

[MS-OXWSADISC]: AutoDiscover Publishing and Lookup SOAP-Based Web Service Protocol Specification

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Revision Summary

| Date | Revision History | Revision Class | Comments |
|------------|------------------|----------------|--|
| 07/15/2009 | 1.0 | Major | Initial Availability. |
| 11/04/2009 | 2.0.0 | Major | Updated and revised the technical content. |
| 02/10/2010 | 3.0.0 | Major | Updated and revised the technical content. |

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1 Introduction

This document specifies the Autodiscover protocol, which sends the request-response messages for retrieving the user settings configuration information. Clients use the Autodiscover protocol to get specific configuration settings by passing in their e-mail address as simple strings.

1.1 Glossary

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

- Hypertext Transfer Protocol (HTTP)**
- Hypertext Transfer Protocol over Secure Socket Layers (HTTPS)**
- Legacy DN**
- Simple Mail Transfer Protocol (SMTP)**
- SOAP header**
- SOAP message**
- Unified Messaging**
- Web Services Description Language (WSDL)**
- WSDL message**
- WSDL port type**
- XML**
- 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

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

[MS-OXWSLVID] Microsoft Corporation, "[Federated Internet Authentication Web Service Protocol Specification](#)", July 2009.

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

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

[WSA10] WS-Addressing 1.0 Namespace, <http://www.w3.org/2005/08/addressing/>.

[WS-addr-core] Web Services Addressing 1.0 – Core, W3C Recommendation 9 May 2006, <http://www.w3.org/TR/ws-addr-core/>

[WS-addr-Metadata] Web Services Addressing 1.0 – Metadata, W3C Recommendation 4 September 2007, <http://www.w3.org/TR/ws-addr-metadata/>

[WS-Addressing] Web Services Addressing (WS-Addressing), W3C Member Submission 10 August 2004, <http://www.w3.org/Submission/2004/SUBM-ws-addressing-20040810/>

[WS-MetadataExchange] Web Services Metadata Exchange (WS-MetadataExchange)", August 2006, <http://schemas.xmlsoap.org/ws/2004/09/mex/>.

[WS-Policy] Web Services Policy Framework (WS-Policy) and Web Services Policy Attachment (WS-PolicyAttachment), March 2006, <http://specs.xmlsoap.org/ws/2004/09/policy/>.

[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>.

[WSDLSOAP] Angelov, D., Ballinger, K., et al. "WSDL 1.1 Binding Extension for SOAP 1.2", April 2006, <http://www.w3.org/Submission/2006/SUBM-wsdl11soap12-20060405/>.

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

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

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

1.2.2 Informative References

None.

1.3 Protocol Overview

The Autodiscover Web Service protocol allows clients to learn e-mail configuration settings for specific e-mail address. The Web services implement three Web methods — **GetDomainSetting**, **GetFederationInformation**, and **GetUserSettings** — to request specific configuration settings. The following user configuration settings MAY be returned in a valid server response, if they are implemented by the server.

| Configuration Setting | Description |
|-------------------------|---|
| UserDisplayName | The display name of the user. |
| UserDN | The legacy distinguished name of the user. |
| UserDeploymentId | The deployment identifier of the user. |
| InternalMailboxServer | The fully qualified domain name of the mailbox server. |
| InternalRpcClientServer | The fully qualified domain name of the RPC client server. |
| InternalMailboxServerDN | The legacy distinguished name of the mailbox server. |
| InternalEcpUrl | The internal URL of the server Control Panel. |
| InternalEcpVoicemailUrl | The internal URL of the server Control Panel for Voice Mail |

| Configuration Setting | Description |
|--|---|
| | Customization. |
| InternalEcpEmailSubscriptionsUrl | The internal URL of the server Control Panel for e-mail Subscriptions. |
| InternalEcpTextMessagingUrl | The internal URL of the server Control Panel for Text Messaging. |
| InternalEcpDeliveryReportUrl | The internal URL of the server Control Panel for Delivery Reports. |
| InternalEwsUrl | The internal URL of the server's Web Services. |
| InternalOABUrl | The internal URL of the Offline Address Book. |
| InternalUMUrl | The internal URL of the Unified Messaging services. |
| InternalWebClientUrls | The internal URLs of the server's web client. |
| MailboxDN | The distinguished name of the mailbox database of the user's mailbox. |
| PublicFolderServer | The name of the Public Folders server. |
| ActiveDirectoryServer | The name of the Active Directory server. |
| ExternalMailboxServer | The name of the RPC over HTTP server. |
| ExternalMailboxServerRequiresSSL | Indicates whether the RPC over HTTP server requires SSL. |
| ExternalMailboxServerAuthenticationMethods | The authentication methods supported by the RPC over HTTP server. |
| EcpVoicemailUrlFragment | The URL fragment of the server Control Panel for VoiceMail Customization. |
| EcpEmailSubscriptionsUrlFragment | The URL fragment of the server Control Panel for e-mail Subscriptions. |
| EcpTextMessagingUrlFragment | The URL fragment of the server Control Panel for Text Messaging. |
| EcpDeliveryReportUrlFragment | The URL fragment of the server Control Panel for Delivery Reports. |
| ExternalEcpUrl | The external URL of the server Control Panel. |
| ExternalEcpVoicemailUrl | The external URL of the server Control Panel for VoiceMail Customization. |
| ExternalEcpEmailSubscriptionsUrl | The external URL of the server Control Panel for e-mail Subscriptions. |
| ExternalEcpTextMessagingUrl | The external URL of the server Control Panel for Text Messaging. |
| ExternalEcpDeliveryReportUrl | The external URL of the server Control Panel for Delivery Reports. |

| Configuration Setting | Description |
|---------------------------------|--|
| ExternalEwsUrl | The external URL of the server's Web Services. |
| ExternalOABUrl | The external URL of the Offline Address Book. |
| ExternalUMUrl | The external URL of the Unified Messaging services. |
| ExternalWebClientUrls | The external URLs of the Server web client. |
| CrossOrganizationSharingEnabled | Indicates that cross-organization sharing is enabled. |
| AlternateMailboxes | Collection of alternate mailboxes. |
| CasVersion | The version of the Client Access Server serving the request (for example, 14.XX.YYY.ZZZ) |
| EwsSupportedSchemas | Comma-separated list of schema versions supported by server's Web Services. |

1.4 Relationship to Other Protocols

The Autodiscover Web Service protocol uses SOAP over **HTTP** and SOAP over **HTTPS**, as in the following figures.

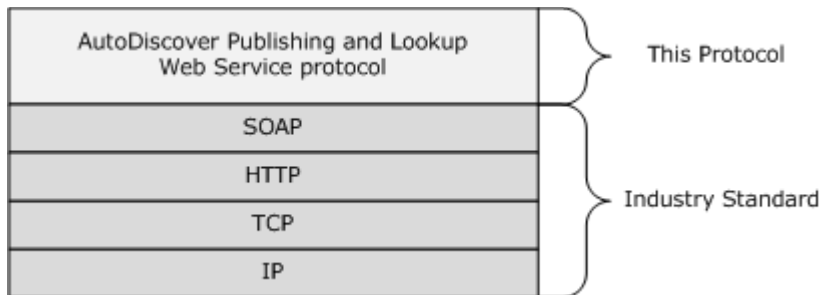


Figure 1: SOAP over HTTP

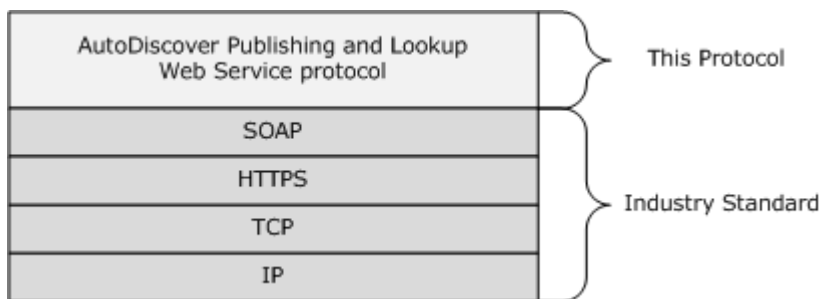


Figure 2: SOAP over HTTPS

1.5 Prerequisites/Preconditions

None.

1.6 Applicability Statement

The protocol specified in this document is applicable to environments that are to perform an auto discovery of a user from the user's e-mail address, using the server's Web Services.

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** portType version.

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 section [3.1.4](#).

Capability Negotiation: None.

1.8 Vendor Extensible Fields

None.

1.9 Standards Assignments

None.

2 Messages

2.1 Transport

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

2.2 Common Message Syntax

This section 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] |
| wsu | http://docs.oasis-open.org/wss/2004/01/oasis-200401-wss-wssecurity-utility-1.0.xsd | [MS-OXWSADISC] |
| soapenc | http://schemas.xmlsoap.org/soap/encoding/ | [SOAP1.1] |
| wsam | http://www.w3.org/2007/05/addressing/metadata | [WS-addr-Metadata] |
| tns | http://schemas.microsoft.com/exchange/2010/Autodiscover | [MS-OXWSADISC] |
| wsa | http://schemas.xmlsoap.org/ws/2004/08/addressing | [WS-Addressing] |
| wsp | http://schemas.xmlsoap.org/ws/2004/09/policy | [WS-Policy] |
| wsap | http://schemas.xmlsoap.org/ws/2004/08/addressing/policy | Not implemented. |
| xsd | http://www.w3.org/2001/XMLSchema | [XMLSCHEMA1] , [XMLSCHEMA2] |
| msc | http://schemas.microsoft.com/ws/2005/12/wsd/contract | Not implemented. |
| wsaw | http://www.w3.org/2006/05/addressing/wsdl | [WS-addr-core] |
| soap12 | http://schemas.xmlsoap.org/wsdl/soap12 | [WSDLSOAP] |
| wsa10 | http://www.w3.org/2005/08/addressing | [WSA10] |
| wsx | http://schemas.xmlsoap.org/ws/2004/09/mex | [WS-MetadataExchange] |
| targetNamespace | http://schemas.microsoft.com/exchange/2010/Autodiscover | [MS-OXWSADISC] |
| wsdl | http://schemas.xmlsoap.org/wsdl/ | [WSDL] |

2.2.2 Simple Types

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

2.2.3 Complex Types

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

2.2.3.1 ServerVersionInfo Complex Type

The **ServerVersionInfo** complex type represents the message server version. This type is returned in the **SOAP header** of a Web Services response message.

```
<xs:complexType name="ServerVersionInfo">
  <xs:sequence>
    <xs:element name="MajorVersion"
      type="xs:int"
      minOccurs="0"
    />
    <xs:element name="MinorVersion"
      type="xs:int"
      minOccurs="0"
    />
    <xs:element name="MajorBuildNumber"
      type="xs:int"
      minOccurs="0"
    />
    <xs:element name="MinorBuildNumber"
      type="xs:int"
      minOccurs="0"
    />
    <xs:element name="Version"
      type="xs:string"
      minOccurs="0"
      nillable="true"
    />
  </xs:sequence>
</xs:complexType>
```

Child Elements

| Element | Type | Description |
|------------------|-----------|--|
| MajorVersion | xs:int | The major version number for the server. |
| MinorVersion | xs:int | The minor version number for the server. |
| MajorBuildNumber | xs:int | The major build number for the server. |
| MinorBuildNumber | xs:int | The minor build number for the server. |
| Version | xs:string | A description of the server product version. |

Specifies the version of the Autodiscovery service.

2.2.3.2 m:Domains Complex Type

The **Domains** complex type represents a collection of domain names to be used in the Autodiscovery.

```
<xs:complexType name="Domains">
  <xs:sequence>
    <xs:element name="Domain"
      type="xs:string"
      maxOccurs="unbounded"
      minOccurs="0"
      nillable="true"
    />
  </xs:sequence>
</xs:complexType>
```

Child Elements

| Element | Type | Description |
|---------|-----------|---|
| Domain | xs:string | The User's domain. The location of the mail server. |

This type is submitted in the request message.

2.2.4 Elements

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

2.2.4.1 ServerVersionInfo Element

The <ServerVersionInfo> element represents the message server's version number, including the Major and Minor Version numbers as well as the Major and Minor Build numbers.

```
<xs:element name="ServerVersionInfo"
  type="tns:ServerVersionInfo"
  nillable="true"
/>
```

2.2.4.2 Domains Element

The <Domains> element represents a list of domains to be discovered.

```
<xs:element name="Domains"
  type="tns:Domains"
  nillable="true"
/>
```

2.2.5 Attributes

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

2.2.6 Groups

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

2.2.7 Attribute Groups

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

2.2.8 Messages

This specification does not define any common **XML schema** message 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 AutoDiscover Server Details

The Autodiscovery Web Service protocol allows the user to determine specific user configuration settings by e-mail address.

| Operation | Description |
|---------------------------------|--|
| GetUserSettings | Performs an Autodiscovery for the specified user and returns the requested configuration settings. |

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.

3.1.2 Timers

None.

3.1.3 Initialization

None.

3.1.4 Message Processing Events and Sequencing

This protocol includes the operation listed in the following table.

| Operation | Description |
|--|---|
| GetDomainSettings | Gets the domain data for a specified domain. |
| GetFederationInformation | Gets the configuration data for the security token service. |
| GetUserSettings | Gets the specified configurations settings for the e-mail user. |

3.1.4.1 GetDomainSettings

The **GetDomainSettings** operation retrieves the specified settings of the domain for the user.

Request

| Message Format | Description |
|---|--|
| tns:GetDomainSettingsRequestMessage | Specifies the SOAP message that requests the user's |

| Message Format | Description |
|----------------|--------------------------------|
| | domain configuration settings. |

Response

| Message Format | Description |
|--|--|
| tns:GetDomainSettingsResponseMessage | Specifies the SOAP message that is returned by the server in response. |

3.1.4.1.1 Simple Types

This specification does not define any specific **XML schema** simple type definitions for this operation.

