

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

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Revision Summary

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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)
SOAP body
SOAP fault
SOAP header
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 dochejp@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 implements three web methods named 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 VoiceMail Customization.
InternalEcpEmailSubscriptionsUrl	The internal URL of the server Control Panel for e-mail

Configuration Setting	Description
	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.
ExternalEwsUrl	The external URL of the server's Web Services.
ExternalOABUrl	The external URL of the Offline Address Book.

Configuration Setting	Description
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 (e.g. 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.

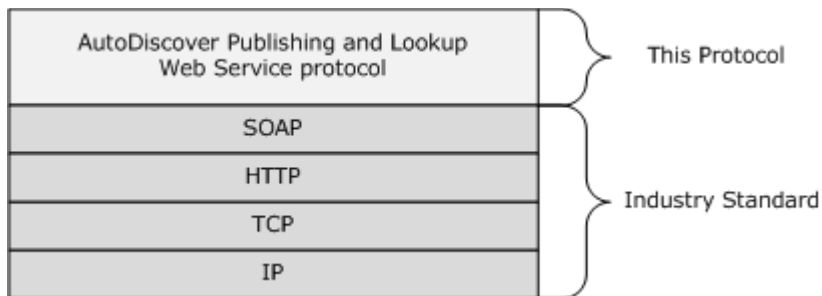


Figure 1: Figure 1:SOAP over HTTP

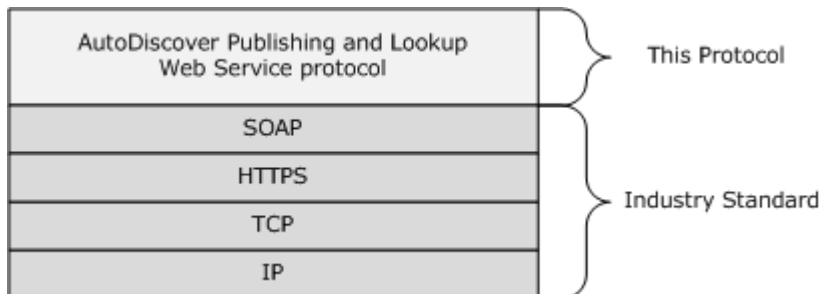


Figure 2: Figure 2:SOAP over HTTPS

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** 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	TBD
xsd	http://www.w3.org/2001/XMLSchema	[XMLSCHEMA1], [XMLSCHEMA2]
msc	http://schemas.microsoft.com/ws/2005/12/wsdl/contract	TBD
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

Information pertinent to 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.

2.2.3.2 m:Domains Complex Type

The domain names of the domains.

```
<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.

2.2.4 Elements

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

2.2.4.1 ServerVersionInfo Element

The [ServerVersionInfo](#) returns 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

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 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

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: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.

3.1.4.1.2.2 m:GetDomainSettingsResponse Complex Type

The [GetDomainSettingsResponse 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

An array of [m:DomainResponse Type](#) object, each m:DomainResponse Type contains [m:DomainSettings Type](#).

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

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

Element	Type	Description
RedirectTarget	xs:string	The redirectionTarget (URL or email address).

3.1.4.1.2.5 m:DomainSettingErrors Complex Type

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

Represents an error from a [GetDomainSettings](#) request. 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	The error code.

Element	Type	Description
ErrorMessage	xs:string	The error message.
SettingName	xs:string	The name of the setting.

3.1.4.1.2.7 m:DomainSettings Complex Type

A collection of [tns: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

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

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](#) 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](#) 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

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

A [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 [tns: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. This message contains one part.

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

3.1.4.1.7.3 tns:GetDomainSettingsResponseMessage

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

The [tns: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. This message contains one part.

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

3.1.4.2 GetFederationInformation

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 the organization also has federated. When the caller doesn't know the URL to use for communicating with the server that hosts the domain of interest, the caller MUST execute either of the following sequences to reach the correct server that can provide the desired 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 [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 HTTP 302 redirect on a non-SSL endpoint.

Compose URL, for an autodiscover endpoint, where {0} is the domain of interest:

http://autodiscover.{0}/autodiscover/autodiscover.xml

Response MUST be HTTP 302 redirect. 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 above URL

https://{0}/autodiscover/autodiscover.svc

Call **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 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

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 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"
          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](#) 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>
```

```

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

```

Child Elements

Element	Type
Response	tns:GetFederationInformationResponse

3.1.4.2.3.3 GetFederationInformationRequest Element

The [GetFederationInformationRequest](#) 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](#) 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. This message contains one part.

