0"
         />
         <xs:element name="PolicyNudgeRulesConfiguration"
type="t:PolicyNudgeRulesServiceConfiguration" minOccurs="0" maxOccurs="1"/>
      </xs:sequence>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>
```

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

Element name	Type	Description
MailTipsConfiguration	**t:MailTipsServiceConfiguration** (section 3.1.4.1.2.7)	Contains service configuration information for the mail tips service. This element MUST occur for mail tips service configuration.
UnifiedMessagingConfiguration	**t:UnifiedMessageServiceConfiguration** (section 3.1.4.1.2.21)	Contains service configuration information for the Unified Messaging service. This element MUST occur for Unified Messaging service configuration.
ProtectionRulesConfiguration	**t:ProtectionRulesServiceConfiguration** (section 3.1.4.1.2.15)	Contains service configuration information for the protection rules service. This element MUST occur for protection rules service configuration.
PolicyNudgeRulesConfiguration	**t:PolicyNudgeRulesServiceConfiguration** (section 3.1.4.1.2.8)	<8>

3.1.4.1.2.19 t:SmtpDomain Complex Type

The **SmtpDomain** complex type specifies a single domain.

```
<xs:complexType name="SmtpDomain">
  <xs:attribute name="Name" type="xs:string" use="required"/>
  <xs:attribute name="IncludeSubdomains" type="xs:boolean" use="optional"/>
</xs:complexType>
```

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

Attribute name	Type	Definition
Name	**xs:string**	Specifies the name of a domain. This attribute MUST be set.
IncludeSubdomains	**xs:boolean**	Specifies whether subdomains of the domain identified by the **Name** attribute are considered internal.

3.1.4.1.2.20 t:SmtpDomainList Complex Type

The **SmtpDomainList** complex type specifies a list of internal domains in a user's organization.

```
<xs:complexType name="SmtpDomainList">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="unbounded" name="Domain" type="t:SmtpDomain"/>
  </xs:sequence>
</xs:complexType>
```

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

Element name	Type	Definition
Domain	**t:SmtpDomain** (section 3.1.4.1.1)	Specifies a single SMTP domain. This element can occur zero or more times.

3.1.4.1.2.21 UnifiedMessageServiceConfiguration Complex Type

The **UnifiedMessageServiceConfiguration** complex type specifies the configuration for the Unified Messaging service. The **UnifiedMessageServiceConfiguration** complex type extends the **ServiceConfiguration** complex type (section 3.1.4.1.2.17).

```
<xs:complexType name="UnifiedMessageServiceConfiguration">
  <xs:complexContent>
    <xs:extension
      base="t:ServiceConfiguration"
    >
      <xs:sequence>
        <xs:element name="UmEnabled"
          type="xs:boolean"
          maxOccurs="1"
          minOccurs="1"
         />
        <xs:element name="PlayOnPhoneDialString"
          type="xs:string"
          maxOccurs="1"
          minOccurs="1"
         />
        <xs:element name="PlayOnPhoneEnabled"
          type="xs:boolean"
          maxOccurs="1"
          minOccurs="1"
         />
      </xs:sequence>
    </xs:extension>
  </xs:complexContent>
```

```
</xs:complexType>
```

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

Element name	Type	Description
UmEnabled	**xs:boolean**	Specifies whether Unified Messaging is enabled. This element MUST be included if the **UnifiedMessageServiceConfiguration** complex type is used.
PlayOnPhoneDialString	**xs:string**	Specifies the telephone number for play-on-phone. This element MUST be included if the **UnifiedMessageServiceConfiguration** complex type is used.
PlayOnPhoneEnabled	**xs:boolean**	Specifies whether play-on-phone is enabled. This element MUST be included if the **UnifiedMessageServiceConfiguration** complex type is used.

3.1.4.1.3 Elements

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

Element name	Description
GetServiceConfiguration	Specifies the base element for a **GetServiceConfiguration** operation request.
GetServiceConfigurationResponse	Specifies the response message for a **GetServiceConfiguration** operation.

3.1.4.1.3.1 m:GetServiceConfiguration

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

```
<xs:element name="GetServiceConfiguration" type="m:GetServiceConfigurationType"/>
```

3.1.4.1.3.2 m:GetServiceConfigurationResponse

The **GetServiceConfigurationResponse** element specifies the response message for a **GetServiceConfiguration** operation.