3.1.4.1.2 Complex Types

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

3.1.4.1.2.1 m:GetDomainSettingsRequest Complex Type

The **GetDomainSettingsRequest** complex type retrieves the specified setting for a domain. The [m:GetDomainSettingsRequest Type](#) contains the domain to be Autodiscovered and the Settings to be returned by the server. This member represents a [GetDomainSettings](#) request. Returns a [m:DomainResponse Type](#) object containing the requested settings for the specified domain.

```
<xs:complexType name="GetDomainSettingsRequest"
  mixed="false"
>
  <xs:complexContent
    mixed="false"
  >
    <xs:extension
      base="tns:AutodiscoverRequest"
    >
      <xs:sequence>
        <xs:element name="Domains"
          type="tns:Domains"
          nillable="true"
        />
        <xs:element name="RequestedSettings"
          type="tns:RequestedSettings"
          nillable="true"
        />
        <xs:element name="RequestedVersion"
          type="tns:ExchangeVersion"
          nillable="true"
        />
      </xs:sequence>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>
```

Child Elements

| Element | Type | Description |
|-------------------|---------------------------------------|---|
| Domains | tns:Domains | The domains being autodiscovered. |
| RequestedSettings | tns:RequestedSettings | The configuration settings being requested. |
| RequestedVersion | tns:ExchangeVersion | The specific server version the provider would like to utilize. |

3.1.4.1.2.2 m:GetDomainSettingsResponse Complex Type

The **GetDomainSettingsResponse** complex type contains an array of domain settings. The domain response contains the configuration settings for the specific domain. This type represents the response to a [GetDomainSettings](#) call for an individual domain.

```
<xs:complexType name="GetDomainSettingsResponse"
  mixed="false"
>
  <xs:complexContent
    mixed="false"
  >
    <xs:extension
      base="tns:AutodiscoverResponse"
    >
      <xs:sequence>
        <xs:element name="DomainResponses"
          type="tns:ArrayOfDomainResponse"
          nillable="true"
          minOccurs="0"
        />
      </xs:sequence>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>
```

Child Elements

| Element | Type | Description |
|-----------------|---|--|
| DomainResponses | tns:ArrayOfDomainResponse | Contains the response for each domain. |

3.1.4.1.2.3 m:ArrayOfDomainResponse Complex Type

The **ArrayOfDomainResponse** complex type represents an array of [DomainResponse Type](#) objects. Each DomainResponse Type object contains [DomainSettings Type](#) for the specified domain.

```
<xs:complexType name="ArrayOfDomainResponse">
  <xs:sequence>
    <xs:element name="ArrayOfDomainResponse"
      type="tns:DomainResponse"
      nillable="true"
      minOccurs="0"
    />
  </xs:sequence>
</xs:complexType>
```

```

        maxOccurs="unbounded"
      />
    </xs:sequence>
  </xs:complexType>

```

Child Elements

| Element | Type | Description |
|-----------------------|------------------------------------|---|
| ArrayOfDomainResponse | tns:DomainResponse | Contains domains m:DomainSettingErrors Type , m:DomainSetting Type , and RedirectTarget for the domain. |

3.1.4.1.2.4 m:DomainResponse Complex Type

The **DomainResponse** complex type represents a response to a [GetDomainSettings](#) call for an individual domain. The [DomainResponse Type](#) object contains the requested settings for the specified domain.

```

<xs:complexType name="DomainResponse"
  mixed="false"
>
  <xs:complexContent
    mixed="false"
  >
    <xs:extension
      base="tns:AutodiscoverResponse"
    >
      <xs:sequence>
        <xs:element name="DomainSettingErrors"
          type="tns:DomainSettingErrors"
          nillable="true"
          minOccurs="0"
        />
        <xs:element name="DomainSettings"
          type="tns:DomainSettings"
          nillable="true"
          minOccurs="0"
        />
        <xs:element name="RedirectTarget"
          type="xs:string"
          nillable="true"
          minOccurs="0"
        />
      </xs:sequence>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>

```

Child Elements

| Element | Type | Description |
|---------------------|---|--|
| DomainSettingErrors | tns:DomainSettingErrors | Error information for settings that could not be returned. |
| DomainSettings | tns:DomainSettings | The requested settings for the domain. |
| RedirectTarget | xs:string | The redirectionTarget (URL or email address). |

3.1.4.1.2.5 m:DomainSettingErrors Complex Type

The **DomainSettingErrors** complex type represents a collection of [DomainSettingError Type](#) objects containing error information for settings that could not be returned.

```
<xs:complexType name="DomainSettingErrors">
  <xs:sequence>
    <xs:element name="DomainSettingError"
      type="tns:DomainSettingError"
      nillable="true"
      minOccurs="0"
      maxOccurs="unbounded"
    />
  </xs:sequence>
</xs:complexType>
```

Child Elements

| Element | Type | Description |
|--------------------|--|---|
| DomainSettingError | tns:DomainSettingError | Represents an error from a GetDomainSettings request. |

3.1.4.1.2.6 m:DomainSettingError Complex Type

The **DomainSettingError** complex type represents an error from a [GetDomainSettings](#) request. This is an error that occurred while retrieving a domain setting.

```
<xs:complexType name="DomainSettingError">
  <xs:sequence>
    <xs:element name="ErrorCode"
      type="tns:ErrorCode"
    />
    <xs:element name="ErrorMessage"
      type="xs:string"
      nillable="true"
    />
    <xs:element name="SettingName"
      type="xs:string"
      nillable="true"
    />
  </xs:sequence>
</xs:complexType>
```

Child Elements

| Element | Type | Description |
|--------------|-------------------------------|---|
| ErrorCode | tns:ErrorCode | Specifies the error code associated with the specific request. |
| ErrorMessage | xs:string | Specifies the error message associated with the specific request. |
| SettingName | xs:string | The name of the setting. |

3.1.4.1.2.7 m:DomainSettings Complex Type

The **DomainSettings** complex type represents a collection of [DomainSetting](#) objects, the base class for all domain settings returned by the [GetDomainSettings](#) method.

```
<xs:complexType name="DomainSettings">
  <xs:sequence>
    <xs:element name="DomainSetting"
      type="tns:DomainSetting"
      nillable="true"
      minOccurs="0"
      maxOccurs="unbounded"
    />
  </xs:sequence>
</xs:complexType>
```

Child Elements

| Element | Type | Description |
|---------------|-----------------------------------|---|
| DomainSetting | tns:DomainSetting | Represents the base class for all domain settings returned by the GetDomainSettings method. |

3.1.4.1.2.8 m:DomainSetting Complex Type

The **DomainSetting** complex type represents the domain settings to be returned by the [GetDomainSettings](#) method.

```
<xs:complexType name="DomainSetting">
  <xs:sequence>
    <xs:element name="Name"
      type="xs:string"
      nillable="true"
    />
  </xs:sequence>
</xs:complexType>
```

Child Elements

| Element | Type | Description |
|---------|-----------|--------------------------|
| Name | xs:string | The name of the setting. |

3.1.4.1.2.9 m:DomainStringSetting Complex Type

The **DomainStringSetting** complex type represents a domain setting whose value is of type string.

```
<xs:complexType name="DomainStringSetting"
  mixed="false"
>
  <xs:complexContent
    mixed="false"
  >
    <xs:extension
      base="tns:DomainSetting"
    >
      <xs:sequence>
        <xs:element name="Value"
          type="xs:string"
          nillable="true"
          minOccurs="0"
        />
      </xs:sequence>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>
```

Child Elements

| Element | Type | Description |
|---------|-----------|---------------------------|
| Value | xs:string | The value of the setting. |

3.1.4.1.3 Elements

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

3.1.4.1.3.1 GetDomainSettingsRequestMessage Element

The `<GetDomainSettingsRequestMessage>` element prepares a call to the server, requesting configuration setting for the domain of the user. The [GetDomainSettingsResponseMessage](#) contains the Domain Settings requested in this call.

```
<xs:element name="GetDomainSettingsRequestMessage">
  <xs:complexType>
    <xs:sequence>
      <xs:element name="Request"
        type="tns:GetDomainSettingsRequest"
        nillable="true"
        minOccurs="0"
      />
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

Child Elements

| Element | Type | Description |
|---------|--|---|
| Request | tns:GetDomainSettingsRequest | Represents a GetDomainSettings request. |

3.1.4.1.3.2 GetDomainSettingsResponseMessage Element

The <GetDomainSettingsResponseMessage> element returns to the caller the user's configuration settings that were requested in the [GetDomainSettingsRequestMessage](#) call.

The Name-Value pairs for each returned Domain Setting is included in the Response. The [GetDomainSettings](#) returns only the requested configuration settings.

```
<xs:element name="GetDomainSettingsResponseMessage">
  <xs:complexType>
    <xs:sequence>
      <xs:element name="Response"
        type="tns:GetDomainSettingsResponse"
        nillable="true"
        minOccurs="0"
      />
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

Child Elements

| Element | Type | Description |
|----------|---|---|
| Response | tns:GetDomainSettingsResponse | Represents the response to a GetDomainSettings call for an individual domain. |

3.1.4.1.3.3 GetDomainSettingsRequest Element

The <GetDomainSettingsRequest> element represents the parameters of a call to [GetDomainSettings](#).

```
<xs:element name="GetDomainSettingsRequest"
  type="tns:GetDomainSettingsRequest"
  nillable="true"
/>
```

3.1.4.1.3.4 GetDomainSettingsResponse Element

The <GetDomainSettingsResponse> element represents the response to a [GetDomainSettings](#) operation for a domain, and returns the domain settings.

```
<xs:element name="GetDomainSettingsResponse"
  type="tns:GetDomainSettingsResponse"
  nillable="true"
/>
```

3.1.4.1.3.5 ArrayOfDomainResponse Element

The <ArrayOfDomainResponse> element represents an array of [DomainResponse](#) elements. Each DomainResponse element contains the requested settings for the specified user.

```
<xs:element name="ArrayOfDomainResponse"
  type="tns:ArrayOfDomainResponse"
  nillable="true"
/>
```

3.1.4.1.3.6 DomainResponse Element

The <DomainResponse> element contains the requested settings for the specified domain.

```
<xs:element name="DomainResponse"
  type="tns:DomainResponse"
  nillable="true"
/>
```

3.1.4.1.3.7 DomainSettingErrors Element

The <DomainSettingErrors> element contains error information for settings that could not be returned.

```
<xs:element name="DomainSettingErrors"
  type="tns:DomainSettingErrors"
  nillable="true"
/>
```

3.1.4.1.3.8 DomainSettingError Element

The <DomainSettingError> element represents an error that occurred while retrieving a domain setting. This represents an error from a [GetDomainSettings](#) request.

```
<xs:element name="DomainSettingError"
  type="tns:DomainSettingError"
  nillable="true"
/>
```

3.1.4.1.3.9 DomainSettings Element

The <DomainSettings> element represents the domain settings that were submitted in a request or returned by an Autodiscover response.


```
<xs:element name="DomainSettings"
  type="tns:DomainSettings"
  nillable="true"
/>
```

3.1.4.1.3.10 DomainSetting Element

The <DomainSetting> element represents the base class for all domain settings returned by the [GetDomainSettings](#) request.

```
<xs:element name="DomainSetting"
  type="tns:DomainSettings"
  nillable="true"
/>
```

3.1.4.1.3.11 DomainStringSetting Element

The <DomainStringSetting> element represents a domain setting whose value is of type string.

```
<xs:element name="DomainStringSetting"
  type="tns:DomainStringSetting"
  nillable="true"
/>
```

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 tns:GetDomainSettingsRequestMessage

Retrieves the specified settings for a domain.

The [GetDomainSettingsRequestMessage Message](#) has one part.

| Part Name | Element/Type | Description |
|------------|---|---|
| parameters | tns:GetDomainSettingsRequestMessage | Represents the parameters of a call to GetDomainSettings request. |

3.1.4.1.7.2 tns:GetDomainSettingsRequestMessage_Headers

The **GetDomainSettingsRequestMessage_Headers Message** message specifies the SOAP header for a **GetDomainSettingsRequest** operation (section [3.1.4.1.3.3](#)). This message contains one part.

| Part Name | Element/Type | Description |
|------------------------|--|--|
| RequestedServerVersion | tns:RequestedServerVersion | Specifies which server version the GetDomainSettingsRequest operation (section 3.1.4.1.3.3) request targets. |

3.1.4.1.7.3 tns:GetDomainSettingsResponseMessage

Represents the response to a [GetDomainSettings](#) call for an individual domain.

The [GetDomainSettingsResponseMessage](#) has one part.

| Part Name | Element/Type | Description |
|------------|--------------------------------------|--|
| parameters | tns:GetDomainSettingsResponseMessage | Represents a response to a call to GetDomainSettings . |

3.1.4.1.7.4 tns:GetDomainSettingsResponseMessage_Headers

The **GetDomainSettingsResponseMessage_Headers Message** message specifies the SOAP header for a **GetDomainSettingsResponse** operation (section [3.1.4.1.3.4](#)). This message contains one part.

| Part Name | Element/Type | Description |
|-------------------|---------------------------------------|--|
| ServerVersionInfo | tns:ServerVersionInfo | Contains the version of the server that processed the GetDomainSettingsResponse operation (section 3.1.4.1.3.4) request. |

3.1.4.2 GetFederationInformation

The **GetFederationInformation** operation provides information about the federation status of the organization, such as the target URI to be used when requesting tokens targeted at this organization, and the other domains that the organization has also federated. When the caller doesn't know the URL to use to communicate with the server that hosts the domain of interest, the caller MUST execute either of the following sequences to reach the server that can provide the information.

Direct attempt:

- Compose URLs for Autodiscover endpoints, where {0} is the domain of interest, in the following order:
 U1: https://autodiscover.{0}/autodiscover/autodiscover.svc
 U2: https://{0}/autodiscover/autodiscover.svc
- Call the **GetFederationInformation** method at the Autodiscover endpoints U1 and U2. Use the results from the first one that provides a successful response.
- Follow HTTP 302 redirects only to HTTPS URLs.

Indirect attempt:

- Probe for an HTTP 302 redirect on a non-SSL endpoint.
- Compose the URL for an Autodiscover endpoint, where {0} is the domain of interest:
 http://autodiscover.{0}/autodiscover/autodiscover.xml
- The response MUST be an HTTP 302 redirect. The redirect URL in response MUST start with <https://> and end with </autodiscover/autodiscover.xml>.
- Parse the host element of the URL and compose the following URL, where {0} is the host element of the previous URL:
 https://{0}/autodiscover/autodiscover.svc
- Call the [GetFederationInformation](#) method at the Autodiscover endpoint.
- Follow HTTP 302 redirects only to HTTPS URLs.

Request

| Message Format | Description |
|---|---|
| tns:GetFederationInformationRequestMessage Messages | Specifies the SOAP message that requests the server federation information. |

Response

| Message Format | Description |
|--|--|
| tns:GetFederationInformationResponseMessage Messages | Specifies the SOAP message that is returned by the server in response. |

3.1.4.2.1 Simple Types

This specification does not define any specific **XML schema** simple type definitions for this operation.

3.1.4.2.2 Complex Types

This specification does not define any specific **XML schema** complex type definitions for this operation.