Part Name	Element/Type	Description
ServerVersionInfo	t:ServerVersionInfo	Contains the version of the server that processed the GetFederationInformation 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.

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

An enumeration that defines the server versions used with this protocol

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

Enumeration

The following value is defined by the simple type:

Value	Description
Exchange2010	Defines the available server version.

3.1.4.3.1.2 t:ErrorCode Simple Type

Specifies the error codes that 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:restriction>
</xs:simpleType>
```



```

<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.
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

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

Represents the base class for all requests made to the Autodiscover service.

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

3.1.4.3.2.3 m:Users Complex Type

A collection of [User](#) types representing users for who 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 for whom to retrieve settings. The [GetUserSettings](#) method uses the e-mail address, the Mailbox element, if it is present. If the e-mail address is omitted, the autodiscover service uses the LegacyDN to discover the user's settings. If the LegacyDN is null, the Mailbox element MUST be present.

```
<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.

3.1.4.3.2.5 m: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"
    />
  </xs:sequence>
</xs:complexType>
```

```

        minOccurs="0"
        maxOccurs="unbounded"
    />
</xs:sequence>
</xs:complexType>

```

Child Elements

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

3.1.4.3.2.6 m:GetUserSettingsResponse Complex Type

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

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

```

<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 base class for all response returned by the Autodiscover service. It introduces the ErrorCode and ErrorMessage properties.

```

<xs:complexType>
  <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.

3.1.4.3.2.8 m: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
  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

Error information for settings that could not be returned.

```
<xs:complexType>
  <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

An array of [m: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

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

Child Elements

Element	Type	Description
ErrorCode	tns:ErrorCode	The error code.
ErrorMessage	xs:string	The error message.
SettingName	xs:string	The name of the setting.

3.1.4.3.2.12 m:UserSettings Complex Type

A collection of [tns: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

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>
```

Child Elements

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

3.1.4.3.2.14 m: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

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 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

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.

3.1.4.3.2.18 m: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 collection of [ProtocolConnection](#) elements. 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

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 portocol.
EncryptionMethod	xs:string	The selected cryptographic method to use for protocol.

3.1.4.3.2.21 m: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 collection of alternate mailboxes.

```
<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

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.

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](#) 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"
  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](#) returns to the caller the user's configuration settings that were requested in the [GetUserSettingsRequestMessage](#) call.

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

```

<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 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](#). 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"
  minOccurs="0"
  maxOccurs="unbounded"
/>
```

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 ExchangeVersion Element

The [ExchangeVersion](#) element holds server version information.

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

3.1.4.3.3.10 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>
```

3.1.4.3.3.11 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"
/>
```

3.1.4.3.3.12 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"
/>
```


3.1.4.3.3.13 ArrayOfUserResponse Element

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"
/>
```

3.1.4.3.3.14 UserResponse Element

A [UserResponse](#) element contains the requested settings for the specified specified user.

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

3.1.4.3.3.15 UserSettingErrors Element

The [UserSettingErrors](#) element contains error information for settings that could not be returned.

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

3.1.4.3.3.16 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"
/>
```

3.1.4.3.3.17 UserSettings Element

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

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

3.1.4.3.3.18 UserSetting Element

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

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

3.1.4.3.3.19 SettingName Element

The [SettingName](#) element represents the name of the setting in the request or response.

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

3.1.4.3.3.20 StringSetting Element

The [StringSetting](#) element represents a user setting whose value is of type string.

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

3.1.4.3.3.21 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"
/>
```

3.1.4.3.3.22 WebClientUrls Element

The [WebClientUrls](#) element represents the internal and external URLs of a web client.

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

```
    nillable="true"  
  />
```

3.1.4.3.3.23 WebClientUrl Element

The [WebClientUrl](#) element represents a URL of a web client.

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

3.1.4.3.3.24 ProtocolConnectionCollectionSetting Element

The [ProtocolConnectionCollectionSetting](#) element represents a collection of server protocol connection settings.

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

3.1.4.3.3.25 ProtocolConnections Element

The [ProtocolConnections](#) element represents the collection of protocol connections.

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

3.1.4.3.3.26 ProtocolConnection Element

Represents the email Protocol connection settings for pop/imap/smtp protocols.

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

3.1.4.3.3.27 AlternateMailboxCollectionSetting Element

The [AlternateMailboxCollectionSetting](#) element represents a collection of alternate mailbox settings.

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

```

    type="tns:AlternateMailboxCollectionSetting"
    nillable="true"
  />

```

3.1.4.3.3.28 AlternateMailboxes Element

The [AlternateMailboxes](#) element represents a collection of alternate mailboxes.

