

[MS-OXWOOF]: Out of Office (OOF) Web Service Protocol Specification

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Preliminary

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Preliminary

1 Introduction

When a user knows that they are going to be away from work or are unable to respond to mail, they can set up a response message that can be sent automatically to people who send them mail. This response message is called the Out-of-Office message. The conditions in which the Out-of-Office message is sent are set by the Out-of-Office settings.

This protocol describes how to do the following:

- 1) Configure the Out-of-Office settings and the Out-of-Office message.
- 2) Retrieve the Out-of-Office settings and the Out-of-Office message.

1.1 Glossary

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

Coordinated Universal Time (UTC)
Out of Office (OOF)
SOAP fault
Uniform Resource Locator (URL)
Web Services Description Language (WSDL)
WSDL port type
XML
XML schema

The following terms are specific to this document:

internal users: Users who are within the organization.

external users: Users who are outside the organization.

Out Of Office message: A reply that is sent to senders of e-mail messages when the mailbox owner is **Out of Office (OOF)**.

internal OOF message: An **OOF message** sent to internal users.

external OOF message: An **OOF message** sent to external users.

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

[MS-OXGLOS] Microsoft Corporation, "Office Exchange Protocols Master Glossary", April 2008.

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

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

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

[SOAP1.1] Box, D., Ehnebuske, D., Kakivaya, G., Layman, A., Mendelsohn, N., Nielsen, H. F., Thatté, S., and Winer, D., "Simple Object Access Protocol (SOAP) 1.1", May 2000, <http://www.w3.org/TR/2000/NOTE-SOAP-20000508/>.

[WSDL] Christensen, E., Curbera, F., Meredith, G., and Weerawarana, S., "Web Services Description Language (WSDL) 1.1", W3C Note, March 2001, <http://www.w3.org/TR/2001/NOTE-wsdl-20010315>.

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

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

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

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

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

1.2.2 Informative References

[MSDN-GUO] Microsoft Corporation, "GetUserOofSettings Operation", <http://go.microsoft.com/fwlink/?LinkID=85951>.

1.3 Protocol Overview (Synopsis)

The Out of Office (OOF) Web Service protocol describes the interaction between a client and a server that configures OOF settings and messages for users.

The OOF Web Service also allows a user to either turn on their OOF or schedule their OOF so that it is enabled for the duration they specify.

1.4 Relationship to Other Protocols

Clients contact the OOF Web Service using the SOAP protocol [SOAP1.1] over HTTP [RFC2616]. Figure 1 shows the SOAP protocol.

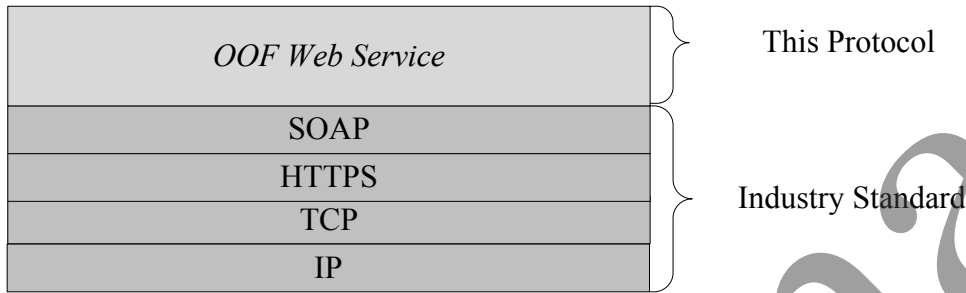


Figure 1: OOF Web service protocol stack

1.5 Prerequisites/Preconditions

None.

1.6 Applicability Statement

None.

1.7 Versioning and Capability Negotiation

- **Supported Transports:** This protocol uses SOAP 1.1
- **Protocol Versions:** This protocol has a single WSDL port type.
- **Security and Authentication Methods:** This protocol relies on the Web server hosting it to perform authentication.
- **Localization:** This protocol includes text strings in various messages.

1.8 Vendor-Extensible Fields

None.

1.9 Standards Assignments

None.

2 Messages

2.1 Transport

Soap 1.1, as specified in [SOAP1.1], is supported.

2.2 Message Syntax

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

2.2.1 Namespaces

See [XMLNS] for the namespaces specification. Clients can use any valid prefix. The prefixes provided here are used throughout this document.