3.1.4.2.2.1 m:GetFederationInformationRequest Complex Type

The **GetFederationInformationRequest** complex type retrieves the specified federation settings for a user. The [GetFederationInformationRequest Type](#) contains the federation information, including federated domain names, from an external server. The requestor provides the domain name that allows the server to return the federation settings.

```
<xs:complexType name="GetFederationInformationRequest"
  mixed="false"
>
  <xs:complexContent
    mixed="false"
  >
    <xs:extension
      base="tns:AutodiscoverRequest"
    >
      <xs:sequence>
        <xs:element name="Domain"
          type="xs:string"
          nillable="true"
        />
      </xs:sequence>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>
```

Child Elements

| Element | Type | Description |
|---------|-----------|---------------------------------------|
| Domain | xs:string | The domain with the federation trust. |

3.1.4.2.2.2 m:GetFederationInformationResponse Complex Type

The **GetFederationInformationResponse** complex type returns to the caller the federation information that was requested in the [GetFederationInformationRequest Type](#) call.

```
<xs:complexType name="GetFederationInformationResponse"
  mixed="false"
>
  <xs:complexContent
    mixed="false"
  >
    <xs:extension
      base="tns:AutodiscoverResponse"
    >
      <xs:sequence>
        <xs:element name="ApplicationUri"
          type="xs:anyURI"
          nillable="true"
          minOccurs="0"
        />
        <xs:element name="Domains"
          type="tns:Domains"
          nillable="true"
        />
      </xs:sequence>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>
```

```

        minOccurs="0"
      />
    </xs:sequence>
  </xs:extension>
</xs:complexContent>
</xs:complexType>

```

Child Elements

| Element | Type | Description |
|----------------|-----------------------------|---|
| ApplicationUri | xs:anyURI | The caller uses this value in AppliesTo/EndpointReference/Address element of RST (as specified in [MS-OXWSLVID]) if it intends to make a request to web services against this server. |
| Domains | tns:Domains | Besides the domain presented in the request, the server returns additional domains the organization has federated. These are domains this server uses in the EmailAddress claim when it makes requests to other servers outside its organization, including the caller's. |

3.1.4.2.3 Elements

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

3.1.4.2.3.1 GetFederationInformationRequestMessage Element

The <GetFederationInformationRequestMessage> element prepares a call to the server, requesting configuration data for the security token service (STS). The [GetFederationInformationResponseMessage](#) contains the Federation settings.

```

<xs:element name="GetFederationInformationRequestMessage">
  <xs:complexType>
    <xs:sequence>
      <xs:element name="Request"
        type="tns:GetFederationInformationRequest"
        nillable="true"
        minOccurs="0"
      />
    </xs:sequence>
  </xs:complexType>
</xs:element>

```

Child Elements

| Element | Type | Description |
|---------|---|--|
| Request | tns:GetFederationInformationRequest | Represents a GetFederationInformation request. |

3.1.4.2.3.2 GetFederationInformationResponseMessage Element

The <GetFederationInformationResponseMessage> returns to the caller the Federations configuration settings that were requested in the [GetFederationInformationRequestMessage](#) call.

The security token service (STS) is specified in the response message.

```
<xs:element name="GetFederationInformationResponseMessage">
  <xs:complexType>
    <xs:sequence>
      <xs:element name="Response"
        type="tns:GetFederationInformationResponse"
        nillable="true"
        minOccurs="0"
      />
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

Child Elements

| Element | Type |
|----------|--------------------------------------|
| Response | tns:GetFederationInformationResponse |

3.1.4.2.3.3 GetFederationInformationRequest Element

The <GetFederationInformationRequest> element prepares a call to the server, requesting configuration data for the security token service (STS).

```
<xs:element name="GetFederationInformationRequest"
  type="tns:GetFederationInformationRequest"
  nillable="true"
/>
```

3.1.4.2.3.4 GetFederationInformationResponse Element

The <GetFederationInformationResponse> element returns to the caller the Federations configuration settings.

```
<xs:element name="GetFederationInformationResponse"
  type="tns:GetFederationInformationResponse"
  nillable="true"
/>
```

3.1.4.2.4 Attributes

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

3.1.4.2.5 Groups

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

3.1.4.2.6 Attribute Groups

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

3.1.4.2.7 Messages

The following **WSDL message** definitions are specific to this operation.

3.1.4.2.7.1 tns:GetFederationInformationRequestMessage

The [GetFederationInformationRequestMessage](#) message contains one part.

| Part Name | Element/Type | Description |
|------------|--|----------------------------------|
| parameters | tns:GetFederationInformationRequestMessage | This part specifies the request. |

3.1.4.2.7.2 tns:GetFederationInformationRequestMessage_Headers

The [GetFederationInformationRequestMessage_Headers Messages](#) message specifies the SOAP header for a [GetFederationInformationRequest](#) operation. This message contains one part.

| Part Name | Element/Type | Description |
|------------------------|--|--|
| RequestedServerVersion | tns:RequestedServerVersion | Specifies which server version the tns:GetFederationInformationRequest request targets. |

3.1.4.2.7.3 tns:GetFederationInformationResponseMessage

Represents the response to a [GetFederationInformation](#) call for an individual domain.

The [GetFederationInformationResponseMessage](#) message contains one part.

| Part Name | Element/Type | Description |
|------------|---|-----------------------------------|
| parameters | tns:GetFederationInformationResponseMessage | This part specifies the response. |

3.1.4.2.7.4 tns:GetFederationInformationResponseMessage_Headers

The **GetFederationInformationResponseMessage_Headers Messages** message specifies the SOAP header for a **GetFederationInformationResponse** operation (section [3.1.4.2.3.4](#)). This message contains one part.

| Part Name | Element/Type | Description |
|-------------------|---------------------------------------|---|
| ServerVersionInfo | tns:ServerVersionInfo | Contains the version of the server that processed the GetFederationInformationResponse operation (section 3.1.4.2.3.4) request. |

3.1.4.3 GetUserSettings

Retrieves the specified settings for a user.

Request

| Message Format | Description |
|---|--|
| tns:GetUserSettingsRequestMessage | Specifies the [SOAP] message that requests the user's configuration setting. |

Response

| Message Format | Description |
|--|--|
| tns:GetUserSettingsResponseMessage | Specifies the [SOAP] message returned by the server in response. |

The [GetUserSettings](#) enables the client to request specific configuration settings by passing in their names as simple strings and receive results as a simple dictionary of string name/value pairs.

3.1.4.3.1 Simple Types

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

3.1.4.3.1.1 t:ExchangeVersion Simple Type

The **ExchangeVersion** simple type represents an enumeration that defines the server versions used with this protocol.

```
<xs:simpleType name="ExchangeVersion">
  <xs:restriction
    base="xs:string"
  >
    <xs:enumeration
      value="Exchange2010"
    />
    <xs:enumeration
      value="Exchange2010_SP1"
    />
  </xs:restriction>
</xs:simpleType>
```

Enumeration

The following values are defined by the **ExchangeVersion** simple type:

| Value | Description |
|------------------|--------------------------------------|
| Exchange2010 | Defines an available server version. |
| Exchange2010_SP1 | Defines an available server version. |

3.1.4.3.1.2 t:ErrorCode Simple Type

The **ErrorCode** simple type specifies the error codes that can be returned by the Autodiscover service.

```
<xs:simpleType name="ErrorCode">
  <xs:restriction
    base="xs:string"
  >
    <xs:enumeration
      value="NoError"
    />
    <xs:enumeration
      value="RedirectAddress"
    />
    <xs:enumeration
      value="RedirectUrl"
    />
    <xs:enumeration
      value="InvalidUser"
    />
    <xs:enumeration
      value="InvalidRequest"
    />
    <xs:enumeration
      value="InvalidSetting"
    />
    <xs:enumeration
      value="SettingIsNotAvailable"
    />
    <xs:enumeration
      value="ServerBusy"
    />
    <xs:enumeration
      value="InvalidDomain"
    />
    <xs:enumeration
      value="NotFederated"
    />
    <xs:enumeration
      value="InternalServerError"
    />
  </xs:restriction>
</xs:simpleType>
```

Enumeration

The following values are defined by the **ErrorCode** simple type:

| Value | Description |
|-----------------|--|
| NoError | There was no error. |
| RedirectAddress | The caller must follow the e-mail address redirection that was returned by Autodiscover. |

| Value | Description |
|-----------------------|---|
| RedirectUrl | The caller must follow the URL redirection that was returned by Autodiscover. |
| InvalidUser | The user that was passed in the request is invalid. |
| InvalidRequest | The request is invalid. |
| InvalidSetting | A specified setting is invalid. |
| SettingIsNotAvailable | A specified setting is not available. |
| ServerBusy | The server is too busy to process the request. |
| InvalidDomain | The requested domain is not valid. |
| NotFederated | The organization is not federated. |
| InternalServerError | The internal server error. |

3.1.4.3.2 Complex Types

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

3.1.4.3.2.1 m:GetUserSettingsRequest Complex Type

The **GetUserSettingsRequest** complex type retrieves the specified settings for one or more users. The [m:GetUserSettingsRequest Type](#) contains the e-mail addresses for whom to retrieve settings. Returns a [m:UserResponse](#) object containing the requested settings for the specified user.

```

<xs:complexType name="GetUserSettingsRequest"
  mixed="false"
  >
  <xs:complexContent
    mixed="false"
    >
    <xs:extension
      base="tns:AutodiscoverRequest"
      >
      <xs:sequence>
        <xs:element name="Users"
          type="tns:Users"
          nillable="true"
          />
        <xs:element name="RequestedSettings"
          type="tns:RequestedSettings"
          nillable="true"
          />
        <xs:element name="RequestedVersion"
          type="tns:ExchangeVersion"
          nillable="true"
          />
      </xs:sequence>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>

```

Child Elements

| Element | Type | Description |
|-------------------|---------------------------------------|--|
| Users | tns:Users | The e-mail addresses of the users for whom settings should be retrieved. |
| RequestedSettings | tns:RequestedSettings | The configuration settings being requested. |
| RequestedVersion | tns:ExchangeVersion | The specific server version the provider would like to utilize. |

3.1.4.3.2.2 m:AutodiscoverRequest Complex Type

The **AutodiscoverRequest** complex type represents the base class for all requests made to the Autodiscover service.

```
<xs:complexType name="AutodiscoverRequest">
  <xs:sequence />
</xs:complexType>
```

The [GetUserSettingsRequest Type](#), [GetDomainSettingsRequest Type](#) and the [GetFederationInformationRequest Type](#) extend the **AutodiscoverRequest** complex type.

3.1.4.3.2.3 m:Users Complex Type

The **Users** complex type represents a collection of [User](#) types representing users for whom settings are to be retrieved.

```
<xs:complexType name="Users">
  <xs:sequence>
    <xs:element name="User"
      type="tns:User"
      nillable="true"
      minOccurs="0"
      maxOccurs="unbounded"
    />
  </xs:sequence>
</xs:complexType>
```

Child Elements

| Element | Type | Description |
|---------|--------------------------|---|
| User | tns:User | The user for whom to retrieve settings. |

3.1.4.3.2.4 m:User Complex Type

The **User** complex type represents a user for whom to retrieve settings. The user is identified by **SMTP** address or **Legacy DN**.

```
<xs:complexType name="User">
  <xs:sequence>
    <xs:element name="Mailbox"
      type="xs:string"
      nillable="true"
    />
  </xs:sequence>
</xs:complexType>
```

Child Elements

| Element | Type | Description |
|---------|-----------|--|
| Mailbox | xs:string | The e-mail address of the user to be discovered. |

The [GetUserSettings](#) method uses the e-mail address to discover the mailbox. The <User> element MUST be present.

3.1.4.3.2.5 m:RequestedSettings Complex Type

The **RequestedSettings** complex type specifies the configuration settings to be returned by the server for the [GetUserSettings](#) method.

```
<xs:complexType name="RequestedSettings">
  <xs:sequence>
    <xs:element name="Setting"
      type="xs:string"
      nillable="true"
      minOccurs="0"
      maxOccurs="unbounded"
    />
  </xs:sequence>
</xs:complexType>
```

Child Elements

| Element | Type | Description |
|---------|-----------|--|
| Setting | xs:string | The configuration settings to be returned. |

The collection of Setting elements MAY be:

| Setting Element | Description |
|-----------------|--|
| UserDisplayName | The display name of the user. |
| UserDN | The legacy distinguished name of the user. |

| Setting Element | Description |
|--|--|
| UserDeploymentId | The deployment ID of the user. |
| InternalMailboxServer | The fully qualified domain name of the mailbox server. |
| InternalRpcClientServer | The fully qualified domain name of the RPC client server. |
| InternalMailboxServerDN | The legacy distinguished name of the mailbox server. |
| InternalEcpUrl | The internal URL of the Exchange Control Panel. |
| InternalEcpVoicemailUrl | The internal URL of the Exchange Control Panel for voice mail customization. |
| InternalEcpEmailSubscriptionsUrl | The internal URL of the Exchange Control Panel for e-mail subscriptions. |
| InternalEcpTextMessagingUrl | The internal URL of the Exchange Control Panel for text messaging. |
| InternalEcpDeliveryReportUrl | The internal URL of the Exchange Control Panel for delivery reports. |
| InternalEwsUrl | The internal URL of the Web Services. |
| InternalOABUrl | The internal URL of the Offline Address Book. |
| InternalUMUrl | The internal URL of the Unified Messaging services. |
| InternalWebClientUrls | The internal URLs of the web client. |
| MailboxDN | The distinguished name of the mailbox database of the user's mailbox. |
| PublicFolderServer | The name of the public folders server. |
| ActiveDirectoryServer | The name of the Active Directory server. |
| ExternalMailboxServer | The name of the RPC over HTTP server. |
| ExternalMailboxServerRequiresSSL | Indicates whether the RPC over HTTP server requires SSL. |
| ExternalMailboxServerAuthenticationMethods | The authentication methods supported by the RPC over HTTP server. |
| EcpVoicemailUrlFragment | The URL fragment of the Exchange Control Panel for voice mail customization. |
| EcpEmailSubscriptionsUrlFragment | The URL fragment of the Exchange Control Panel for e-mail subscriptions. |
| EcpTextMessagingUrlFragment | The URL fragment of the Exchange Control Panel for text messaging. |
| EcpDeliveryReportUrlFragment | The URL fragment of the Exchange Control Panel for delivery reports. |
| ExternalEcpUrl | The external URL of the Exchange Control Panel. |

| Setting Element | Description |
|----------------------------------|--|
| ExternalEcpVoicemailUrl | The external URL of the Exchange Control Panel for voice mail customization. |
| ExternalEcpEmailSubscriptionsUrl | The external URL of the Exchange Control Panel for e-mail subscriptions. |
| ExternalEcpTextMessagingUrl | The external URL of the Exchange Control Panel for text messaging. |
| ExternalEcpDeliveryReportUrl | The external URL of the Exchange Control Panel for delivery Reports. |
| ExternalEwsUrl | The external URL of the Exchange Web Services. |
| ExternalOABUrl | The external URL of the Offline Address Book. |
| ExternalUMUrl | The external URL of the Unified Messaging services. |
| ExternalWebClientUrls | The external URLs of the Exchange web client. |
| CrossOrganizationSharingEnabled | Indicates that cross-organization sharing is enabled for the user. |
| AlternateMailboxes | A list of alternate mailboxes. |
| CasVersion | The version of the Client Access server that is serving the request (for example, 14.XX.YYY.ZZZ). |
| EwsSupportedSchemas | A comma-separated list of schema versions that are supported by Exchange Web Services. The schema version values will be the same as the values of the ExchangeVersion . |
| InternalPop3Connections | The internal connection settings list for the POP3 protocol. |
| ExternalPop3Connections | The external connection settings list for the POP3 protocol. |
| InternalImap4Connections | The internal connection settings list for the IMAP4 protocol. |
| ExternalImap4Connections | The external connection settings list for the IMAP4 protocol. |
| InternalSmtpConnections | The internal connection settings list for the SMTP protocol. |
| ExternalSmtpConnections | The external connection settings list for the SMTP protocol. |

3.1.4.3.2.6 m:GetUserSettingsResponse Complex Type

The **GetUserSettingsResponse** complex type represents a response that contains an array of user responses. A single user response contains the configuration settings for a specific user. The **GetUserSettingsResponse** complex type returns to the caller the user's configuration settings that were requested in the [GetDomainSettingsRequest](#) call.

The Name-Value pairs for each returned User Setting is included in the response. The [GetUserSettings](#) method returns only the requested configuration settings, if they exist on the server.