```
<xs:element name="GetServiceConfigurationResponse"
type="m:GetServiceConfigurationResponseMessageType"/>
```

3.1.4.1.4 Attributes

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

3.1.4.1.5 Groups

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

3.1.4.1.6 Attribute Groups

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

3.1.4.1.7 Messages

The following WSDL message definitions are specific to this operation.

3.1.4.1.7.1 GetServiceConfigurationSoapIn Message

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

Part name	Element/type	Description
request	**m:GetServiceConfiguration**	Specifies the request.
Impersonation	**t:ExchangeImpersonation** ([MS-OXWSCDATA] section 2.2.5.3)	Specifies the account to impersonate.
RequestVersion	**t:RequestServerVersion** ([MS-OXWSCDATA] section 2.2.5.9)	Specifies the schema version for the **GetServiceConfiguration** operation request. The **RequestServerVersion** element is defined in [MS-OXWSCDATA] section 2.2.5.9.
MailboxCulture	**t:MailboxCulture** ([MS-OXWSCDATA] section 2.2.5.6)	Specifies the culture to use for accessing the mailbox. The cultures are defined by [RFC3066].

3.1.4.1.7.2 GetServiceConfigurationSoapOut Message

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

Part name	Element/type	Description
GetServiceConfigurationResult	**m:GetServiceConfigurationResponse**	Specifies the response.
ServerVersion	**t:ServerVersionInfo** ([MS-OXWSCDATA] section 2.2.5.10)	Specifies the server version for the response.

3.1.5 Timer Events

None.

3.1.6 Other Local Events

None.

4 Protocol Examples

4.1 GetServiceConfiguration Operation Request

The following example shows how to get sender hints 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>
    <GetServiceConfiguration
xmlns="http://schemas.microsoft.com/exchange/services/2006/messages">
      <ActingAs>
        <t:EmailAddress>user1@contoso.com</t:EmailAddress>
        <t:RoutingType>SMTP</t:RoutingType>
      </ActingAs>
      <RequestedConfiguration>
        <ConfigurationName>MailTips</ConfigurationName>
      </RequestedConfiguration>
    </GetServiceConfiguration>
  </soap:Body>

</soap:Envelope>
```

4.2 GetServiceConfiguration Operation Response

The following example shows a successful response from the **GetServiceConfiguration** 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="482"
                         MinorBuildNumber="17"
                         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">
    <GetServiceConfigurationResponse ResponseClass="Success"
xmlns="http://schemas.microsoft.com/exchange/services/2006/messages">
      <ResponseCode>NoError</ResponseCode>
      <ResponseMessages>
        <ServiceConfigurationResponseMessageType ResponseClass="Success">
          <ResponseCode>NoError</ResponseCode>
          <m:MailTipsConfiguration
xmlns:m="http://schemas.microsoft.com/exchange/services/2006/messages">
```