Prefix	Namespace URI [XMLNS]	Reference
soap	http://schemas.xmlsoap.org/wsdl/soap/	[SOAP1.1]
tns	http://schemas.microsoft.com/exchange/services/2006/messages	Appendix B
xs	http://www.w3.org/2001/XMLSchema	[XMLSCHEM A1]
targetNamespace	http://schemas.microsoft.com/exchange/services/2006/messages	Appendix B
WsdL	http://schemas.xmlsoap.org/wsdl/	[WSDL]
T	http://schemas.microsoft.com/exchange/services/2006/types	Appendix B
M	http://schemas.microsoft.com/exchange/services/2006/messages	Appendix B

2.2.2 Simple Types

2.2.2.1 t:ExternalAudience

This specifies a value that determines to whom external OOF messages are sent.

```
<xs:simpleType name="ExternalAudience">  
  <xs:restriction base="xs:string">  
    <xs:enumeration value="None" />  
    <xs:enumeration value="Known" />  
    <xs:enumeration value="All" />  
  </xs:restriction>  
</xs:simpleType>
```



```

    </xs:restriction>
</xs:simpleType>

```

Value	Description
None	Specifies that mail sent from external users will not get an OOF message.
Known	Specifies that mail sent from external users that are known to the user will receive an OOF message in response to the mail they sent. A known user is one that appears in the user's list of contacts in any of their contacts folders in their mailbox.
All	Specifies that the external OOF message SHOULD be sent to all external users.

2.2.2.2 t:OofState

This type specifies state of the user's mailbox with respect to OOF.

```

<xs:simpleType name="OofState">
  <xs:restriction base="xs:string">
    <xs:enumeration value="Disabled" />
    <xs:enumeration value="Enabled" />
    <xs:enumeration value="Scheduled" />
  </xs:restriction>
</xs:simpleType>

```

Value	Description
Disabled	Specifies that OOF behavior is disabled.
Enabled	Specifies that OOF state is enabled – this indicates that OOF messages will be sent.
Scheduled	Specifies that the OOF status is set to Enabled for the time period identified by the Duration element.

2.2.2.3 t:ResponseClassType

This type indicates if the request was successfully processed by the OOF Web service.

```

<xs:simpleType name="ResponseClassType">
  <xs:restriction base="xs:string">
    <xs:enumeration value="Success" />
    <xs:enumeration value="Warning" />
    <xs:enumeration value="Error" />
  </xs:restriction>
</xs:simpleType>

```

Value	Description
Success	Specifies that the request was successfully processed.
Warning	Specifies that an unusual situation was encountered during the processing of the request.
Error	Specifies that the request could not be processed.

2.2.2.4 t:ResponseCodeType

The **ResponseClassType** enumeration specifies the status states of a response.

```
<xs:simpleType name="ResponseCodeType">
  <xs:annotation>
    <xs:documentation>
      Represents the message keys that can be returned by
response error messages
    </xs:documentation>
  </xs:annotation>
  <xs:restriction base="xs:string">
    <xs:enumeration value="NoError"/>
    <xs:enumeration value="ErrorAccessDenied"/>
    <xs:enumeration value="ErrorInvalidOofParameter"/>
    <xs:enumeration value="ErrorInvalidScheduledOofDuration"/>
    <xs:enumeration value="ErrorInvalidUserOofSettings"/>
    <xs:enumeration value="ErrorUnableToGetUserOofSettings"/>
  </xs:restriction>
</xs:simpleType>
```

Value	Description
NoError = 0	No error returned in the request.
ErrorInvalidOofParameter	Occurs when one of the parameters is invalid.
ErrorInvalidScheduledOofDuration	Occurs when the scheduled duration is not valid.
ErrorInvalidUserOofSettings	Occurs when the OOF settings are not valid.
ErrorUnableToGetUserOofSettings	Occurs when the service is unable to get the OOF settings.