```

<xs:complexType name="GetUserSettingsResponse"
  mixed="false"
>
  <xs:complexContent
    mixed="false"
  >
    <xs:extension
      base="tns:AutodiscoverResponse"
    >
      <xs:sequence>
        <xs:element name="UserResponses"
          type="tns:ArrayOfUserResponse"
          nillable="true"
          minOccurs="0"
        />
      </xs:sequence>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>

```

Child Elements

| Element | Type | Description |
|---------------|---|--------------------------------------|
| UserResponses | tns:ArrayOfUserResponse | Contains the response for each user. |

3.1.4.3.2.7 m:AutodiscoverResponse Complex Type

The **AutodiscoverResponse** complex type represents the base class for all responses returned by the Autodiscover service. It introduces the `ErrorCode` and `ErrorMessage` properties.

```

<xs:complexType name="AutodiscoverResponse">
  <xs:sequence>
    <xs:element name="ErrorCode"
      type="tns:ErrorCode"
      minOccurs="0"
    />
    <xs:element name="ErrorMessage"
      type="xs:string"
      nillable="true"
      minOccurs="0"
    />
  </xs:sequence>
</xs:complexType>

```

Child Elements

| Element | Type | Description |
|--------------|-------------------------------|--|
| ErrorCode | tns:ErrorCode | The error code associated with this response. |
| ErrorMessage | xs:string | The error message associated with this response. |

The [GetUserSettingsResponse Type](#), [UserResponse Type](#), [GetDomainSettingsResponse Type](#), [DomainResponse Type](#), and the [GetFederationInformationResponse Type](#) extend the **AutodiscoverResponse**.

3.1.4.3.2.8 m:UserResponse Complex Type

The **UserResponse** complex type represents a response to a [GetUserSettings](#) for an individual user. The server returns only the configuration settings requested by the client.

```
<xs:complexType name="UserResponse"
  mixed="false"
>
  <xs:complexContent
    mixed="false"
  >
    <xs:extension
      base="tns:AutodiscoverResponse"
    >
      <xs:sequence>
        <xs:element name="RedirectTarget"
          type="xs:string"
          nillable="true"
          minOccurs="0"
        />
        <xs:element name="UserSettingErrors"
          type="tns:UserSettingErrors"
          nillable="true"
          minOccurs="0"
        />
        <xs:element name="UserSettings"
          type="tns:UserSettings"
          nillable="true"
          minOccurs="0"
        />
      </xs:sequence>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>
```

Child Elements

| Element | Type | Description |
|-------------------|---------------------------------------|--|
| RedirectTarget | xs:string | The target of the redirection (URL or email address). |
| UserSettingErrors | tns:UserSettingErrors | Error information for settings that could not be returned. |
| UserSettings | tns:UserSettings | The requested settings for the user. |

3.1.4.3.2.9 m:UserSettingErrors Complex Type

The **UserSettingErrors** complex type represents a collection of [UserSettingError](#) elements containing error information for settings that could not be returned.

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



```

<xs:sequence>
  <xs:element name="UserSettingError"
    type="tns:UserSettingError"
    nillable="true"
    minOccurs="0"
    maxOccurs="unbounded"
  />
</xs:sequence>
</xs:complexType>

```

Child Elements

| Element | Type | Description |
|------------------|--------------------------------------|---|
| UserSettingError | tns:UserSettingError | Represents an error from a GetUserSettings request. |

3.1.4.3.2.10 m:ArrayOfUserResponse Complex Type

The **ArrayOfUserResponse** represents an array of [UserResponse](#) elements containing the responses for each user.

```

<xs:complexType name="ArrayOfUserResponse">
  <xs:sequence>
    <xs:element name="UserResponse"
      type="tns:UserResponse"
      nillable="true"
      minOccurs="0"
      maxOccurs="unbounded"
    />
  </xs:sequence>
</xs:complexType>

```

Child Elements

| Element | Type | Description |
|--------------|----------------------------------|--|
| UserResponse | tns:UserResponse | Represents a response to a GetUserSettings for an individual user. |

3.1.4.3.2.11 m:UserSettingError Complex Type

The **UserSettingError** complex type represents an error from a [GetUserSettings](#) request. An error that occurred while retrieving a user setting.

```

<xs:complexType name="UserSettingError">
  <xs:sequence>
    <xs:element name="ErrorCode"
      type="tns:ErrorCode"
    />
    <xs:element name="ErrorMessage"
      type="xs:string"
      nillable="true"
    />
  </xs:sequence>
</xs:complexType>

```

```

    />
    <xs:element name="SettingName"
      type="xs:string"
      nillable="true"
    />
  </xs:sequence>
</xs:complexType>

```

Child Elements

| Element | Type | Description |
|--------------|-------------------------------|---|
| ErrorCode | tns:ErrorCode | Specifies the error code associated with the specific request. |
| ErrorMessage | xs:string | Specifies the error message associated with the specific request. |
| SettingName | xs:string | The name of the setting. |

3.1.4.3.2.12 m:UserSettings Complex Type

The **UserSettings** complex type represents a collection of [UserSetting](#) objects, the base class for all user settings returned by the [GetUserSettings](#) method.

```

<xs:complexType name="UserSettings">
  <xs:sequence>
    <xs:element name="UserSetting"
      type="tns:UserSetting"
      nillable="true"
      minOccurs="0"
      maxOccurs="unbounded"
    />
  </xs:sequence>
</xs:complexType>

```

Child Elements

| Element | Type | Description |
|-------------|---------------------------------|---|
| UserSetting | tns:UserSetting | Represents the base class for all user settings returned by the GetUserSettings method. |

3.1.4.3.2.13 m:UserSetting Complex Type

The **UserSetting** complex type represents the user settings to be returned by the [GetUserSettings](#) method.

```

<xs:complexType name="UserSetting">
  <xs:sequence>
    <xs:element name="Name"
      type="xs:string"
      nillable="true"
    />
  </xs:sequence>
</xs:complexType>

```

```

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

```

Child Elements

| Element | Type | Description |
|---------|-----------|--------------------------|
| Name | xs:string | The name of the setting. |

The [ProtocolConnectionCollectionSetting Type](#), [StringSetting Type](#), [WebClientUrlCollectionSetting Type](#), and [AlternateMailboxCollectionSetting Type](#) extend the **UserSetting**.

3.1.4.3.2.14 m:StringSetting Complex Type

The **StringSetting** complex type represents a user setting whose value is of type string.

```

<xs:complexType name="StringSetting"
  mixed="false"
>
  <xs:complexContent
    mixed="false"
  >
    <xs:extension
      base="tns:UserSetting"
    >
      <xs:sequence>
        <xs:element name="Value"
          type="xs:string"
          nillable="true"
          minOccurs="0"
        />
      </xs:sequence>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>

```

Child Elements

| Element | Type | Description |
|---------|-----------|---------------------------|
| Value | xs:string | The value of the setting. |

3.1.4.3.2.15 m:WebClientUrlCollectionSetting Complex Type

The **WebClientUrlCollectionSetting** complex type represents a collection of [WebClientUrls](#) types.

```

<xs:complexType name="WebClientUrlCollectionSetting"
  mixed="false"
>
  <xs:complexContent
    mixed="false"
  >

```

```

<xs:extension
  base="tns:UserSetting"
>
  <xs:sequence>
    <xs:element name="WebClientUrls"
      type="tns:WebClientUrls"
      nillable="true"
    />
  </xs:sequence>
</xs:extension>
</xs:complexContent>
</xs:complexType>

```

Child Elements

| Element | Type | Description |
|---------------|-----------------------------------|-------------|
| WebClientUrls | tns:WebClientUrls | The URLs. |

3.1.4.3.2.16 m:WebClientUrls Complex Type

The **WebClientUrls** complex type represents a collection of [WebClientUrl](#) elements. Represents the internal and external URLs of the server's web client.

```

<xs:complexType name="WebClientUrls">
  <xs:sequence>
    <xs:element name="WebClientUrl"
      type="tns:WebClientUrl"
      nillable="true"
      minOccurs="0"
      maxOccurs="unbounded"
    />
  </xs:sequence>
</xs:complexType>

```

Child Elements

| Element | Type | Description |
|--------------|----------------------------------|--|
| WebClientUrl | tns:WebClientUrl | Represents the URL of the server web client. |

3.1.4.3.2.17 m:WebClientUrl Complex Type

The **WebClientUrl** complex type represents the URL of the server web client.

```

<xs:complexType name="WebClientUrl">
  <xs:sequence>
    <xs:element name="AuthenticationMethods"
      type="xs:string"
      nillable="true"
    />
    <xs:element name="Url"

```

```

        type="xs:string"
        nillable="true"
    />
</xs:sequence>
</xs:complexType>

```

Child Elements

| Element | Type | Description |
|-----------------------|-----------|-----------------------------|
| AuthenticationMethods | xs:string | The authentication methods. |
| Url | xs:string | The URL. |

The [m:WebClientUrl Type](#) can be used for retrieving data from a Web Service.

3.1.4.3.2.18 m:ProtocolConnectionCollectionSetting Complex Type

The **ProtocolConnectionCollectionSetting** complex type represents a collection of [ProtocolConnection](#) types.

```

<xs:complexType name="ProtocolConnectionCollectionSetting"
    mixed="false"
>
    <xs:complexContent
        mixed="false"
    >
        <xs:extension
            base="tns:UserSetting"
        >
            <xs:sequence>
                <xs:element name="ProtocolConnections"
                    type="tns:ProtocolConnections"
                    nillable="true"
                />
            </xs:sequence>
        </xs:extension>
    </xs:complexContent>
</xs:complexType>

```

Child Elements

| Element | Type | Description |
|---------------------|---|---------------------------|
| ProtocolConnections | tns:ProtocolConnections | The protocol connections. |

3.1.4.3.2.19 m:ProtocolConnections Complex Type

The **ProtocolConnections** complex type represents a collection of <ProtocolConnection> elements (section [3.1.4.3.3.24](#)). **ProtocolConnections** represents the internal and external protocol connection of the server's Web client.

```

<xs:complexType name="ProtocolConnections">
  <xs:sequence>
    <xs:element name="ProtocolConnection"
      type="tns:ProtocolConnection"
      nillable="true"
      minOccurs="0"
      maxOccurs="unbounded"
    />
  </xs:sequence>
</xs:complexType>

```

Child Elements

| Element | Type | Description |
|--------------------|--|--|
| ProtocolConnection | tns:ProtocolConnection | Represents the protocol connection of the server Web client. |

3.1.4.3.2.20 m:ProtocolConnection Complex Type

The **ProtocolConnection** complex type represents the email Protocol connection settings for pop/imap/smtp protocols.

```

<xs:complexType name="ProtocolConnection">
  <xs:sequence>
    <xs:element name="Hostname"
      type="xs:string"
      nillable="true"
    />
    <xs:element name="Port"
      type="xs:int"
    />
    <xs:element name="EncryptionMethod"
      type="xs:string"
      nillable="true"
    />
  </xs:sequence>
</xs:complexType>

```

Child Elements

| Element | Type | Description |
|------------------|-----------|--|
| Hostname | xs:string | Host name portion of the full computer name of the computer. |
| Port | xs:int | The port number to use for the protocol. |
| EncryptionMethod | xs:string | The selected cryptographic method to use for protocol. |

3.1.4.3.2.21 m:AlternateMailboxCollectionSetting Complex Type

The **AlternateMailboxCollectionSetting** complex type represents a collection of [AlternateMailboxes](#) types.

```
<xs:complexType name="AlternateMailboxCollectionSetting"
  mixed="false"
>
  <xs:complexContent
    mixed="false"
  >
    <xs:extension
      base="tns:UserSetting"
    >
      <xs:sequence>
        <xs:element name="AlternateMailboxes"
          type="tns:AlternateMailboxes"
          nillable="true"
        />
      </xs:sequence>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>
```

Child Elements

| Element | Type | Description |
|--------------------|--|------------------------------------|
| AlternateMailboxes | tns:AlternateMailboxes | Collection of alternate mailboxes. |

3.1.4.3.2.22 m:AlternateMailboxes Complex Type

The **AlternateMailboxes** complex type represents a collection of [m:AlternateMailbox Type](#) elements.

```
<xs:complexType name="AlternateMailboxes">
  <xs:sequence>
    <xs:element name="AlternateMailbox"
      type="tns:AlternateMailbox"
      nillable="true"
      minOccurs="0"
      maxOccurs="unbounded"
    />
  </xs:sequence>
</xs:complexType>
```

Child Elements

| Element | Type | Description |
|------------------|--------------------------------------|----------------------------------|
| AlternateMailbox | tns:AlternateMailbox | Represents an alternate mailbox. |

3.1.4.3.2.23 m:AlternateMailbox Complex Type

The **AlternateMailbox** complex type represents an alternate mailbox.