```

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

```

3.1.4.3.3.29 AlternateMailbox Element

The [AlternateMailbox](#) represents an alternative mailbox, an archived mailbox.

```

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

```

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

Part Name	Element/Type	Description
		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>
    <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:Header>
  <s:Body>
    <a:Response>
      <a:Settings>
        <a:Setting>ExternalEwsUrl</a:Setting>
      </a:Settings>
    </a:Response>
  </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.byfcxudom.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>0</h:MinorVersion>
      <h:MajorBuildNumber>639</h:MajorBuildNumber>
      <h:MinorBuildNumber>20</h:MinorBuildNumber>
      <h:Version>Exchange2010</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>14.00.0639.020</Value>
  </UserSetting>
  <UserSetting i:type="StringSetting">
    <Name>EwsSupportedSchemas</Name>
    <Value>Exchange2007, Exchange2007_SP1, Exchange2010</Value>
  </UserSetting>
  <UserSetting i:type="StringSetting">
    <Name>InternalMailboxServer</Name>
    <Value>DF-M14-05.exchange.corp.microsoft.com</Value>
  </UserSetting>
  <UserSetting i:type="StringSetting">
    <Name>ActiveDirectoryServer</Name>
    <Value>CO1-EXCH-DC-05.exchange.corp.microsoft.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.exchange.corp.microsoft.com</Value>
  </UserSetting>
  <UserSetting i:type="StringSetting">
    <Name>ExternalEwsUrl</Name>
    <Value>https://mail.exchange.microsoft.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 provided below:

```
<?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:wspolicy="http://schemas.xmlsoap.org/ws/2004/08/addressing/policy"
  xmlns:xsd="http://www.w3.org/2001/XMLSchema"
  xmlns:msc="http://schemas.microsoft.com/ws/2005/12/wsdl/contract"
  xmlns:wsws="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:wsm="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 provided below :

```
<?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: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: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: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:sequence>
</xs:complexType>