2.2.3 Complex Types

2.2.3.1 m:BaseRequestType

This is an abstract type. GetUserOofSettingsRequest and SetUserOofSettingsRequest derive from this.

```
<xs:complexType name="BaseRequestType" abstract="true"/>
```

2.2.3.2 t:Duration

This type specifies the time interval for which the user is OOF.

```
<xs:complexType name="Duration">
  <xs:sequence>
    <xs:element minOccurs="1" maxOccurs="1" name="StartTime"
type="xs:dateTime" />
    <xs:element minOccurs="1" maxOccurs="1" name="EndTime"
type="xs:dateTime" />
  </xs:sequence>
</xs:complexType>
```

```

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

```

Element	Type	Definition
StartTime	xs:dateTime	Represents the start time of the window. MUST be present.
EndTime	xs:dateTime	Represents the end time of the window. MUST be present.

Restriction: EndTime MUST be greater than the StartTime. Times specified MUST be in Coordinated Universal Time (UTC).

2.2.3.3 t:EmailAddress

Specifies the name and address of the user.

```

<xs:complexType name="EmailAddress">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="1" name="Name"
      type="xs:string" />
    <xs:element minOccurs="1" maxOccurs="1" name="Address"
      type="xs:string" />
    <xs:element minOccurs="0" maxOccurs="1" name="RoutingType"
      type="xs:string" />
  </xs:sequence>
</xs:complexType>

```

Element	Type	Definition
Name	xs:string	Represents the name of the attendee. MAY be present.
Address	xs:string	Represents the e-mail address of the attendee. MUST be present and MUST be a Simple Mail Transfer Protocol (SMTP) address.
RoutingType	xs:string	Represents the routing protocol for the e-mail address. MAY be present.

2.2.3.4 m:GetUserOofSettingsResponse

This type contains the response message to the GetUserOofSettings request and OOF settings for the user specified in the GetUserOofSettings request.

```

<xs:complexType name="GetUserOofSettingsResponse">
  <xs:sequence>
    <xs:element minOccurs="1" maxOccurs="1"
name="ResponseMessage" type="m:ResponseMessageType" />
    <xs:element minOccurs="0" maxOccurs="1" ref="t:OofSettings"
/>
    <xs:element minOccurs="0" maxOccurs="1"
name="AllowExternalOof" type="t:ExternalAudience" />
  </xs:sequence>
</xs:complexType>

```

Element	Type	Definition
ResponseMessage	m:ResponseMessageType	Provides descriptive information about the response status. MUST be present.
<None>	t:OofSettings	Contains the OOF settings. MAY be present.
AllowExternalOof	t:ExternalAudience	Contains a value that identifies to whom external OOF messages are sent. MAY be present.

2.2.3.5 m:GetUserOofSettingsRequest

This type contains the arguments used to get a user's OOF settings.

```

<xs:complexType name="GetUserOofSettingsRequest">
  <xs:complexContent mixed="false">
    <xs:extension base="m:BaseRequestType">
      <xs:sequence>
        <xs:element minOccurs="1" maxOccurs="1" ref="t:Mailbox" />
      </xs:sequence>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>

```

Element	Type	Definition
<None>	t:Mailbox	Specifies the user for which OOF settings are to retrieved. MUST be present.

The caller **MUST** be the owner of the mailbox specified in the request.

2.2.3.6 t:Mailbox

```
<xs:element name="Mailbox" type="t:EmailAddress" />
```

Refer to the EmailAddress type for details.

2.2.3.7 t:ReplyBody

This type specifies the body of the OOF message that is sent to users.

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

Element:

Element	Type	Definition
Message	xs:string	HTML message that forms the body of the OOF message. MAY be present and SHOULD not exceed 128000 bytes.

Attributes:

Element	Definition
xml:lang	Specifies the language used in the OOF message. The possible values of this attribute are defined by [RFC3066].

2.2.3.8 m:ResponseMessageType

Specifies whether the service returned a successful response or not.

```

<xs:complexType name="ResponseMessageType">
  <xs:sequence minOccurs="0">
    <xs:element name="MessageText" type="xs:string"
minOccurs="0"/>
    <xs:element name="ResponseCode" type="m:ResponseCodeType"
minOccurs="0"/>
    <xs:element name="DescriptiveLinkKey" type="xs:int"
minOccurs="0"/>
    <xs:element name="MessageXml" minOccurs="0">
      <xs:complexType>
        <xs:sequence>
          <xs:any processContents="lax"
minOccurs="0" maxOccurs="unbounded"/>
        </xs:sequence>
      </xs:complexType>
    </xs:element>
  </xs:sequence>
  <xs:attribute name="ResponseClass" type="t:ResponseClassType"
use="required"/>
</xs:complexType>

```

Attributes:

Attribute	Type	Definition
ResponseClass	t:ResponseClassType	Represents the status of the response. The following values are valid for this attribute: <ul style="list-style-type: none"> • Success • Warning • Error

Elements:

Element	Type	Definition
MessageText	xs:string	A text description of the status of the response. MAY be present. MUST be present when errors are returned.
ResponseCode	t: ResponseCodeType	The error code that identifies the specific error that the request encountered. MAY be present.