```
<xs:complexType name="AlternateMailbox">
  <xs:sequence>
    <xs:element name="Type"
      type="xs:string"
      nillable="true"
    />
    <xs:element name="DisplayName"
      type="xs:string"
      nillable="true"
    />
    <xs:element name="LegacyDN"
      type="xs:string"
      nillable="true"
    />
    <xs:element name="Server"
      type="xs:string"
      nillable="true"
    />
  </xs:sequence>
</xs:complexType>
```

Child Elements

| Element | Type | Description |
|-------------|-----------|-------------------------------------|
| Type | xs:string | The alternate mailbox type. |
| DisplayName | xs:string | The alternate mailbox display name. |
| LegacyDN | xs:string | The alternate mailbox legacy DN. |
| Server | xs:string | The alternate mailbox server. |

An alternate mailbox corresponds to a user's external mailbox, such as a personal POP/IMAP account, a Web mail account, or an archived account.

3.1.4.3.3 Elements

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

3.1.4.3.3.1 GetUserSettingsRequestMessage Element

The <GetUserSettingsRequestMessage> element prepares a call to the server, specifying the configuration settings to be returned along with the e-mail address of the user for whom to retrieve the settings. The [GetUserSettingsResponseMessage](#) contains the setting requested in this call.

```
<xs:element name="GetUserSettingsRequestMessage">
  <xs:complexType>
    <xs:sequence>
      <xs:element name="Request"
        type="tns:GetUserSettingsRequest"
      />
    </xs:sequence>
  </xs:complexType>
```



```

        nillable="true"
        minOccurs="0"
      />
    </xs:sequence>
  </xs:complexType>
</xs:element>

```

Child Elements

| Element | Type | Description |
|---------|--|---|
| Request | tns:GetUserSettingsRequest | Represents a GetUserSettings request. |

3.1.4.3.3.2 GetUserSettingsResponseMessage Element

The <GetUserSettingsResponseMessage> element returns to the caller the user's configuration settings that were requested in the <GetUserSettingsRequestMessage> element (section [3.1.4.3.3.1](#)) call.

The Name-Value pairs for each returned user setting is included in the response. The <GetUserSettings> element (section [3.1.4.3](#)) returns only the requested configuration settings if they exist on the server.

```

<xs:element name="GetUserSettingsResponseMessage">
  <xs:complexType>
    <xs:sequence>
      <xs:element name="Response"
        type="tns:GetUserSettingsResponse"
        nillable="true"
        minOccurs="0"
      />
    </xs:sequence>
  </xs:complexType>
</xs:element>

```

Child Elements

| Element | Type | Description |
|----------|---|--|
| Response | tns:GetUserSettingsResponse | Represents the response to a <GetUserSettings> element (section 3.1.4.3) call for an individual user. |

3.1.4.3.3.3 GetUserSettingsRequest Element

The <GetUserSettingsRequest> element represents the parameters of a call to [GetUserSettings](#).

```

<xs:element name="GetUserSettingsRequest"
  type="tns:GetUserSettingsRequest"
  nillable="true"
/>

```

3.1.4.3.3.4 GetUserSettingsResponse Element

The <GetUserSettingsResponse> element represents the response to a [GetUserSettings](#) operation for an individual user.

```
<xs:element name="GetUserSettingsResponse"
  type="tns:GetUserSettingsResponse"
  nillable="true"
/>
```

3.1.4.3.3.5 AutodiscoverRequest Element

The <AutodiscoverRequest> element represents the base element of all Autodiscover requests.

```
<xs:element name="AutodiscoverRequest"
  type="tns:AutodiscoverRequest"
  nillable="true"
/>
```

3.1.4.3.3.6 Users Element

The <Users> element represents a list of [User](#) elements. Each user includes an e-mail address.

```
<xs:element name="Users"
  type="tns:Users"
  nillable="true"
/>
```

3.1.4.3.3.7 User Element

The <User> element represents the user.

```
<xs:element name="User"
  type="tns:User"
  nillable="true"
/>
```

3.1.4.3.3.8 RequestedSettings Element

The <RequestedSettings> element represents the configuration settings to be returned in the autodiscovery.

```
<xs:element name="RequestedSettings"
  type="tns:RequestedSettings"
  nillable="true"
/>
```

3.1.4.3.3.9 RequestedServerVersion Element

The <RequestedServerVersion> element specifies the server version that an Autodiscover method call targets. For example, Exchange2010.

```
<xs:element name="RequestedServerVersion">
  <xs:simpleType>
    <xs:restriction
      base="tns:ExchangeVersion"
    />
  </xs:simpleType>
</xs:element>
```

3.1.4.3.3.10 AutodiscoverResponse Element

The <AutodiscoverResponse> element represents the base class for all responses returned by the Autodiscover service. The [AutodiscoverResponse](#) introduces the [ErrorCode](#) and ErrorMessage elements.

```
<xs:element name="AutodiscoverResponse"
  type="tns:AutodiscoverResponse"
  nillable="true"
/>
```

3.1.4.3.3.11 ErrorCode Element

The <ErrorCode> element defines the error codes that can be returned by the Autodiscover service.

```
<xs:element name="ErrorCode"
  type="tns:ErrorCode"
  nillable="true"
/>
```

3.1.4.3.3.12 ArrayOfUserResponse Element

The <ArrayOfUserResponse> element contains an array of [UserResponse](#) elements. Each **UserResponse** element contains the requested settings for the specified specific user.

```
<xs:element name="ArrayOfUserResponse"
  type="tns:ArrayOfUserResponse"
  nillable="true"
/>
```

3.1.4.3.3.13 UserResponse Element

A <UserResponse> element contains the requested settings for the specified user.

```
<xs:element name="UserResponse"
```

```
    type="tns:UserResponse"
    nillable="true"
  />
```

3.1.4.3.3.14 UserSettingErrors Element

The <UserSettingErrors> element contains error information for settings that could not be returned.

```
<xs:element name="UserSettingErrors"
  type="tns:UserSettingErrors"
  nillable="true"
/>
```

3.1.4.3.3.15 UserSettingError Element

The <UserSettingError> element represents an error that occurred while retrieving a user setting. This represents an error from a [GetUserSettings](#) request.

```
<xs:element name="UserSettingError"
  type="tns:UserSettingError"
  nillable="true"
/>
```

3.1.4.3.3.16 UserSettings Element

The <UserSettings> element represents the base class for all user settings returned by the [GetUserSettings](#) request.

```
<xs:element name="UserSettings"
  type="tns:UserSettings"
  nillable="true"
/>
```

3.1.4.3.3.17 UserSetting Element

The <UserSetting> element represents the base class for all user settings returned by the [GetUserSettings](#) element.

```
<xs:element name="UserSetting"
  type="tns:UserSetting"
  nillable="true"
/>
```

3.1.4.3.3.18 StringSetting Element

The <StringSetting> element represents a user setting whose value is of type string.

```
<xs:element name="StringSetting"
  type="tns:StringSetting"
  nillable="true"
/>
```

3.1.4.3.3.19 WebClientUrlCollectionSetting Element

The <WebClientUrlCollectionSetting> element represents a user setting whose value is a collection of web client URLs.

```
<xs:element name="WebClientUrlCollectionSetting"
  type="tns:WebClientUrlCollectionSetting"
  nillable="true"
/>
```

3.1.4.3.3.20 WebClientUrls Element

The <WebClientUrls> element represents the internal and external URLs of a web client.

```
<xs:element name="WebClientUrls"
  type="tns:WebClientUrls"
  nillable="true"
/>
```

3.1.4.3.3.21 WebClientUrl Element

The <WebClientUrl> element represents a URL of a web client.

```
<xs:element name="WebClientUrl"
  type="tns:WebClientUrl"
  nillable="true"
/>
```

3.1.4.3.3.22 ProtocolConnectionCollectionSetting Element

The <ProtocolConnectionCollectionSetting> element represents a collection of server protocol connection settings.

```
<xs:element name="ProtocolConnectionCollectionSetting"
  type="tns:ProtocolConnectionCollectionSetting"
  nillable="true"
/>
```

3.1.4.3.3.23 ProtocolConnections Element

The <ProtocolConnections> element represents the collection of protocol connections.

```
<xs:element name="ProtocolConnections"
  type="tns:ProtocolConnections"
  nillable="true"
/>
```

3.1.4.3.3.24 ProtocolConnection Element

The <ProtocolConnection> element represents the email Protocol connection settings for pop/imap/smtp protocols.

```
<xs:element name="ProtocolConnection"
  type="tns:ProtocolConnection"
  nillable="true"
/>
```

3.1.4.3.3.25 AlternateMailboxCollectionSetting Element

The <AlternateMailboxCollectionSetting> element represents a collection of alternate mailbox settings.

```
<xs:element name="AlternateMailboxCollectionSetting"
  type="tns:AlternateMailboxCollectionSetting"
  nillable="true"
/>
```

3.1.4.3.3.26 AlternateMailboxes Element

The <AlternateMailboxes> element represents a collection of alternate mailboxes.

```
<xs:element name="AlternateMailboxes"
  type="tns:AlternateMailboxes"
  nillable="true"
/>
```

3.1.4.3.3.27 AlternateMailbox Element

The <AlternateMailbox> represents an alternative mailbox, an archived mailbox.

```
<xs:element name="AlternateMailbox"
  type="tns:AlternateMailbox"
  nillable="true"
/>
```

An alternate mailbox corresponds to an external mailbox of the user's such as a personal POP/IMAP account, a user's webmail account, or an archived account.

3.1.4.3.4 Attributes

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

3.1.4.3.5 Groups

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

3.1.4.3.6 Attribute Groups

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

3.1.4.3.7 Messages

The following **WSDL message** definitions are specific to this operation.

3.1.4.3.7.1 tns:GetUserSettingsRequestMessage

Retrieves the specified settings for a user.

The [tns:GetUserSettingsRequestMessage Messages](#) has one part.

| Part Name | Element/Type | Description |
|------------|---|---|
| parameters | tns:GetUserSettingsRequestMessage | Represents the parameters of a call to GetUserSettings request. |

3.1.4.3.7.2 tns:GetUserSettingsRequestMessage_Headers

The [GetUserSettingsRequestMessage_Headers Messages](#) message specifies the SOAP header for a [GetUserSettingsRequest](#) operation. This message contains one part.

| Part Name | Element/Type | Description |
|------------------------|--|---|
| RequestedServerVersion | tns:RequestedServerVersion | Specifies which server version the tns:GetUserSettingsRequest request targets. |

3.1.4.3.7.3 tns:GetUserSettingsResponseMessage

Represents the response to a [GetUserSettings](#) call for an individual user.

The [tns:GetUserSettingsResponseMessage Messages](#) has one part.

| Part Name | Element/Type | Description |
|------------|--|--|
| parameters | tns:GetUserSettingsResponseMessage | Represents a response to a call to GetUserSettings . |

3.1.4.3.7.4 tns:GetUserSettingsResponseMessage_Headers

The [GetUserSettingsResponseMessage_Headers Messages](#) message specifies the SOAP header for a [GetUserSettingsResponse](#) operation. This message contains one part.

| Part Name | Element/Type | Description |
|-------------------|-------------------------------------|--|
| ServerVersionInfo | t:ServerVersionInfo | Contains the version of the server that processed the GetUserSettings request. |

3.1.5 Timer Events

None.

3.1.6 Other Local Events

None.

3.2 Client Details

Client Details

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

3.2.1 Abstract Data Model

None.

3.2.2 Timers

None.

3.2.3 Initialization

None.

3.2.4 Message Processing Events and Sequencing

None.

3.2.5 Timer Events

None.

3.2.6 Other Local Events

None.

4 Protocol Examples

The following are examples of an Autodiscovery Request and Response. Note that in the [GetUserSettings](#) and [GetDomainSettings](#) examples only the requested settings are returned to the client.

4.1 GetDomainSettings_Example

The following is an example of the GetDomainSettings operation.

To retrieve the requested Domain settings, the client constructs the Autodiscover Request XML and sends it to the server.

```
<?xml version="1.0" encoding="utf-8"?>
<soap:Envelope xmlns:a="http://schemas.microsoft.com/exchange/2010/Autodiscover"
  xmlns:wsa="http://www.w3.org/2005/08/addressing" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
  xmlns:soap="http://schemas.xmlsoap.org/soap/envelope/">
  <soap:Header>
    <a:RequestedServerVersion>Exchange2010</a:RequestedServerVersion>
    <wsa:Action>http://schemas.microsoft.com/exchange/2010/Autodiscover/Autodiscover/GetDomainSettings</wsa:Action>
    <wsa:To>https://autodiscover.exchange.microsoft.com/autodiscover/autodiscover.svc</wsa:To>
  </soap:Header>
  <soap:Body>
    <a:GetDomainSettingsRequestMessage xmlns:a="http://schemas.microsoft.com/exchange/2010/Autodiscover">
      <a:Request>
        <a:Domains>
          <a:Domain>Redmond</a:Domain>
        </a:Domains>
        <a:RequestedSettings>
          <a:Setting>ExternalEwsUrl</a:Setting>
        </a:RequestedSettings>
      </a:Request>
    </a:GetDomainSettingsRequestMessage>
  </soap:Body>
</soap:Envelope>
</EwsLogEntry>
```

The server constructs the Autodiscover Response XML and sends it to the client.

```
<s:Envelope xmlns:s="http://schemas.xmlsoap.org/soap/envelope/" xmlns:a="http://www.w3.org/2005/08/addressing">
  <s:Header>
    <a:Action s:mustUnderstand="1">http://schemas.microsoft.com/exchange/2010/Autodiscover/Autodiscover/GetDomainSettingsResponse</a:Action>
  </s:Header>
  <s:Body>
    <h:ServerVersionInfo xmlns:h="http://schemas.microsoft.com/exchange/2010/Autodiscover"
      xmlns:i="http://www.w3.org/2001/XMLSchema-instance">
      <h:MajorVersion>14</h:MajorVersion>
      <h:MinorVersion>0</h:MinorVersion>
      <h:MajorBuildNumber>639</h:MajorBuildNumber>
      <h:MinorBuildNumber>20</h:MinorBuildNumber>
      <h:Version>Exchange2010</h:Version>
    </h:ServerVersionInfo>
  </s:Body>
</s:Envelope>
```

```

</s:Header>
<s:Body>
  <GetDomainSettingsResponseMessage xmlns="http://schemas.microsoft.com/exchange/2010/Autodiscover">
    <Response xmlns:i="http://www.w3.org/2001/XMLSchema-instance">
      <ErrorCode>NoError</ErrorCode>
      <ErrorMessage />
      <DomainResponses>
        <DomainResponse>
          <ErrorCode>NoError</ErrorCode>
          <ErrorMessage>No error.</ErrorMessage>
          <DomainSettingErrors />
          <DomainSettings>
            <DomainSetting i:type="DomainStringSetting">
              <Name>ExternalEwsUrl</Name>
              <Value>https://emea.mail.microsoft.com/EWS/Exchange.asmx</Value>
            </DomainSetting>
          </DomainSettings>
          <RedirectTarget i:nil="true" />
        </DomainResponse>
      </DomainResponses>
    </Response>
  </GetDomainSettingsResponseMessage>
</s:Body>
</s:Envelope>

```

4.2 GetFederationInformation_Example

The following is an example of the [GetFederationInformation](#) operation.

In the request the caller is requesting domain information for domain "contoso.com".