```
            <t:MaxRecipientsPerGetMailTipsRequest
xmlns:t="http://schemas.microsoft.com/exchange/services/2006/types">50</t:MaxRecipientsPerGet
MailTipsRequest>
            <t:MaxMessageSize
xmlns:t="http://schemas.microsoft.com/exchange/services/2006/types">10485760</t:MaxMessageSiz
e>
            <t:LargeAudienceThreshold
xmlns:t="http://schemas.microsoft.com/exchange/services/2006/types">25</t:LargeAudienceThresh
old>
            <t:ShowExternalRecipientCount
xmlns:t="http://schemas.microsoft.com/exchange/services/2006/types">false</t:ShowExternalReci
pientCount>
            <t:InternalDomains
xmlns:t="http://schemas.microsoft.com/exchange/services/2006/types">
              <t:Domain Name="contoso.com" IncludeSubdomains="false"/>
              <t:Domain Name="fabrikam.com" IncludeSubdomains="false"/>
              <t:Domain Name="example.com" IncludeSubdomains="false"/>
            </t:InternalDomains>
          </m:MailTipsConfiguration>
        </ServiceConfigurationResponseMessageType>
      </ResponseMessages>
    </GetServiceConfigurationResponse>
  </s:Body>
</s:Envelope>
```

4.3 Unsuccessful GetServiceConfiguration Operation Response

4.3.1 SOAP Exception

The following example shows a **SOAP fault** caused by the failure of request schema validation.

```
<?xml version="1.0" encoding="utf-8"?><s:Envelope
xmlns:s="http://schemas.xmlsoap.org/soap/envelope/">
  <s:Body>
    <s:Fault>
      <faultcode
xmlns:a="http://schemas.microsoft.com/exchange/services/2006/types">a:ErrorSchemaValidation</
faultcode>
      <faultstring xml:lang="en-US">The request failed schema validation: The element
'RequestedConfiguration' in namespace
'http://schemas.microsoft.com/exchange/services/2006/messages' has incomplete content. List
of possible elements expected: 'ConfigurationName' in namespace
'http://schemas.microsoft.com/exchange/services/2006/messages'.</faultstring>
      <detail>
        <e:ResponseCode
xmlns:e="http://schemas.microsoft.com/exchange/services/2006/errors">ErrorSchemaValidation</e
:ResponseCode>
        <e:Message xmlns:e="http://schemas.microsoft.com/exchange/services/2006/errors">The
request failed schema validation.</e:Message>
        <e:MessageXml xmlns:e="http://schemas.microsoft.com/exchange/services/2006/errors">
          <t:LineNumber
xmlns:t="http://schemas.microsoft.com/exchange/services/2006/types">16</t:LineNumber>
          <t:LinePosition
xmlns:t="http://schemas.microsoft.com/exchange/services/2006/types">9</t:LinePosition>
          <t:Violation
xmlns:t="http://schemas.microsoft.com/exchange/services/2006/types">The element
'RequestedConfiguration' in namespace
'http://schemas.microsoft.com/exchange/services/2006/messages' has incomplete content. List
```

```
of possible elements expected: 'ConfigurationName' in namespace
'http://schemas.microsoft.com/exchange/services/2006/messages'.</t:Violation>
        </e:MessageXml>
      </detail>
    </s:Fault>
  </s:Body>
</s:Envelope>
```

4.3.2 GetServiceConfiguration Operation Error Response

The following example shows the error response that occurs when the user specified in the **ActingAs** element is not found in the directory.