```

```

        <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: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: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 July 2009 and November 2009 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
[MS-OXWSADISC]: AutoDiscover Publishing and Lookup SOAP-Based Web Service Protocol Specification	53355 Updated title.	N	Content update.
1.2.1 Normative References	Added MS-OXWSLVID as a Normative Reference.	Y	New content added.
1.3 Protocol Overview	Updated contents for GetDomainSettings and GetFederationInformation methods.	N	Product behavior note updated.
2.2.3 Complex Types	Added new complex type.	N	New content added.
2.2.3.1 ServerVersionInfo Complex Type	Added new topic.	N	New content added.
2.2.3.2 m:Domains Complex Type	Added new topic.	Y	New content added.
2.2.4.1 ServerVersionInfo Element	Added new topic.	N	New content added.
2.2.4.2 Domains Element	Added new topic.	N	New content added.
3.1.4 Message Processing Events and Sequencing	Updated to include GetDomainSettings and GetFederationInformation	N	Product behavior note

Section	Tracking number (if applicable) and description	Major change (Y or N)	Revision Type
	.		updated.
3.1.4.1 GetDomainSettings	Added new topic.	N	New content added.
3.1.4.1.2 Complex Types	Added new topic.	N	New content added.
3.1.4.1.2.1 m:GetDomainSettingsRequest Complex Type	Added new topic.	N	New content added.
3.1.4.1.2.2 m:GetDomainSettingsResponse Complex Type	Added new topic.	N	New content added.
3.1.4.1.2.3 m:ArrayOfDomainResponse Complex Type	Added new topic.	N	New content added.
3.1.4.1.2.3 m:ArrayOfDomainResponse Complex Type	Added new topic.	N	New content added.
3.1.4.1.2.4 m:DomainResponse Complex Type	Added new topic.	N	New content added.
3.1.4.1.2.5 m:DomainSettingErrors Complex Type	Added new topic.	N	New content added.
3.1.4.1.2.6 m:DomainSettingError Complex Type	Added new topic.	N	New content added.
3.1.4.1.2.7 m:DomainSettings Complex Type	Added new topic.	N	New content added.
3.1.4.1.2.8 m:DomainSetting Complex Type	Added new topic.	N	New content added.
3.1.4.1.2.9 m:DomainStringSetting Complex Type	Added new topic.	N	New content added.
3.1.4.1.3 Elements	Added new topic.	N	New content added.

Section	Tracking number (if applicable) and description	Major change (Y or N)	Revision Type
3.1.4.1.3.1 GetDomainSettingsRequestMessage Element	Added new topic.	Y	New content added.
3.1.4.1.3.2 GetDomainSettingsResponseMessage Element	Added new topic.	Y	New content added.
3.1.4.1.3.3 GetDomainSettingsRequest Element	Added new topic.	N	New content added.
3.1.4.1.3.4 GetDomainSettingsResponse Element	Added new topic.	N	New content added.
3.1.4.1.3.5 ArrayOfDomainResponse Element	Added new topic.	N	New content added.
3.1.4.1.3.6 DomainResponse Element	Added new topic.	N	New content added.
3.1.4.1.3.7 DomainSettingErrors Element	Added new content.	N	New content added.
3.1.4.1.3.8 DomainSettingError Element	Added new topic.	N	New content added.
3.1.4.1.3.8 DomainSettingError Element	Added new topic.	N	New content added.
3.1.4.1.3.9 DomainSettings Element	Added new topic.	N	New content added.
3.1.4.1.3.10 DomainSetting Element	Added new topic.	N	New content added.
3.1.4.1.3.11 DomainStringSetting Element	Added new topic.	N	New content added.
3.1.4.1.4 Attributes	Added new topic.	N	New content added.
3.1.4.1.5 Groups	Added new topic.	N	New content

Section	Tracking number (if applicable) and description	Major change (Y or N)	Revision Type
			added.
3.1.4.1.6 Attribute Groups	Added new topic.	N	New content added.
3.1.4.1.7 Messages	Added new content.	N	New content added.
3.1.4.1.7.1 tns:GetDomainSettingsRequestMessage	Added new topic.	N	New content added.
3.1.4.1.7.2 tns:GetDomainSettingsRequestMessage Headers	Added new topic.	Y	New content added.
3.1.4.1.7.3 tns:GetDomainSettingsResponseMessage	Added new topic.	N	New content added.
3.1.4.1.7.4 tns:GetDomainSettingsResponseMessage Headers	Added new topic.	N	New content added.
3.1.4.2 GetFederationInformation	Added additional description details.	Y	New content added.
3.1.4.2.2.1 m:GetFederationInformationRequest Complex Type	Added new topic.	N	New content added.
3.1.4.2.2.2 m:GetFederationInformationResponse Complex Type	Added new topic.	N	New content added.
3.1.4.2.3 Elements	Updated Request and Response elements.	Y	Product behavior note updated.
3.1.4.2.3.1 GetFederationInformationRequestMessage Element	Added element description.	N	Content update.
3.1.4.2.7.2 tns:GetFederationInformationRequestMessage Headers	Added new topic.	N	New content added.
3.1.4.2.7.3 tns:GetFederationInformationResponseMessage	Added introductory description.	N	Content update.
3.1.4.2.7.4	Added new topic.	N	New

Section	Tracking number (if applicable) and description	Major change (Y or N)	Revision Type
tns:GetFederationInformationResponseMessage_Headers			content added.
3.1.4.3.1.1 t:ExchangeVersion Simple Type	Updated Exchange Version server value.	Y	Content update.
3.1.4.3.1.2 t:ErrorCode Simple Type	Added new enumeration value.	N	New content added.
3.1.4.3.2.1 m:GetUserSettingsRequest Complex Type	Added the RequestedVersion element.	Y	Content update.