```

<?xml version="1.0" encoding="utf-8"?>
<soap:Envelope xmlns:exm="http://schemas.microsoft.com/exchange/services/2006/messages"
xmlns:ext="http://schemas.microsoft.com/exchange/services/2006/types"
xmlns:a="http://www.w3.org/2005/08/addressing"
xmlns:soap="http://schemas.xmlsoap.org/soap/envelope/"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:xsd="http://www.w3.org/2001/XMLSchema">
  <soap:Header>
    <a:MessageID>urn:uuid:6389558d-9e05-465e-ade9-aae14c4bcd10</a:MessageID>
    <a:Action
soap:mustUnderstand="1">http://schemas.microsoft.com/exchange/2010/Autodiscover/Autodiscover/
GetFederationInformation</a:Action>
    <a:To soap:mustUnderstand="1">https://autodiscover.byfxcu-
dom.extest.microsoft.com/autodiscover/autodiscover.svc</a:To>
    <a:ReplyTo>
      <a:Address>http://www.w3.org/2005/08/addressing/anonymous</a:Address>
    </a:ReplyTo>
  </soap:Header>
  <soap:Body>
    <GetFederationInformationRequestMessage
xmlns="http://schemas.microsoft.com/exchange/2010/Autodiscover">
      <Request>
        <Domain>contoso.com</Domain>
      </Request>
    </GetFederationInformationRequestMessage>

```

```

    </soap:Body>
</soap:Envelope>

```

The server constructs the Response XML and sends it to the client.

```

<s:Envelope xmlns:s="http://schemas.xmlsoap.org/soap/envelope/"
xmlns:a="http://www.w3.org/2005/08/addressing">
  <s:Header>
    <a:Action
s:mustUnderstand="1">http://schemas.microsoft.com/exchange/2010/Autodiscover/Autodiscover/Get
FederationInformationResponse</a:Action>
    <a:RelatesTo>urn:uuid:6389558d-9e05-465e-ade9-aae14c4bcd10</a:RelatesTo>
  </s:Header>
  <s:Body>
    <GetFederationInformationResponseMessage
xmlns="http://schemas.microsoft.com/exchange/2010/Autodiscover">
      <Response xmlns:i="http://www.w3.org/2001/XMLSchema-instance">
        <ErrorCode>NoError</ErrorCode>
        <ErrorMessage/>
        <ApplicationUri>BYFCXU-DOM.EXTEST.MICROSOFT.COM</ApplicationUri>
        <Domains>
          <Domain>contoso.com</Domain>
          <Domain>europe.contoso.com</Domain>
          <Domain>americas.contoso.com</Domain>
          <Domain>contosolive.com</Domain>
        </Domains>
      </Response>
    </GetFederationInformationResponseMessage>
  </s:Body>
</s:Envelope>

```

4.3 GetUserSettings_Example

The following is an example of the GetUserSettings operation.

To retrieve the requested User settings, the client constructs the Autodiscover Request XML and sends it to the server.

```

<?xml version="1.0" encoding="utf-8"?>
<soap:Envelope xmlns:a="http://schemas.microsoft.com/exchange/2010/Autodiscover"
xmlns:wsa="http://www.w3.org/2005/08/addressing" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:soap="http://schemas.xmlsoap.org/soap/envelope/">
  <
    <soap:Header>
      <a:RequestedServerVersion>Exchange2010</a:RequestedServerVersion>
      <wsa:Action>http://schemas.microsoft.com/exchange/2010/Autodiscover/Autodiscover/GetUserSettings</wsa:Action>
      <wsa:To>https://autodiscover.exchange.microsoft.com/autodiscover/autodiscover.svc</wsa:To>
    </soap:Header>
    <soap:Body>
      <a:GetUserSettingsRequestMessage xmlns:a="http://schemas.microsoft.com/exchange/2010/Autodiscover">
        <a:Request>

```

```

    <a:Users>
      <a:User>
        <a:Mailbox>tadam@exchange.microsoft.com</a:Mailbox>
      </a:User>
    </a:Users>
    <a:RequestedSettings>
      <a:Setting>UserDisplayName</a:Setting>
      <a:Setting>UserDN</a:Setting>
      <a:Setting>UserDeploymentId</a:Setting>
      <a:Setting>InternalMailboxServer</a:Setting>
      <a:Setting>MailboxDN</a:Setting>
      <a:Setting>PublicFolderServer</a:Setting>
      <a:Setting>ActiveDirectoryServer</a:Setting>
      <a:Setting>ExternalEwsUrl</a:Setting>
      <a:Setting>CasVersion</a:Setting>
      <a:Setting>EwsSupportedSchemas</a:Setting>
    </a:RequestedSettings>
  </a:Request>
</a:GetUserSettingsRequestMessage>
</soap:Body>
</soap:Envelope>

```

The server constructs the Autodiscover Response XML and sends it to the client.

```

<s:Envelope xmlns:s="http://schemas.xmlsoap.org/soap/envelope/" xmlns:a="http://www.w3.org/2005/08/addressing">
  <s:Header>
    <a:Action s:mustUnderstand="1">http://schemas.microsoft.com/exchange/2010/Autodiscover/Autodiscover/GetUserSettingsResponse</a:Action>
    <h:ServerVersionInfo xmlns:h="http://schemas.microsoft.com/exchange/2010/Autodiscover" xmlns:i="http://www.w3.org/2001/XMLSchema-instance">
      <h:MajorVersion>14</h:MajorVersion>
      <h:MinorVersion>1</h:MinorVersion>
      <h:MajorBuildNumber>63</h:MajorBuildNumber>
      <h:MinorBuildNumber>0</h:MinorBuildNumber>
      <h:Version>Exchange2010_SP1</h:Version>
    </h:ServerVersionInfo>
  </s:Header>
  <s:Body>
    <GetUserSettingsResponseMessage xmlns="http://schemas.microsoft.com/exchange/2010/Autodiscover">
      <Response xmlns:i="http://www.w3.org/2001/XMLSchema-instance">
        <ErrorCode>NoError</ErrorCode>
        <ErrorMessage />
        <UserResponses>
          <UserResponse>
            <ErrorCode>NoError</ErrorCode>
            <ErrorMessage>No error.</ErrorMessage>
            <RedirectTarget i:nil="true" />
            <UserSettingErrors />
            <UserSettings>
              <UserSetting i:type="StringSetting">
                <Name>UserDisplayName</Name>
                <Value>Terry Adams</Value>
              </UserSetting>
              <UserSetting i:type="StringSetting">
                <Name>UserDN</Name>
                <Value>/o=microsoft/ou=Exchange Administrative Group (FYDIBOHF

```

```

23SPDLT) /cn=Recipients/cn=tadam</Value>
  </UserSetting>
  <UserSetting i:type="StringSetting">
    <Name>UserDeploymentId</Name>
    <Value>649d50b8-a1ce-4bac-8ace-2321e463f701</Value>
  </UserSetting>
  <UserSetting i:type="StringSetting">
    <Name>CasVersion</Name>
    <Value>14.01.0063.000</Value>
  </UserSetting>
  <UserSetting i:type="StringSetting">
    <Name>EwsSupportedSchemas</Name>
    <Value>Exchange2007, Exchange2007_SP1, Exchange2010,
Exchange2010_SP1</Value>
  </UserSetting>
  <UserSetting i:type="StringSetting">
    <Name>InternalMailboxServer</Name>
    <Value>DF-M14-05.Contoso.com</Value>
  </UserSetting>
  <UserSetting i:type="StringSetting">
    <Name>ActiveDirectoryServer</Name>
    <Value>CO1-EXCH-DC-05.Contoso.com</Value>
  </UserSetting>
  <UserSetting i:type="StringSetting">
    <Name>MailboxDN</Name>
    <Value>/o=microsoft/ou=Exchange Administrative Group (FYDIBOHF
23SPDLT) /cn=Configuration/cn=Servers/cn=outlookbeta.exchange.corp.microsoft.com/
cn=Microsoft Private MDB</Value>
  </UserSetting>
  <UserSetting i:type="StringSetting">
    <Name>PublicFolderServer</Name>
    <Value>DF-P14-01.Contoso.com</Value>
  </UserSetting>
  <UserSetting i:type="StringSetting">
    <Name>ExternalEwsUrl</Name>
    <Value>https://mail.Contoso.com/EWS/Exchange.asmx</
Value>
  </UserSetting>
</UserSettings>
</UserResponse>
</UserResponses>
</Response>
</GetUserSettingsResponseMessage>
</s:Body>
</s:Envelope>

```

5 Security

5.1 Security Considerations for Implementers

Auto discovery using this protocol over HTTPS (HTTP with SSL). Not providing SSL will seriously affect the operation of this protocol. The server will not answer Autodiscover queries unless the Autodiscover client has authenticated with the Autodiscover Server.

[GetFederationInformation](#) should be Anonymous. The intent of **GetFederationInformation** is to provide information to other organizations with STS in common on how to request tokens to authenticate against other services. As such, the caller needs to have access to the federation information without the need to authenticate first.

5.2 Index of Security Parameters

None.

6 Appendix A: Full WSDL

The Autodiscover Service has a WSDL and an XSD file.

6.1 WSDL

See [\[WSDL\]](#) for a specification of the **Web Service Description Language (WSDL)**.

For ease of implementation, the full WSDL is included in this section.

```
<?xml version="1.0" encoding="utf-8"?>
<wsdl:definitions xmlns:soap="http://schemas.xmlsoap.org/wsdl/soap/"
  xmlns:wsu="http://docs.oasis-open.org/wss/2004/01/oasis-200401-wss-wssecurity-
  utility-1.0.xsd"
  xmlns:soapenc="http://schemas.xmlsoap.org/soap/encoding/"
  xmlns:wsam="http://www.w3.org/2007/05/addressing/metadata"
  xmlns:tns="http://schemas.microsoft.com/exchange/2010/Autodiscover"
  xmlns:wsa="http://schemas.xmlsoap.org/ws/2004/08/addressing"
  xmlns:wsp="http://schemas.xmlsoap.org/ws/2004/09/policy"
  xmlns:wsap="http://schemas.xmlsoap.org/ws/2004/08/addressing/policy"
  xmlns:xsd="http://www.w3.org/2001/XMLSchema"
  xmlns:misc="http://schemas.microsoft.com/ws/2005/12/wsdl/contract"
  xmlns:wsaw="http://www.w3.org/2006/05/addressing/wsdl"
  xmlns:soap12="http://schemas.xmlsoap.org/wsdl/soap12/"
  xmlns:wsa10="http://www.w3.org/2005/08/addressing"
  xmlns:wsx="http://schemas.xmlsoap.org/ws/2004/09/mex"
  targetNamespace="http://schemas.microsoft.com/exchange/2010/Autodiscover"
  xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:types>
    <xsd:schema
  targetNamespace="http://schemas.microsoft.com/exchange/2010/Autodiscover/Imports">
      <xsd:import namespace="http://schemas.microsoft.com/exchange/2010/Autodiscover"
  location="messages.xsd" />
    </xsd:schema>
  </wsdl:types>
  <wsdl:message name="GetUserSettingsRequestMessage">
    <wsdl:part name="parameters" element="tns:GetUserSettingsRequestMessage" />
  </wsdl:message>
  <wsdl:message name="GetUserSettingsRequestMessage_Headers">
    <wsdl:part name="RequestedServerVersion" element="tns:RequestedServerVersion" />
  </wsdl:message>
  <wsdl:message name="GetUserSettingsResponseMessage">
    <wsdl:part name="parameters" element="tns:GetUserSettingsResponseMessage" />
  </wsdl:message>
  <wsdl:message name="GetUserSettingsResponseMessage_Headers">
    <wsdl:part name="ServerVersionInfo" element="tns:ServerVersionInfo" />
  </wsdl:message>
  <wsdl:message name="GetDomainSettingsRequestMessage">
    <wsdl:part name="parameters" element="tns:GetDomainSettingsRequestMessage" />
  </wsdl:message>
  <wsdl:message name="GetDomainSettingsRequestMessage_Headers">
    <wsdl:part name="RequestedServerVersion" element="tns:RequestedServerVersion" />
  </wsdl:message>
  <wsdl:message name="GetDomainSettingsResponseMessage">
    <wsdl:part name="parameters" element="tns:GetDomainSettingsResponseMessage" />
  </wsdl:message>
  <wsdl:message name="GetDomainSettingsResponseMessage_Headers">
    <wsdl:part name="ServerVersionInfo" element="tns:ServerVersionInfo" />
  </wsdl:message>
```

```

</wsdl:message>
<wsdl:message name="GetFederationInformationRequestMessage">
  <wsdl:part name="parameters" element="tns:GetFederationInformationRequestMessage" />
</wsdl:message>
<wsdl:message name="GetFederationInformationRequestMessage_Headers">
  <wsdl:part name="RequestedServerVersion" element="tns:RequestedServerVersion" />
</wsdl:message>
<wsdl:message name="GetFederationInformationResponseMessage">
  <wsdl:part name="parameters" element="tns:GetFederationInformationResponseMessage" />
</wsdl:message>
<wsdl:message name="GetFederationInformationResponseMessage_Headers">
  <wsdl:part name="ServerVersionInfo" element="tns:ServerVersionInfo" />
</wsdl:message>
<wsdl:portType name="Autodiscover">
  <wsdl:operation name="GetUserSettings">
    <wsdl:input
wsaw:Action="http://schemas.microsoft.com/exchange/2010/Autodiscover/Autodiscover/GetUserSettings"
    name="GetUserSettingsRequestMessage" message="tns:GetUserSettingsRequestMessage" />
    <wsdl:output
wsaw:Action="http://schemas.microsoft.com/exchange/2010/Autodiscover/Autodiscover/GetUserSettingsResponse"
    name="GetUserSettingsResponseMessage" message="tns:GetUserSettingsResponseMessage"
  />
  </wsdl:operation>
  <wsdl:operation name="GetDomainSettings">
    <wsdl:input
wsaw:Action="http://schemas.microsoft.com/exchange/2010/Autodiscover/Autodiscover/GetDomainSettings"
    name="GetDomainSettingsRequestMessage" message="tns:GetDomainSettingsRequestMessage"
  />
    <wsdl:output
wsaw:Action="http://schemas.microsoft.com/exchange/2010/Autodiscover/Autodiscover/GetDomainSettingsResponse"
    name="GetDomainSettingsResponseMessage"
message="tns:GetDomainSettingsResponseMessage" />
    </wsdl:operation>
  <wsdl:operation name="GetFederationInformation">
    <wsdl:input
wsaw:Action="http://schemas.microsoft.com/exchange/2010/Autodiscover/Autodiscover/GetFederationInformation"
    name="GetFederationInformationRequestMessage"
message="tns:GetFederationInformationRequestMessage" />
    <wsdl:output
wsaw:Action="http://schemas.microsoft.com/exchange/2010/Autodiscover/Autodiscover/GetFederationInformationResponse"
    name="GetFederationInformationResponseMessage"
message="tns:GetFederationInformationResponseMessage" />
    </wsdl:operation>
  </wsdl:portType>
  <wsdl:binding name="DefaultBinding_Autodiscover" type="tns:Autodiscover">
    <soap:binding transport="http://schemas.xmlsoap.org/soap/http" />
    <wsdl:operation name="GetUserSettings">
      <soap:operation
soapAction="http://schemas.microsoft.com/exchange/2010/Autodiscover/Autodiscover/GetUserSettings"
style="document" />
      <wsdl:input name="GetUserSettingsRequestMessage">
        <soap:header message="tns:GetUserSettingsRequestMessage_Headers"
part="RequestedServerVersion" use="literal" />
        <soap:body use="literal" />
      </wsdl:input>

```