```
<?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="482"
                         MinorBuildNumber="17"
                         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">
    <GetServiceConfigurationResponse ResponseClass="Error"
xmlns="http://schemas.microsoft.com/exchange/services/2006/messages">
      <MessageText>The ActingAs parameter does not match a user in the
directory.</MessageText>
      <ResponseCode>ErrorInvalidArgument</ResponseCode>
      <DescriptiveLinkKey>0</DescriptiveLinkKey>
    </GetServiceConfigurationResponse>
  </s:Body>
</s:Envelope>
```

5 Security

5.1 Security Considerations for Implementers

None.

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 in this document.

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

This section contains the contents of the MS-OXWCONFIG.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="Exchange2012"
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">
      <xs:include schemaLocation="MS-OXWCONFIG-messages.xsd"/>
    </xs:schema>
  </wsdl:types>
  <wsdl:message name="GetServiceConfigurationSoapIn">
    <wsdl:part name="request" element="tns:GetServiceConfiguration"/>
    <wsdl:part name="Impersonation" element="t:ExchangeImpersonation"/>
    <wsdl:part name="RequestVersion" element="t:RequestServerVersion"/>
    <wsdl:part name="MailboxCulture" element="t:MailboxCulture"/>
  </wsdl:message>
  <wsdl:message name="GetServiceConfigurationSoapOut">
    <wsdl:part name="GetServiceConfigurationResult"
element="tns:GetServiceConfigurationResponse"/>
    <wsdl:part name="ServerVersion" element="t:ServerVersionInfo"/>
  </wsdl:message>
  <wsdl:portType name="ExchangeServicePortType">
    <wsdl:operation name="GetServiceConfiguration">
      <wsdl:input message="tns:GetServiceConfigurationSoapIn"/>
      <wsdl:output message="tns:GetServiceConfigurationSoapOut"/>
    </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="GetServiceConfiguration">
      <soap:operation
soapAction="http://schemas.microsoft.com/exchange/services/2006/messages/GetServiceConfigurat
ion"/>
      <wsdl:input>
        <soap:body parts="request" use="literal"/>
        <soap:header message="tns:GetServiceConfigurationSoapIn" part="Impersonation"
use="literal"/>
        <soap:header message="tns:GetServiceConfigurationSoapIn" part="RequestVersion"
use="literal"/>
        <soap:header message="tns:GetServiceConfigurationSoapIn" part="MailboxCulture"
use="literal"/>
      </wsdl:input>
      <wsdl:output>
        <soap:body parts="GetServiceConfigurationResult" use="literal"/>
        <soap:header message="tns:GetServiceConfigurationSoapOut" 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-OXWCONFIG-types.xsd or MS-OXWCONFIG-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-OXWCONFIG-messages.xsd file and information about additional files that this schema file requires to operate correctly.

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

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

```
<?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="Exchange2012" id="messages">
   <xs:import namespace="http://schemas.microsoft.com/exchange/services/2006/types"
schemaLocation="MS-OXWCONFIG-types.xsd"/>
   <xs:include schemaLocation="MS-OXWSCDATA-messages.xsd"/>
   <xs:complexType name="ArrayOfServiceConfigurationResponseMessageType">
      <xs:sequence>
         <xs:element name="ServiceConfigurationResponseMessageType"
type="m:ServiceConfigurationResponseMessageType" minOccurs="1" maxOccurs="unbounded"/>
      </xs:sequence>
   </xs:complexType>
   <xs:complexType name="ArrayOfServiceConfigurationType">
      <xs:choice minOccurs="1" maxOccurs="unbounded">
         <xs:element name="ConfigurationName" type="t:ServiceConfigurationType"/>
      </xs:choice>
   </xs:complexType>
   <xs:complexType name="GetServiceConfigurationResponseMessageType">
      <xs:complexContent>
         <xs:extension base="m:ResponseMessageType">
            <xs:sequence>
               <xs:element name="ResponseMessages"
type="m:ArrayOfServiceConfigurationResponseMessageType" minOccurs="0" maxOccurs="1"/>
            </xs:sequence>
```