3.1.4.3.2.2 m:AutodiscoverRequest Complex Type	Updated description.	N	Content update.
3.1.4.3.2.3 m:Users Complex Type	Added link for User Type.	N	Content update.
3.1.4.3.2.3 m:Users Complex Type	Updated description.	N	Content update.
3.1.4.3.2.4 m:User Complex Type	Removed LegacyDN from the User Complex Type. Updated description.	N	Content update.
3.1.4.3.2.5 m:RequestedSettings Complex Type	Updated Description.	Y	Content update.
3.1.4.3.2.6 m:GetUserSettingsResponse Complex Type	Updated description and links.	Y	Content update.
3.1.4.3.2.8 m:UserResponse Complex Type	Updated description and links.	Y	Content update.
3.1.4.3.2.9 m:UserSettingErrors Complex Type	Replaced error description.	N	Content update.
3.1.4.3.2.10 m:ArrayOfUserResponse Complex Type	Updated description.	Y	Content update.
3.1.4.3.2.11 m:UserSettingError Complex Type	Added description information.	N	Content update.
3.1.4.3.2.14 m:StringSetting Complex Type	Added xsd-name value.	N	Product behavior note updated.
3.1.4.3.2.15 m:WebClientUrlCollectionSetting Complex Type	Added descriptive information.	Y	Content update.
3.1.4.3.2.16	Added complexType	Y	Content

Section	Tracking number (if applicable) and description	Major change (Y or N)	Revision Type
m:WebClientUrls Complex Type	name.		update.
3.1.4.3.2.17 m:WebClientUrl Complex Type	Added xsd-name.	N	Content update.
3.1.4.3.2.18 m:ProtocolConnectionCollectionSetting Complex Type	Added new topic.	N	New content added.
3.1.4.3.2.19 m:ProtocolConnections Complex Type	Added new topic.	N	New content added.
3.1.4.3.2.21 m:AlternateMailboxCollectionSetting Complex Type	Added new topic.	N	New content added.
3.1.4.3.2.21 m:AlternateMailboxCollectionSetting Complex Type	Added new topic.	N	New content added.
3.1.4.3.2.22 m:AlternateMailboxes Complex Type	Added new topic.	Y	New content added.
3.1.4.3.2.23 m:AlternateMailbox Complex Type	Added new topic.	Y	New content added.
3.1.4.3.3.1 GetUserSettingsRequestMessage Element	Updated description.	N	Content update.
3.1.4.3.3.6 Users Element	Clarified description.	Y	Content update.
3.1.4.3.3.7 User Element	Clarified description.	N	Content update.
3.1.4.3.3.9 ExchangeVersion Element	Clarified description.	N	Product behavior note updated.
3.1.4.3.3.10 RequestedServerVersion Element	Updated description.	N	Content update.
3.1.4.3.3.11 AutodiscoverResponse Element	Repaired broken link.	Y	Content update.
3.1.4.3.3.13 ArrayOfUserResponse Element	Edited grammar.	Y	Editorially updated.
3.1.4.3.3.14	Modified description.	Y	Content

Section	Tracking number (if applicable) and description	Major change (Y or N)	Revision Type
UserResponse Element			update.
3.1.4.3.3.15 UserSettingErrors Element	Modified description.	Y	Editorially updated.
3.1.4.3.3.16 UserSettingError Element	Added additional description information.	Y	Content update.
3.1.4.3.3.17 UserSettings Element	Added descriptive information.	N	Content update.
3.1.4.3.3.21 WebClientUrlCollectionSetting Element	Updated description.	N	Content update.
3.1.4.3.3.22 WebClientUrls Element	Reworded description.	Y	Editorially updated.
3.1.4.3.3.23 WebClientUrl Element	Revised description.	Y	Editorially updated.
3.1.4.3.3.24 ProtocolConnectionCollectionSetting Element	Added new topic.	N	New content added.
3.1.4.3.3.25 ProtocolConnections Element	Added new topic.	N	New content added.
3.1.4.3.3.26 ProtocolConnection Element	Added new topic.	N	New content added.
3.1.4.3.3.27 AlternateMailboxCollectionSetting Element	Added new topic.	Y	New content added.
3.1.4.3.3.28 AlternateMailboxes Element	Added new topic.	N	New content added.
3.1.4.3.3.29 AlternateMailbox Element	Added new topic.	N	New content added.
3.1.4.3.7.2 tns:GetUserSettingsRequestMessage Headers	Added new topic.	N	New content added.
3.1.4.3.7.2 tns:GetUserSettingsRequestMessage Headers	Added new topic.	N	New content added.

Section	Tracking number (if applicable) and description	Major change (Y or N)	Revision Type
3.1.4.3.7.3 tns:GetUserSettingsResponseMessage	Added introductory description.	N	Content update.
3.1.4.3.7.4 tns:GetUserSettingsResponseMessage_Headers	Added new topic.	N	New content added.
4 Protocol Examples	Added an additional example and broke the examples into separate topics.	N	Content update.
4.1 GetDomainSettings_Example	Added new topic.	Y	New content added.
4.2 GetFederationInformation_Example	Added GetFederationInformation example.	N	New content added.
4.3 GetUserSettings_Example	Added new topic.	N	New content added.
5.1 Security Considerations for Implementers	Added security concerns for GetFederationInformation .	N	Content update.
6.1 WSDL	Updated document to include the latest WSDL.	Y	Content update.
6.1 WSDL	53923 Updated XML to prevent page overflow.	N	Content update.
6.2 Messages XSD	Updated document to include the latest XSD.	Y	Content update.
6.2 Messages XSD	53923 Updated XML to prevent page overflow.	N	Product behavior note updated.
7 Appendix B: Product Behavior	52746 Updated Product Behavior information	Y	Content updated due to protocol revision.

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