```

        <wsdl:output name="GetUserSettingsResponseMessage">
            <soap:header message="tns:GetUserSettingsResponseMessage_Headers"
part="ServerVersionInfo" use="literal" />
            <soap:body use="literal" />
        </wsdl:output>
    </wsdl:operation>
    <wsdl:operation name="GetDomainSettings">
        <soap:operation
soapAction="http://schemas.microsoft.com/exchange/2010/Autodiscover/Autodiscover/GetDomainSet
tings" style="document" />
        <wsdl:input name="GetDomainSettingsRequestMessage">
            <soap:header message="tns:GetDomainSettingsRequestMessage_Headers"
part="RequestedServerVersion" use="literal" />
            <soap:body use="literal" />
        </wsdl:input>
        <wsdl:output name="GetDomainSettingsResponseMessage">
            <soap:header message="tns:GetDomainSettingsResponseMessage_Headers"
part="ServerVersionInfo" use="literal" />
            <soap:body use="literal" />
        </wsdl:output>
    </wsdl:operation>
    <wsdl:operation name="GetFederationInformation">
        <soap:operation
soapAction="http://schemas.microsoft.com/exchange/2010/Autodiscover/Autodiscover/GetFederatio
nInformation" style="document" />
        <wsdl:input name="GetFederationInformationRequestMessage">
            <soap:header message="tns:GetFederationInformationRequestMessage_Headers"
part="RequestedServerVersion" use="literal" />
            <soap:body use="literal" />
        </wsdl:input>
        <wsdl:output name="GetFederationInformationResponseMessage">
            <soap:header message="tns:GetFederationInformationResponseMessage_Headers"
part="ServerVersionInfo" use="literal" />
            <soap:body use="literal" />
        </wsdl:output>
    </wsdl:operation>
</wsdl:binding>
</wsdl:definitions>

```

6.2 Messages XSD

See [\[XMLSCHEMA1\]](#) for a specification of the **XML schema definition (XSD)**.

For ease of implementation, the message.xsd is included in this section.

```

<?xml version="1.0" encoding="utf-8"?>
<xs:schema xmlns:tns="http://schemas.microsoft.com/exchange/2010/Autodiscover"
xmlns:xs="http://www.w3.org/2001/XMLSchema"
targetNamespace="http://schemas.microsoft.com/exchange/2010/Autodiscover"
elementFormDefault="qualified">
    <xs:element name="GetUserSettingsRequestMessage">
        <xs:complexType>
            <xs:sequence>
                <xs:element name="Request" type="tns:GetUserSettingsRequest" nillable="true"
minOccurs="0"/>
            </xs:sequence>
        </xs:complexType>
    </xs:element>

```

```

</xs:element>
<xs:complexType name="GetUserSettingsRequest" mixed="false">
  <xs:complexContent mixed="false">
    <xs:extension base="tns:AutodiscoverRequest">
      <xs:sequence>
        <xs:element name="Users" type="tns:Users" nillable="true"/>
        <xs:element name="RequestedSettings" type="tns:RequestedSettings"
nillable="true"/>
        <xs:element name="RequestedVersion" type="tns:ExchangeVersion"
nillable="true"/>
      </xs:sequence>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>
<xs:element name="GetUserSettingsRequest" type="tns:GetUserSettingsRequest"
nillable="true"/>
<xs:complexType name="AutodiscoverRequest">
  <xs:sequence/>
</xs:complexType>
<xs:element name="AutodiscoverRequest" type="tns:AutodiscoverRequest" nillable="true"/>
<xs:complexType name="Users">
  <xs:sequence>
    <xs:element name="User" type="tns:User" nillable="true" minOccurs="0"
maxOccurs="unbounded"/>
  </xs:sequence>
</xs:complexType>
<xs:element name="Users" type="tns:Users" nillable="true"/>
<xs:complexType name="User">
  <xs:sequence>
    <xs:element name="Mailbox" type="xs:string" nillable="true"/>
  </xs:sequence>
</xs:complexType>
<xs:element name="User" type="tns:User" nillable="true"/>
<xs:complexType name="RequestedSettings">
  <xs:sequence>
    <xs:element name="Setting" type="xs:string" nillable="true" minOccurs="0"
maxOccurs="unbounded"/>
  </xs:sequence>
</xs:complexType>
<xs:element name="RequestedSettings" type="tns:RequestedSettings" nillable="true"/>
<xs:simpleType name="ExchangeVersion">
  <xs:restriction base="xs:string">
    <xs:enumeration value="Exchange2010"/>
    <xs:enumeration value="Exchange2010_SP1"/>
  </xs:restriction>
</xs:simpleType>
<xs:element name="RequestedServerVersion">
  <xs:simpleType>
    <xs:restriction base="tns:ExchangeVersion"/>
  </xs:simpleType>
</xs:element>
<xs:element name="GetUserSettingsResponseMessage">
  <xs:complexType>
    <xs:sequence>
      <xs:element name="Response" type="tns:GetUserSettingsResponse"
nillable="true" minOccurs="0"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>

```

```

<xs:complexType name="GetUserSettingsResponse" mixed="false">
  <xs:complexContent mixed="false">
    <xs:extension base="tns:AutodiscoverResponse">
      <xs:sequence>
        <xs:element name="UserResponses"
          type="tns:ArrayOfUserResponse" nillable="true" minOccurs="0"/>
      </xs:sequence>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>
<xs:element name="GetUserSettingsResponse" type="tns:GetUserSettingsResponse"
nillable="true"/>
<xs:complexType name="AutodiscoverResponse">
  <xs:sequence>
    <xs:element name="ErrorCode" type="tns:ErrorCode" minOccurs="0"/>
    <xs:element name="ErrorMessage" type="xs:string" nillable="true" minOccurs="0"/>
  </xs:sequence>
</xs:complexType>
<xs:element name="AutodiscoverResponse" type="tns:AutodiscoverResponse" nillable="true"/>
<xs:simpleType name="ErrorCode">
  <xs:restriction base="xs:string">
    <xs:enumeration value="NoError"/>
    <xs:enumeration value="RedirectAddress"/>
    <xs:enumeration value="RedirectUrl"/>
    <xs:enumeration value="InvalidUser"/>
    <xs:enumeration value="InvalidRequest"/>
    <xs:enumeration value="InvalidSetting"/>
    <xs:enumeration value="SettingIsNotAvailable"/>
    <xs:enumeration value="ServerBusy"/>
    <xs:enumeration value="InvalidDomain"/>
    <xs:enumeration value="NotFederated"/>
    <xs:enumeration value="InternalServerError"/>
  </xs:restriction>
</xs:simpleType>
<xs:element name="ErrorCode" type="tns:ErrorCode" nillable="true"/>
<xs:complexType name="ArrayOfUserResponse">
  <xs:sequence>
    <xs:element name="UserResponse" type="tns:UserResponse"
      nillable="true" minOccurs="0" maxOccurs="unbounded"/>
  </xs:sequence>
</xs:complexType>
<xs:element name="ArrayOfUserResponse" type="tns:ArrayOfUserResponse" nillable="true"/>
<xs:complexType name="UserResponse" mixed="false">
  <xs:complexContent mixed="false">
    <xs:extension base="tns:AutodiscoverResponse">
      <xs:sequence>
        <xs:element name="RedirectTarget" type="xs:string" nillable="true"
minOccurs="0"/>
        <xs:element name="UserSettingErrors" type="tns:UserSettingErrors"
nillable="true" minOccurs="0"/>
        <xs:element name="UserSettings" type="tns:UserSettings" nillable="true"
minOccurs="0"/>
      </xs:sequence>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>
<xs:element name="UserResponse" type="tns:UserResponse" nillable="true"/>
<xs:complexType name="UserSettingErrors">
  <xs:sequence>

```

```

        <xs:element name="UserSettingError" type="tns:UserSettingError"
            nillable="true" minOccurs="0" maxOccurs="unbounded"/>
    </xs:sequence>
</xs:complexType>
<xs:element name="UserSettingErrors" type="tns:UserSettingErrors" nillable="true"/>
<xs:complexType name="UserSettingError">
    <xs:sequence>
        <xs:element name="ErrorCode" type="tns:ErrorCode"/>
        <xs:element name="ErrorMessage" type="xs:string" nillable="true"/>
        <xs:element name="SettingName" type="xs:string" nillable="true"/>
    </xs:sequence>
</xs:complexType>
<xs:element name="UserSettingError" type="tns:UserSettingError" nillable="true"/>
<xs:complexType name="UserSettings">
    <xs:sequence>
        <xs:element name="UserSetting" type="tns:UserSetting" nillable="true"
minOccurs="0" maxOccurs="unbounded"/>
    </xs:sequence>
</xs:complexType>
<xs:element name="UserSettings" type="tns:UserSettings" nillable="true"/>
<xs:complexType name="UserSetting">
    <xs:sequence>
        <xs:element name="Name" type="xs:string" nillable="true"/>
    </xs:sequence>
</xs:complexType>
<xs:element name="UserSetting" type="tns:UserSetting" nillable="true"/>
<xs:complexType name="ProtocolConnectionCollectionSetting" mixed="false">
    <xs:complexContent mixed="false">
        <xs:extension base="tns:UserSetting">
            <xs:sequence>
                <xs:element name="ProtocolConnections" type="tns:ProtocolConnections"
nillable="true"/>
            </xs:sequence>
        </xs:extension>
    </xs:complexContent>
</xs:complexType>
<xs:element name="ProtocolConnectionCollectionSetting"
type="tns:ProtocolConnectionCollectionSetting" nillable="true"/>
<xs:complexType name="ProtocolConnections">
    <xs:sequence>
        <xs:element name="ProtocolConnection" type="tns:ProtocolConnection"
            nillable="true" minOccurs="0" maxOccurs="unbounded"/>
    </xs:sequence>
</xs:complexType>
<xs:element name="ProtocolConnections" type="tns:ProtocolConnections" nillable="true"/>
<xs:complexType name="ProtocolConnection">
    <xs:sequence>
        <xs:element name="Hostname" type="xs:string" nillable="true"/>
        <xs:element name="Port" type="xs:int"/>
        <xs:element name="EncryptionMethod" type="xs:string" nillable="true"/>
    </xs:sequence>
</xs:complexType>
<xs:element name="ProtocolConnection" type="tns:ProtocolConnection" nillable="true"/>
<xs:complexType name="StringSetting" mixed="false">
    <xs:complexContent mixed="false">
        <xs:extension base="tns:UserSetting">
            <xs:sequence>
                <xs:element name="Value" type="xs:string" nillable="true" minOccurs="0"/>
            </xs:sequence>
        </xs:extension>
    </xs:complexContent>

```

```

        </xs:extension>
    </xs:complexContent>
</xs:complexType>
<xs:element name="StringSetting" type="tns:StringSetting" nillable="true"/>
<xs:complexType name="WebClientUrlCollectionSetting" mixed="false">
    <xs:complexContent mixed="false">
        <xs:extension base="tns:UserSetting">
            <xs:sequence>
                <xs:element name="WebClientUrls" type="tns:WebClientUrls"
nillable="true"/>
            </xs:sequence>
        </xs:extension>
    </xs:complexContent>
</xs:complexType>
<xs:element name="WebClientUrlCollectionSetting" type="tns:WebClientUrlCollectionSetting"
nillable="true"/>
<xs:complexType name="WebClientUrls">
    <xs:sequence>
        <xs:element name="WebClientUrl" type="tns:WebClientUrl" nillable="true"
minOccurs="0" maxOccurs="unbounded"/>
    </xs:sequence>
</xs:complexType>
<xs:element name="WebClientUrls" type="tns:WebClientUrls" nillable="true"/>
<xs:complexType name="WebClientUrl">
    <xs:sequence>
        <xs:element name="AuthenticationMethods" type="xs:string" nillable="true"/>
        <xs:element name="Url" type="xs:string" nillable="true"/>
    </xs:sequence>
</xs:complexType>
<xs:element name="WebClientUrl" type="tns:WebClientUrl" nillable="true"/>
<xs:complexType name="AlternateMailboxCollectionSetting" mixed="false">
    <xs:complexContent mixed="false">
        <xs:extension base="tns:UserSetting">
            <xs:sequence>
                <xs:element name="AlternateMailboxes" type="tns:AlternateMailboxes"
nillable="true"/>
            </xs:sequence>
        </xs:extension>
    </xs:complexContent>
</xs:complexType>
<xs:element name="AlternateMailboxCollectionSetting"
type="tns:AlternateMailboxCollectionSetting" nillable="true"/>
<xs:complexType name="AlternateMailboxes">
    <xs:sequence>
        <xs:element name="AlternateMailbox" type="tns:AlternateMailbox"
nillable="true" minOccurs="0" maxOccurs="unbounded"/>
    </xs:sequence>
</xs:complexType>
<xs:element name="AlternateMailboxes" type="tns:AlternateMailboxes" nillable="true"/>
<xs:complexType name="AlternateMailbox">
    <xs:sequence>
        <xs:element name="Type" type="xs:string" nillable="true"/>
        <xs:element name="DisplayName" type="xs:string" nillable="true"/>
        <xs:element name="LegacyDN" type="xs:string" nillable="true"/>
        <xs:element name="Server" type="xs:string" nillable="true"/>
    </xs:sequence>
</xs:complexType>
<xs:element name="AlternateMailbox" type="tns:AlternateMailbox" nillable="true"/>
<xs:complexType name="ServerVersionInfo">

```