```
         </xs:extension>
      </xs:complexContent>
   </xs:complexType>
   <xs:complexType name="GetServiceConfigurationType">
      <xs:complexContent>
         <xs:extension base="m:BaseRequestType">
            <xs:sequence>
               <xs:element minOccurs="0" maxOccurs="1" name="ActingAs"
type="t:EmailAddressType"/>
               <xs:element minOccurs="1" maxOccurs="1" name="RequestedConfiguration"
type="m:ArrayOfServiceConfigurationType"/>
               <xs:element minOccurs="0" maxOccurs="1" name="ConfigurationRequestDetails"
type="t:ConfigurationRequestDetailsType" />
            </xs:sequence>
         </xs:extension>
      </xs:complexContent>
   </xs:complexType>
   <xs:complexType name="ServiceConfigurationResponseMessageType">
      <xs:complexContent>
         <xs:extension base="m:ResponseMessageType">
            <xs:sequence>
               <xs:element name="MailTipsConfiguration" type="t:MailTipsServiceConfiguration"
minOccurs="0" maxOccurs="1"/>
               <xs:element name="UnifiedMessagingConfiguration"
type="t:UnifiedMessageServiceConfiguration" minOccurs="0" maxOccurs="1"/>
               <xs:element name="ProtectionRulesConfiguration"
type="t:ProtectionRulesServiceConfiguration" minOccurs="0" maxOccurs="1"/>
               <xs:element name="PolicyNudgeRulesConfiguration"
type="t:PolicyNudgeRulesServiceConfiguration" minOccurs="0" maxOccurs="1"/>
            </xs:sequence>
         </xs:extension>
      </xs:complexContent>
   </xs:complexType>
   <xs:element name="GetServiceConfiguration" type="m:GetServiceConfigurationType"/>
   <xs:element name="GetServiceConfigurationResponse"
type="m:GetServiceConfigurationResponseMessageType"/>
</xs:schema>
```

7.2 Types Schema

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

```
<?xml version="1.0" encoding="utf-8"?>
<xs:schema xmlns:t="http://schemas.microsoft.com/exchange/services/2006/types"
xmlns:xs="http://www.w3.org/2001/XMLSchema"
targetNamespace="http://schemas.microsoft.com/exchange/services/2006/types"
elementFormDefault="qualified" version="Exchange2012" id="types">
  <xs:import namespace="http://www.w3.org/XML/1998/namespace"/>
  <xs:simpleType name="ProtectionRuleActionKindType">
    <xs:restriction base="xs:string">
      <xs:enumeration value="RightsProtectMessage"/>
    </xs:restriction>
  </xs:simpleType>
  <xs:simpleType name="ProtectionRuleAllInternalType">
    <xs:restriction base="xs:string">
      <xs:length value="0"/>
    </xs:restriction>
  </xs:simpleType>
```

```
  <xs:simpleType name="ProtectionRuleTrueType">
    <xs:restriction base="xs:string">
      <xs:length value="0"/>
    </xs:restriction>
  </xs:simpleType>
  <xs:simpleType name="ProtectionRuleValueType">
    <xs:restriction base="xs:string">
      <xs:minLength value="1"/>
    </xs:restriction>
  </xs:simpleType>
  <xs:simpleType name="ServiceConfigurationType">
    <xs:list>
      <xs:simpleType>
        <xs:restriction base="xs:string">
          <xs:enumeration value="MailTips"/>
          <xs:enumeration value="UnifiedMessagingConfiguration"/>
          <xs:enumeration value="ProtectionRules"/>
          <xs:enumeration value="PolicyNudges"/>
        </xs:restriction>
      </xs:simpleType>
    </xs:list>
  </xs:simpleType>
  <xs:complexType name="MailTipsServiceConfiguration">
    <xs:complexContent>
      <xs:extension base="t:ServiceConfiguration">
        <xs:sequence>
          <xs:element minOccurs="1" maxOccurs="1" name="MaxRecipientsPerGetMailTipsRequest"
type="xs:int"/>
          <xs:element minOccurs="1" maxOccurs="1" name="MaxMessageSize" type="xs:int"/>
          <xs:element minOccurs="1" maxOccurs="1" name="LargeAudienceThreshold"
type="xs:int"/>
          <xs:element minOccurs="1" maxOccurs="1" name="ShowExternalRecipientCount"
type="xs:boolean"/>
          <xs:element minOccurs="1" maxOccurs="1" name="InternalDomains"
type="t:SmtpDomainList"/>
                    <xs:element minOccurs="1" maxOccurs="1" name="PolicyTipsEnabled"
type="xs:boolean" />
          <xs:element minOccurs="1" maxOccurs="1" name="LargeAudienceCap" type="xs:int" />
        </xs:sequence>
      </xs:extension>
    </xs:complexContent>
  </xs:complexType>
  <xs:complexType name="UnifiedMessageServiceConfiguration">
    <xs:complexContent>
      <xs:extension base="t:ServiceConfiguration">
        <xs:sequence>
          <xs:element minOccurs="1" maxOccurs="1" name="UmEnabled" type="xs:boolean"/>
          <xs:element minOccurs="1" maxOccurs="1" name="PlayOnPhoneDialString"
type="xs:string"/>
          <xs:element minOccurs="1" maxOccurs="1" name="PlayOnPhoneEnabled"
type="xs:boolean"/>
        </xs:sequence>
      </xs:extension>
    </xs:complexContent>
  </xs:complexType>
  <xs:complexType name="ArrayOfProtectionRulesType">
    <xs:sequence>
      <xs:element name="Rule" type="t:ProtectionRuleType" minOccurs="0"
maxOccurs="unbounded"/>
    </xs:sequence>
```