DescriptiveLinkKey	xs:int	Currently unused and is reserved for future use. It MUST contain a value of 0.
MessageXml	Complex type defined above.	Additional error response information. MAY be present

2.2.3.9 t:ServerVersionInfo

Specifies the version of the OOF Web service.

```

<xs:element name="ServerVersionInfo">
  <xs:complexType>
    <xs:attribute name="MajorVersion" type="xs:int"
      use="optional"/>
    <xs:attribute name="MinorVersion" type="xs:int"
      use="optional"/>
    <xs:attribute name="MajorBuildNumber" type="xs:int"
      use="optional"/>
    <xs:attribute name="MinorBuildNumber" type="xs:int"
      use="optional"/>
    <xs:attribute name="Version" type="xs:string"
      use="optional"/>
  </xs:complexType>
</xs:element>

```

Element	Type	Definition
MajorVersion	xs:int	The major version number of the server. MAY be present.
MinorVersion	xs:int	The minor version number of the server. MAY be present.
MajorBuildNumber	xs:int	Describes the major build number. MAY be present.
MinorBuildNumber	xs:int	The minor build number. MAY be present.
Version	xs:string	Version of the server that is processing the request. MAY be present.

2.2.3.10 m:SetUserOofSettingsResponse

The SetUserOofSettingsResponse type specifies the result of a SetUserOofSettingsRequest message attempt.

```
<xs:complexType name="SetUserOofSettingsResponse">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="1"
      name="ResponseMessage" type="m:ResponseMessageType" />
  </xs:sequence>
</xs:complexType>
```

Element	Type	Definition
ResponseMessage	m:ResponseMessageType	Descriptive information about the response status. MAY be present.

2.2.3.11 m:SetUserOofSettingsRequest

The SetUserOofSettingsRequest type specifies the arguments used to set a mailbox user's OOF settings.

```
<xs:complexType name="SetUserOofSettingsRequest">
  <xs:complexContent mixed="false">
    <xs:extension base="m:BaseRequestType">
      <xs:sequence>
        <xs:element minOccurs="1" maxOccurs="1"
          ref="t:Mailbox" />
        <xs:element minOccurs="1" maxOccurs="1"
          ref="t:UserOofSettings" />
      </xs:sequence>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>
```

Element	Type	Definition
<None>	t:Mailbox	Specifies the mailbox user. MUST be present.
<None>	t:UserOofSettings	Specifies the OOF settings. MUST be present.

2.2.3.12 t:UserOofSettings

The UserOofSetting type specifies the OOF settings.

```
<xs:complexType name="UserOofSettings">
  <xs:sequence>
    <xs:element minOccurs="1" maxOccurs="1" name="OofState"
      type="t:OofState" />
    <xs:element minOccurs="1" maxOccurs="1"
      name="ExternalAudience" type="t:ExternalAudience" />
    <xs:element minOccurs="0" maxOccurs="1" name="Duration"
      type="t:Duration" />
    <xs:element minOccurs="0" maxOccurs="1"
      name="InternalReply" type="t:ReplyBody" />
    <xs:element minOccurs="0" maxOccurs="1"
      name="ExternalReply" type="t:ReplyBody" />
  </xs:sequence>
</xs:complexType>
```

Element	Type	Definition
OofState	t:OofState	Indicates the user's OOF state. MUST be present.
ExternalAudience	t:ExternalAudience	Indicates how external users are handled. MUST be present.
Duration	t:Duration	Indicates the duration for which the OOF status is enabled if the OOF state in the OofState element is set to Scheduled. The times MUST be in the time zone of the mailbox. This is ignored if the OofState element is set to Enabled or Disabled. MAY be present.
InternalReply	t:ReplyBody	Contains the body of the OOF response message that is sent to internal users. MAY be present.