```

    <xs:sequence>
      <xs:element name="MajorVersion" type="xs:int" minOccurs="0"/>
      <xs:element name="MinorVersion" type="xs:int" minOccurs="0"/>
      <xs:element name="MajorBuildNumber" type="xs:int" minOccurs="0"/>
      <xs:element name="MinorBuildNumber" type="xs:int" minOccurs="0"/>
      <xs:element name="Version" type="xs:string" nillable="true" minOccurs="0"/>
    </xs:sequence>
  </xs:complexType>
  <xs:element name="ServerVersionInfo" type="tns:ServerVersionInfo" nillable="true"/>
  <xs:element name="GetDomainSettingsRequestMessage">
    <xs:complexType>
      <xs:sequence>
        <xs:element name="Request" type="tns:GetDomainSettingsRequest"
nillable="true" minOccurs="0"/>
        </xs:sequence>
      </xs:complexType>
    </xs:element>
    <xs:complexType name="GetDomainSettingsRequest" mixed="false">
      <xs:complexContent mixed="false">
        <xs:extension base="tns:AutodiscoverRequest">
          <xs:sequence>
            <xs:element name="Domains" type="tns:Domains" nillable="true"/>
            <xs:element name="RequestedSettings" type="tns:RequestedSettings"
nillable="true"/>
            <xs:element name="RequestedVersion" type="tns:ExchangeVersion"
nillable="true"/>
          </xs:sequence>
        </xs:extension>
      </xs:complexContent>
    </xs:complexType>
    <xs:element name="GetDomainSettingsRequest" type="tns:GetDomainSettingsRequest"
nillable="true"/>
    <xs:complexType name="Domains">
      <xs:sequence>
        <xs:element name="Domain" type="xs:string" nillable="true" minOccurs="0"
maxOccurs="unbounded"/>
      </xs:sequence>
    </xs:complexType>
    <xs:element name="Domains" type="tns:Domains" nillable="true"/>
    <xs:element name="GetDomainSettingsResponseMessage">
      <xs:complexType>
        <xs:sequence>
          <xs:element name="Response" type="tns:GetDomainSettingsResponse"
nillable="true" minOccurs="0"/>
        </xs:sequence>
      </xs:complexType>
    </xs:element>
    <xs:complexType name="GetDomainSettingsResponse" mixed="false">
      <xs:complexContent mixed="false">
        <xs:extension base="tns:AutodiscoverResponse">
          <xs:sequence>
            <xs:element name="DomainResponses" type="tns:ArrayOfDomainResponse"
nillable="true" minOccurs="0"/>
          </xs:sequence>
        </xs:extension>
      </xs:complexContent>
    </xs:complexType>
    <xs:element name="GetDomainSettingsResponse" type="tns:GetDomainSettingsResponse"
nillable="true"/>
    <xs:complexType name="ArrayOfDomainResponse">

```

```

    <xs:sequence>
      <xs:element name="DomainResponse" type="tns:DomainResponse"
        nillable="true" minOccurs="0" maxOccurs="unbounded"/>
    </xs:sequence>
  </xs:complexType>
  <xs:element name="ArrayOfDomainResponse" type="tns:ArrayOfDomainResponse"
nillable="true"/>
  <xs:complexType name="DomainResponse" mixed="false">
    <xs:complexContent mixed="false">
      <xs:extension base="tns:AutodiscoverResponse">
        <xs:sequence>
          <xs:element name="DomainSettingErrors" type="tns:DomainSettingErrors"
nillable="true" minOccurs="0"/>
          <xs:element name="DomainSettings" type="tns:DomainSettings"
nillable="true" minOccurs="0"/>
          <xs:element name="RedirectTarget" type="xs:string" nillable="true"
minOccurs="0"/>
        </xs:sequence>
      </xs:extension>
    </xs:complexContent>
  </xs:complexType>
  <xs:element name="DomainResponse" type="tns:DomainResponse" nillable="true"/>
  <xs:complexType name="DomainSettingErrors">
    <xs:sequence>
      <xs:element name="DomainSettingError" type="tns:DomainSettingError"
        nillable="true" minOccurs="0" maxOccurs="unbounded"/>
    </xs:sequence>
  </xs:complexType>
  <xs:element name="DomainSettingErrors" type="tns:DomainSettingErrors" nillable="true"/>
  <xs:complexType name="DomainSettingError">
    <xs:sequence>
      <xs:element name="ErrorCode" type="tns:ErrorCode"/>
      <xs:element name="ErrorMessage" type="xs:string" nillable="true"/>
      <xs:element name="SettingName" type="xs:string" nillable="true"/>
    </xs:sequence>
  </xs:complexType>
  <xs:element name="DomainSettingError" type="tns:DomainSettingError" nillable="true"/>
  <xs:complexType name="DomainSettings">
    <xs:sequence>
      <xs:element name="DomainSetting" type="tns:DomainSetting"
        nillable="true" minOccurs="0" maxOccurs="unbounded"/>
    </xs:sequence>
  </xs:complexType>
  <xs:element name="DomainSettings" type="tns:DomainSettings" nillable="true"/>
  <xs:complexType name="DomainSetting">
    <xs:sequence>
      <xs:element name="Name" type="xs:string" nillable="true"/>
    </xs:sequence>
  </xs:complexType>
  <xs:element name="DomainSetting" type="tns:DomainSetting" nillable="true"/>
  <xs:complexType name="DomainStringSetting" mixed="false">
    <xs:complexContent mixed="false">
      <xs:extension base="tns:DomainSetting">
        <xs:sequence>
          <xs:element name="Value" type="xs:string" nillable="true" minOccurs="0"/>
        </xs:sequence>
      </xs:extension>
    </xs:complexContent>
  </xs:complexType>

```

```

<xs:element name="DomainStringSetting" type="tns:DomainStringSetting" nillable="true"/>
<xs:element name="GetFederationInformationRequestMessage">
  <xs:complexType>
    <xs:sequence>
      <xs:element name="Request" type="tns:GetFederationInformationRequest"
        nillable="true" minOccurs="0"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
<xs:complexType name="GetFederationInformationRequest" mixed="false">
  <xs:complexContent mixed="false">
    <xs:extension base="tns:AutodiscoverRequest">
      <xs:sequence>
        <xs:element name="Domain" type="xs:string" nillable="true"/>
      </xs:sequence>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>
<xs:element name="GetFederationInformationRequest"
type="tns:GetFederationInformationRequest" nillable="true"/>
<xs:element name="GetFederationInformationResponseMessage">
  <xs:complexType>
    <xs:sequence>
      <xs:element name="Response" type="tns:GetFederationInformationResponse"
nillable="true" minOccurs="0"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
<xs:complexType name="GetFederationInformationResponse" mixed="false">
  <xs:complexContent mixed="false">
    <xs:extension base="tns:AutodiscoverResponse">
      <xs:sequence>
        <xs:element name="ApplicationUri" type="xs:anyURI" nillable="true"
minOccurs="0"/>
        <xs:element name="Domains" type="tns:Domains" nillable="true"
minOccurs="0"/>
      </xs:sequence>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>
<xs:element name="GetFederationInformationResponse"
type="tns:GetFederationInformationResponse" nillable="true"/>
</xs:schema>

```

6.3 Types XSD

This protocol does not define a types XSD file.

7 Appendix B: Product Behavior

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

- Microsoft Exchange Server 2010

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

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

8 Change Tracking

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

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

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

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

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

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

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

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

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

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

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

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

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

Changes are listed in the following table. If you need further information, please contact protocol@microsoft.com.

| Section | Tracking number (if applicable) and description | Major change (Y or N) | Revision Type |
|--|--|-----------------------|--------------------|
| 1.1 Glossary | 54172 Added Unified Messaging to the list of terms that are defined in [MS-OXGLOS]. | N | New content added. |
| 1.1 Glossary | 53993 Added "Legacy DN", "Simple Mail Transfer Protocol (SMTP)", and "SOAP message" to the list of terms that are defined in [MS-OXGLOS]. | N | New content added. |
| 1.1 Glossary | Removed the terms "SOAP body" and "SOAP fault" from the list of terms that are defined in [MS-OXGLOS]. | N | Content removed. |
| 1.3 Protocol Overview | 54172 Added a glossary term link for the term Unified Messaging. | N | New content added. |
| 1.4 Relationship to Other Protocols | Removed duplicate figure information. | N | Content update. |
| 2.2.1 Namespaces | 53741 Updated the table to reflect that the wsap and msc prefixes are not implemented. | N | Content update. |
| 2.2.3.1 ServerVersionInfo Complex Type | 53993 Added information in remarks. | N | New content added. |
| 2.2.3.2 m:Domains Complex Type | 53993 Added description and remarks information. | N | New content added. |
| 2.2.4.1 | 53993 | Y | Content |

| Section | Tracking number (if applicable) and description | Major change (Y or N) | Revision Type |
|--|---|-----------------------|----------------------|
| ServerVersionInfo Element | Modified description. | | update. |
| 3.1.4.1.2.1 m:GetDomainSettingsRequest Complex Type | Added new section. | N | New content added. |
| 3.1.4.1.2.1 m:GetDomainSettingsRequest Complex Type | 53993 Added element to the AutodiscoverRequest. | N | Content update. |
| 3.1.4.1.2.2 m:GetDomainSettingsResponse Complex Type | Added new section. | N | New content added. |
| 3.1.4.1.2.3 m:ArrayOfDomainResponse Complex Type | Added new section. | N | New content added. |
| 3.1.4.1.2.3 m:ArrayOfDomainResponse Complex Type | 53993 Added additional description information. | N | Content update. |
| 3.1.4.1.2.4 m:DomainResponse Complex Type | Added new section. | N | New content added. |
| 3.1.4.1.2.4 m:DomainResponse Complex Type | 53993 Updated description for grammatical purposes. | N | Editorially updated. |
| 3.1.4.1.2.5 m:DomainSettingErrors Complex Type | Added new section. | N | New content added. |
| 3.1.4.1.2.5 m:DomainSettingErrors Complex Type | 53993 Updated description. | N | Content update. |
| 3.1.4.1.2.6 m:DomainSettingError Complex Type | 53993 Added descriptions for error code and message. | N | Content update. |
| 3.1.4.1.2.7 m:DomainSettings Complex Type | 53993 Modified description. | N | Editorially updated. |
| 3.1.4.1.3.1 GetDomainSettingsRequestMessage Element | 53993 Updated description | Y | Content update. |
| 3.1.4.1.7.1 tns:GetDomainSettingsRequestMessage | 53993 Edited link. | N | Editorially updated. |
| 3.1.4.1.7.3 tns:GetDomainSettingsResponseMessage | 53994 Edited link | N | Editorially updated. |
| 3.1.4.2.2.1 | 53993 | N | Product |

| Section | Tracking number (if applicable) and description | Major change (Y or N) | Revision Type |
|--|---|-----------------------|----------------------------------|
| m:GetFederationInformationRequest Complex Type | Updated description. | | behavior note updated. |
| 3.1.4.3 GetUserSettings | 53993 added remarks to topic. | N | Content update. |
| 3.1.4.3.1.1 t:ExchangeVersion Simple Type | 53993 Added simpleType name. Added new enumeration value. | N | Content update. |
| 3.1.4.3.1.2 t:ErrorCode Simple Type | 53993 Updated description. | N | Editorially updated. |
| 3.1.4.3.2.1 m:GetUserSettingsRequest Complex Type | 53993 Added the RequestVersion element. | Y | New product behavior note added. |
| 3.1.4.3.2.2 m:AutodiscoverRequest Complex Type | 53993 Added remarks to topic. | N | New content added. |
| 3.1.4.3.2.4 m:User Complex Type | Updated the description to indicate that the user is identified by an SMTP address or a Legacy DN. Added information about how the GetUserSettings method discovers the mailbox and the <User> element requirement. | N | Content update. |
| 3.1.4.3.2.5 m:RequestedSettings Complex Type | 53993 Added possible Request settings \. | N | Content update. |
| 3.1.4.3.2.5 m:RequestedSettings Complex Type | 53993 Added setting values and description. | N | New content added. |
| 3.1.4.3.2.6 m:GetUserSettingsResponse Complex Type | 53993 Updated the description to reflect that the GetUserSettingsResponse complex type represents a response. | N | Product behavior note updated. |
| 3.1.4.3.2.7 m:AutodiscoverResponse Complex Type | 53993 Updated Grammar, added complexType name. Added remarks. | N | Editorially updated. |
| 3.1.4.3.2.8 m:UserResponse Complex Type | 53993 Added complexType name. | N | Content update. |
| 3.1.4.3.2.9 m:UserSettingErrors Complex Type | 53993 Added complexType name, and | N | Content update. |

| Section | Tracking number (if applicable) and description | Major change (Y or N) | Revision Type |
|--|--|-----------------------|----------------------|
| | added additional description information. | | |
| 3.1.4.3.2.11 m:UserSettingError Complex Type | 53993 Added descriptions for error code and message. | N | Content update. |
| 3.1.4.3.2.12 m:UserSettings Complex Type | 53993 Modified link. | N | Editorially updated. |
| 3.1.4.3.2.13 m:UserSetting Complex Type | 53993 Added description information and list of types that extend this element. | N | Content update. |
| 3.1.4.3.2.14 m:StringSetting Complex Type | 53993 Inserted Mark tag. | N | Editorially updated. |
| 3.1.4.3.2.17 m:WebClientUrl Complex Type | 53993 Added remarks. | N | New content added. |
| 3.1.4.3.2.21 m:AlternateMailboxCollectionSetting Complex Type | 53993 Updated description. | N | Editorially updated. |
| 3.1.4.3.2.22 m:AlternateMailboxes Complex Type | 53993 Updated description. | N | Content update. |
| 3.1.4.3.2.23 m:AlternateMailbox Complex Type | 53993 Added information about what an alternate mailbox corresponds to. | N | Editorially updated. |
| 3.1.4.3.3.2 GetUserSettingsResponseMessage Element | 53993 Updated the description to reflect that the GetUserSettings element returns configuration settings if they exist on the server. | N | Content update. |
| 3.1.4.3.3.6 Users Element | 53993 Added clarifying description information. | N | Content update. |
| 3.1.4.3.3.7 User Element | 53993 Updated element attributes. | N | Content update. |
| 3.1.4.3.3.12 ArrayOfUserResponse Element | 53993 Updated description. | N | Content update. |
| 3.1.4.3.3.13 UserResponse Element | 53993 Modified description. | N | Editorially updated. |
| 4.3 GetUserSettings Example | 53993 Updated Response XML | N | Content update. |

| Section | Tracking number (if applicable) and description | Major change (Y or N) | Revision Type |
|----------------------------------|--|------------------------------|----------------------|
| 6.2 Messages XSD | 53993 Updated the XSD. | N | Content update. |

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