```
  </xs:complexType>
  <xs:complexType name="ProtectionRuleActionType">
    <xs:sequence>
      <xs:element name="Argument" type="t:ProtectionRuleArgumentType" minOccurs="0"
maxOccurs="unbounded"/>
    </xs:sequence>
    <xs:attribute name="Name" use="required" type="t:ProtectionRuleActionKindType"/>
  </xs:complexType>
  <xs:complexType name="ProtectionRuleAndType">
    <xs:sequence>
      <xs:choice minOccurs="1" maxOccurs="unbounded">
        <xs:element name="AllInternal" type="t:ProtectionRuleAllInternalType"/>
        <xs:element name="And" type="t:ProtectionRuleAndType"/>
        <xs:element name="RecipientIs" type="t:ProtectionRuleRecipientIsType"/>
        <xs:element name="SenderDepartments" type="t:ProtectionRuleSenderDepartmentsType"/>
        <xs:element name="True" type="t:ProtectionRuleTrueType"/>
      </xs:choice>
    </xs:sequence>
  </xs:complexType>
  <xs:complexType name="ProtectionRuleArgumentType">
    <xs:attribute name="Value" use="required">
      <xs:simpleType>
        <xs:restriction base="xs:string">
          <xs:minLength value="1"/>
        </xs:restriction>
      </xs:simpleType>
    </xs:attribute>
  </xs:complexType>
  <xs:complexType name="ProtectionRuleConditionType">
    <xs:choice minOccurs="1" maxOccurs="1">
      <xs:element name="AllInternal" type="t:ProtectionRuleAllInternalType"/>
      <xs:element name="And" type="t:ProtectionRuleAndType"/>
      <xs:element name="RecipientIs" type="t:ProtectionRuleRecipientIsType"/>
      <xs:element name="SenderDepartments" type="t:ProtectionRuleSenderDepartmentsType"/>
      <xs:element name="True" type="t:ProtectionRuleTrueType"/>
    </xs:choice>
  </xs:complexType>
  <xs:complexType name="ProtectionRuleRecipientIsType">
    <xs:sequence>
      <xs:element name="Value" type="t:ProtectionRuleValueType" minOccurs="1"
maxOccurs="unbounded"/>
    </xs:sequence>
  </xs:complexType>
  <xs:complexType name="ProtectionRuleSenderDepartmentsType">
    <xs:sequence>
      <xs:element name="Value" type="t:ProtectionRuleValueType" minOccurs="1"
maxOccurs="unbounded"/>
    </xs:sequence>
  </xs:complexType>
  <xs:complexType name="ProtectionRulesServiceConfiguration">
    <xs:complexContent>
      <xs:extension base="t:ServiceConfiguration">
        <xs:sequence>
          <xs:element name="Rules" type="t:ArrayOfProtectionRulesType" minOccurs="1"
maxOccurs="1"/>
          <xs:element name="InternalDomains" type="t:SmtpDomainList" minOccurs="1"
maxOccurs="1"/>
        </xs:sequence>
        <xs:attribute name="RefreshInterval" use="required">
```