ExternalReply	t:ReplyBody	Contains the body of the OOF response message that is sent to external users. MAY be present.
---------------	-------------	--

2.2.4 Fault Detail

A SOAP Fault [SOAP1.1] is used to carry error information from the OOF methods when there is API misuse or when there are configuration failures. This will also occur if the caller is not the mailbox owner.

SOAP Fault sub-element	Type	Definition
faultstring	xs:string	Contains information about the exception that was returned.
faultCode	<u>System.Xml...:XmlQualifiedName</u>	This protocol returns SoapException.ClientFaultCode.
faultactor	xs:string	Contains the OOF Web Service URI where this occurred.
Role		The OOF Web service returns the following: "Exception Handler".
detail	xs:XmlNode	A child node is created with Name="ErrorCode" Namespace= http://schemas.microsoft.com/exchange/services/2006/messages InnerText=stringized error This is used for debugging purposes only.
subCode	xs:SoapFaultCode	This protocol returns SoapException.ClientFaultCode.
innerException	xs:System.Exception	Contains the exception that was thrown.

3 Protocol Details

This protocol specifies a way of getting OOF settings and configuring OOF settings for a mailbox.

3.1 ExchangeServicePortType Server Details

3.1.1 Abstract Data Model

The OOF service is a stateless protocol.

3.1.2 Timers

None.

3.1.3 Initialization

None.

3.1.4 Message Processing Events and Sequencing Rules

Operation	Description
GetUserOofSettings	Gets a user's OOF settings and OOF messages from their mailbox.
SetUserOofSettings	Sets a user's OOF settings and OOF messages in their mailbox

```
<wsdl:portType name="ExchangeServicePortType">
  <wsdl:operation name="GetUserOofSettings">
    <wsdl:input message="tns:GetUserOofSettingsSoapIn" />
    <wsdl:output message="tns:GetUserOofSettingsSoapOut" />
  </wsdl:operation>

  <wsdl:operation name="SetUserOofSettings">
    <wsdl:input message="tns:SetUserOofSettingsSoapIn" />
    <wsdl:output message="tns:SetUserOofSettingsSoapOut" />
  </wsdl:operation>
</wsdl:portType>
```

3.1.4.1 GetUserOofSettings

The GetUserOofSettings operation specifies how to get the OOF settings and OOF messages from a user's mailbox.

```
<wsdl:message name="GetUserOofSettingsSoapIn">
  <wsdl:part name="GetUserOofSettingsRequest"
  element="tns:GetUserOofSettingsRequest" />
</wsdl:message>
<wsdl:message name="GetUserOofSettingsSoapOut">
  <wsdl:part name="GetUserOofSettingsResult"
  element="tns:GetUserOofSettingsResponse" />
</wsdl:message>
```

```

    <wsdl:part name="ServerVersion" element="t:ServerVersionInfo"/>
</wsdl:message>

```

The GetUserOofSettings operation requires an input message – GetUserSettingsSoapIn and returns an output message called GetUserOofSettingsSoapOut.

Parameters for the GetUserOofSettingsSoapIn message:

Part	Element/Type	Description
GetUserOofSettingsRequest	tns:GetUserOofSettingsRequest	This part contains the information required to get OOF information.

Parameters for the GetUserOofSettingsSoapOut message:

Part	Element/Type	Description
GetUserOofSettingsResult	tns:GetUserOofSettingsResponse	Response containing OOF information that was requested.
ServerVersion	ServerVersionInfo	Used for diagnostic purposes.

3.1.4.2 SetUserOofSettings Operation

The SetUserOofSettings operation specifies how to set a mailbox user's OOF settings and response message.

```

<wsdl:message name="SetUserOofSettingsSoapIn">
  <wsdl:part name="SetUserOofSettingsRequest"
  element="tns:SetUserOofSettingsRequest" />
</wsdl:message>
<wsdl:message name="SetUserOofSettingsSoapOut">
  <wsdl:part name="SetUserOofSettingsResult"
  element="tns:SetUserOofSettingsResponse" />
  <wsdl:part name="ServerVersion" element="t:ServerVersionInfo"/>
</wsdl:message>

```

Parts for SetUserOofSettingsSoapIn

Part	Element/Type	Description
SetUserOofSettingsRequest	tns: <u>SetUserOofSettingsRequest</u>	This part contains the information required to set oof settings and messages.

Parts for SetUserOofSettingsSoapOut

Part	Element/Type	Description
SetUserOofSettingsResult	tns:SetUserOofSettingsResponse	This part contains the response from the OOF web service.
ServerVersion	ServerVersionInfo	Used for diagnostic purposes.

3.1.5 Timer Events

None.

3.1.6 Other Local Events

The OOF Web service does not maintain state. If there are network problems, the client is expected to re-query the service.

3.2 ExchangeServicePortType 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 returned by the transport are passed directly back to the higher-layer protocol or application.

3.2.1 Abstract Data Model

The OOF service is a stateless protocol.

3.2.2 Timers

None.

3.2.3 Initialization

None.

3.2.4 Message Processing Events and Sequencing Rules

None.

3.2.5 Timer Events

None.

3.2.6 Other Local Events

Not applicable.

4 Protocol Examples

4.1 *GetUserOofSettings Request*

The following example shows how to get a specified user's OOF settings.

```
<?xml version="1.0" encoding="utf-8"?>
<soap:Envelope xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
  xmlns:xsd="http://www.w3.org/2001/XMLSchema"
  xmlns:soap="http://schemas.xmlsoap.org/soap/envelope/">
  <soap:Body>
    <GetUserOofSettingsRequest
      xmlns="http://schemas.microsoft.com/exchange/services/2006/messages">
      <Mailbox
        xmlns="http://schemas.microsoft.com/exchange/services/2006/types">
        <Address>user@example.com</Address>
      </Mailbox>
    </GetUserOofSettingsRequest>
  </soap:Body>
</soap:Envelope>
```

4.2 *GetUserOofSettings Response*

The following example shows a successful response to get a user's OOF settings.

```
<?xml version="1.0" encoding="utf-8" ?>
<soap:Envelope 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>
    <t:ServerVersionInfo MajorVersion="8" MinorVersion="1"
      MajorBuildNumber="240" MinorBuildNumber="5"
      xmlns:t="http://schemas.microsoft.com/exchange/services/2006/types" />
  </soap:Header>
  <soap:Body>
    <GetUserOofSettingsResponse
      xmlns="http://schemas.microsoft.com/exchange/services/2006/messages">
      <ResponseMessage ResponseClass="Success">
        <ResponseCode>NoError</ResponseCode>
      </ResponseMessage>
      <OofSettings
        xmlns="http://schemas.microsoft.com/exchange/services/2006/types">
        <OofState>Enabled</OofState>
        <ExternalAudience>All</ExternalAudience>
        <Duration>
          <StartTime>2008-02-01T00:00:00</StartTime>
        </Duration>
      </OofSettings>
    </GetUserOofSettingsResponse>
  </soap:Body>
</soap:Envelope>
```

```

        <EndTime>2008-02-02T00:00:00</EndTime>
    </Duration>
    <InternalReply>
        <Message>I am out of office. This is my internal
reply.</Message>
    </InternalReply>
    <ExternalReply>
        <Message>I am out of office. This is my external
reply.</Message>
    </ExternalReply>
</OofSettings>
    <AllowExternalOof>All</AllowExternalOof>
</GetUserOofSettingsResponse>
</soap:Body>
</soap:Envelope>

```

4.3 SetUserOofSettings Request

The following example shows how to set a specified user's OOF settings.

```

<?xml version="1.0" encoding="utf-8"?>
<soap:Envelope xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:xsd="http://www.w3.org/2001/XMLSchema"
xmlns:soap="http://schemas.xmlsoap.org/soap/envelope/">
  <soap:Body>
    <SetUserOofSettingsRequest
xmlns="http://schemas.microsoft.com/exchange/services/2006/messages">
      <Mailbox
xmlns="http://schemas.microsoft.com/exchange/services/2006/types">
        <Address>ul@example.com</Address>
        <RoutingType>SMTP</RoutingType>
      </Mailbox>
      <UserOofSettings
xmlns="http://schemas.microsoft.com/exchange/services/2006/types">
        <OofState>Enabled</OofState>
        <ExternalAudience>All</ExternalAudience>
        <InternalReply>
          <Message>I am out of office. This is my internal
reply.</Message>
        </InternalReply>
        <ExternalReply>
          <Message>I am out of office. This is my external
reply.</Message>
        </ExternalReply>
      </UserOofSettings>
    </SetUserOofSettingsRequest>
  </soap:Body>
</soap:Envelope>