```
          <xs:simpleType>
            <xs:restriction base="xs:int">
              <xs:minInclusive value="1"/>
            </xs:restriction>
          </xs:simpleType>
        </xs:attribute>
      </xs:extension>
    </xs:complexContent>
  </xs:complexType>
  <xs:complexType name="ProtectionRuleType">
    <xs:sequence>
      <xs:element name="Condition" type="t:ProtectionRuleConditionType" minOccurs="1"
maxOccurs="1"/>
      <xs:element name="Action" type="t:ProtectionRuleActionType" minOccurs="1"
maxOccurs="1"/>
    </xs:sequence>
    <xs:attribute name="Name" use="required">
      <xs:simpleType>
        <xs:restriction base="xs:string">
          <xs:minLength value="1"/>
        </xs:restriction>
      </xs:simpleType>
    </xs:attribute>
    <xs:attribute name="UserOverridable" type="xs:boolean" use="required"/>
    <xs:attribute name="Priority" use="required">
      <xs:simpleType>
        <xs:restriction base="xs:int">
          <xs:minInclusive value="1"/>
        </xs:restriction>
      </xs:simpleType>
    </xs:attribute>
  </xs:complexType>
  <xs:complexType name="ServiceConfiguration"/>
  <xs:complexType name="SmtpDomain">
    <xs:attribute name="Name" type="xs:string" use="required"/>
    <xs:attribute name="IncludeSubdomains" type="xs:boolean" use="optional"/>
  </xs:complexType>
  <xs:complexType name="SmtpDomainList">
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="unbounded" name="Domain" type="t:SmtpDomain"/>
    </xs:sequence>
  </xs:complexType>
  <xs:complexType name="ConfigurationRequestDetailsType">
    <xs:choice minOccurs="1" maxOccurs="1">
      <xs:any processContents="skip" minOccurs="0" maxOccurs="unbounded" namespace="##any"/>
    </xs:choice>
  </xs:complexType>
  <xs:complexType name="PolicyNudgeRulesServiceConfiguration">
    <xs:sequence>
      <xs:any processContents="skip" minOccurs="0" maxOccurs="unbounded" namespace="##any"/>
    </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 Preview
- Microsoft® Outlook® 2010
- Microsoft® Outlook® 2013 Preview

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.

<1> Section 3.1.4.1.1.5: Exchange 2010 does not use the **PolicyNudges** value.

<2> Section 3.1.4.1.2: Exchange 2010 does not use the **PolicyNudgeRulesServiceConfiguration** complex type.

<3> Section 3.1.4.1.2.4: Exchange 2010 does not use the **ConfigurationRequestDetailsType** complex type.

<4> Section 3.1.4.1.2.6: Exchange 2010 does not use the **ConfigurationRequestDetails** element.

<5> Section 3.1.4.1.2.7: Exchange 2007 and Exchange 2010 do not support the **PolicyTipsEnabled** element.

<6> Section 3.1.4.1.2.7: Exchange 2007 and Exchange 2010 do not support the **LargeAudienceCap** element.

<7> Section 3.1.4.1.2.8: Exchange 2010 does not use the **PolicyNudgeRulesServiceConfiguration** complex type.

<8> Section 3.1.4.1.2.18: Exchange 2010 does not use the **PolicyNudgeRulesConfiguration** element.

9 Change Tracking

This section identifies changes that were made to the [MS-OXWCONFIG] protocol document between the April 2012 and July 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
3.1.4.1.2.7 t:MailTipsServiceConfiguration Complex Type	Added new elements.	N	Content updated.
3.1.6 Other Local Events	Removed section 3.2.	N	Content removed.
6 Appendix A: Full WSDL	Updated WSDL.	N	Content updated.
7.1 Messages Schema	Updated messages schema.	N	Content updated.
7.2 Types Schema	Updated types schema.	N	Content updated.

10 Index

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