```

4.4 *SetUserOofSettings Successful Response*

The following example shows a successful response to a SetUserOofSetting request.

```
<?xml version="1.0" encoding="utf-8" ?>
<soap:Envelope 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>
    <t:ServerVersionInfo MajorVersion="8" MinorVersion="1"
      MajorBuildNumber="240" MinorBuildNumber="5"
      xmlns:t="http://schemas.microsoft.com/exchange/services/2006/types" />
  </soap:Header>
  <soap:Body>
    <SetUserOofSettingsResponse
      xmlns="http://schemas.microsoft.com/exchange/services/2006/messages">
      <ResponseMessage ResponseClass="Success">
        <ResponseCode>NoError</ResponseCode>
      </ResponseMessage>
    </SetUserOofSettingsResponse>
  </soap:Body>
</soap:Envelope>
```

4.5 *SetUserOofSetting Failure Response*

The following example shows a successful response to a SetUserOofSetting request.

```
<?xml version="1.0" encoding="utf-8" ?>
<soap:Envelope 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>
    <t:ServerVersionInfo MajorVersion="8" MinorVersion="1"
      MajorBuildNumber="240" MinorBuildNumber="5"
      xmlns:t="http://schemas.microsoft.com/exchange/services/2006/types" />
  </soap:Header>
  <soap:Body>
    <SetUserOofSettingsResponse
      xmlns="http://schemas.microsoft.com/exchange/services/2006/messages">
      <ResponseMessage ResponseClass="Error">
        <MessageText>The scheduled Out of Office duration is not
          valid.</MessageText>
        <ResponseCode>ErrorInvalidScheduledOofDuration</ResponseCode>
        <DescriptiveLinkKey>0</DescriptiveLinkKey>
        <MessageXml>
          <ExceptionType
            xmlns="http://schemas.microsoft.com/exchange/services/2006/errors">Microsoft.Exchange.InfoWorker.Common.OOF.InvalidScheduledOofDuration</ExceptionType>
          <ExceptionCode
            xmlns="http://schemas.microsoft.com/exchange/services/2006/errors">158</ExceptionCode>
        </MessageXml>
      </ResponseMessage>
    </SetUserOofSettingsResponse>
  </soap:Body>
</soap:Envelope>
```



```

    </MessageXml>
  </ResponseMessage>
</SetUserOutOfSettingsResponse>
</soap:Body>
</soap:Envelope>

```

5 Security

5.1 Security Considerations for Implementers

The OOF service does not use additional security mechanisms.

6 Appendix A: Full WSDL

```

<?xml version="1.0" encoding="utf-8"?>
<wsdl:definitions xmlns:soap="http://schemas.xmlsoap.org/wsdl/soap/"

xmlns:tns="http://schemas.microsoft.com/exchange/services/2006/messages"
"
          xmlns:s="http://www.w3.org/2001/XMLSchema"

targetNamespace="http://schemas.microsoft.com/exchange/services/2006/me
ssages"
          xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/"

xmlns:t="http://schemas.microsoft.com/exchange/services/2006/types">
  <wsdl:types>
    <xs:schema id="types"
              elementFormDefault="qualified"
              version="Exchange2007_SP1"

xmlns:t="http://schemas.microsoft.com/exchange/services/2006/type
s"
"
    targetNamespace="http://schemas.microsoft.com/exchange/services/2
006/types"
    xmlns:tns="http://schemas.microsoft.com/exchange/services/2006/ty
pes"
    xmlns:xs="http://www.w3.org/2001/XMLSchema">
      <xs:import
namespace="http://www.w3.org/XML/1998/namespace"/>
      <!-- Used in the SOAP header of responses for
diagnostics purposes. -->
      <xs:element name="ServerVersionInfo">
        <xs:complexType>
          <xs:attribute name="MajorVersion"
type="xs:int" use="optional"/>
          <xs:attribute name="MinorVersion"
type="xs:int" use="optional"/>

```

```

        <xs:attribute name="MajorBuildNumber"
type="xs:int" use="optional"/>
        <xs:attribute name="MinorBuildNumber"
type="xs:int" use="optional"/>
        <xs:attribute name="Version"
type="xs:string" use="optional"/>
    </xs:complexType>
</xs:element>

<xs:simpleType name="ResponseClassType">
    <xs:restriction base="xs:string">
        <xs:enumeration value="Success" />
        <xs:enumeration value="Warning" />
        <xs:enumeration value="Error" />
    </xs:restriction>
</xs:simpleType>

<xs:complexType name="EmailAddress">
    <xs:sequence>
        <xs:element minOccurs="0" maxOccurs="1"
name="Name" type="xs:string" />
        <xs:element minOccurs="1" maxOccurs="1"
name="Address" type="xs:string" />
        <xs:element minOccurs="0" maxOccurs="1"
name="RoutingType" type="xs:string" />
    </xs:sequence>
</xs:complexType>

<xs:element name="Mailbox" type="t:EmailAddress" />

<xs:complexType name="Duration">
    <xs:sequence>
        <xs:element minOccurs="1" maxOccurs="1"
name="StartTime" type="xs:dateTime" />
        <xs:element minOccurs="1" maxOccurs="1"
name="EndTime" type="xs:dateTime" />
    </xs:sequence>
</xs:complexType>

<xs:simpleType name="OofState">
    <xs:restriction base="xs:string">
        <xs:enumeration value="Disabled" />
        <xs:enumeration value="Enabled" />
        <xs:enumeration value="Scheduled" />
    </xs:restriction>
</xs:simpleType>

<xs:simpleType name="ExternalAudience">
    <xs:restriction base="xs:string">
        <xs:enumeration value="None" />
        <xs:enumeration value="Known" />
        <xs:enumeration value="All" />
    </xs:restriction>
</xs:simpleType>

```

```

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

        <xs:complexType name="UserOofSettings">
            <xs:sequence>
                <xs:element minOccurs="1" maxOccurs="1"
name="OofState" type="t:OofState" />
                <xs:element minOccurs="1" maxOccurs="1"
name="ExternalAudience" type="t:ExternalAudience" />
                <xs:element minOccurs="0" maxOccurs="1"
name="Duration" type="t:Duration" />
                <xs:element minOccurs="0" maxOccurs="1"
name="InternalReply" type="t:ReplyBody" />
                <xs:element minOccurs="0" maxOccurs="1"
name="ExternalReply" type="t:ReplyBody" />
            </xs:sequence>
        </xs:complexType>

        <xs:element name="OofSettings"
type="t:UserOofSettings" />
        <xs:element name="UserOofSettings"
type="t:UserOofSettings" />
    </xs:schema>

    <xs:schema id="messages"
        elementFormDefault="qualified"
        version="Exchange2007_SP1"

        xmlns:m="http://schemas.microsoft.com/exchange/services/2006/mess
ages"

        xmlns:tns="http://schemas.microsoft.com/exchange/services/2006/me
ssages"

        xmlns:t="http://schemas.microsoft.com/exchange/services/2006/type
s"

        xmlns:xs="http://www.w3.org/2001/XMLSchema"

        targetNamespace="http://schemas.microsoft.com/exchange/services/2
006/messages">
        <!-- Import common types. -->
        <xs:import
namespace="http://schemas.microsoft.com/exchange/services/2006/types"
schemaLocation="types.xsd"/>
        <!-- Basic response type -->
        <!-- Common to all responses -->
        <xs:simpleType name="ResponseCodeType">
            <xs:annotation>

```

```

        <xs:documentation>
            Represents the message keys that
            can be returned by response error messages
        </xs:documentation>
    </xs:annotation>
    <xs:restriction base="xs:string">
        <xs:enumeration value="NoError"/>
        <xs:enumeration
value="ErrorAccessDenied"/>
        <xs:enumeration
value="ErrorInvalidOofParameter"/>
        <xs:enumeration
value="ErrorInvalidScheduledOofDuration"/>
        <xs:enumeration
value="ErrorInvalidUserOofSettings"/>
        <xs:enumeration
value="ErrorUnableToGetUserOofSettings"/>
    </xs:restriction>
</xs:simpleType>

    <xs:complexType name="ResponseMessageType">
        <xs:sequence minOccurs="0">
            <xs:element name="MessageText"
type="xs:string" minOccurs="0"/>
            <xs:element name="ResponseCode"
type="m:ResponseCodeType" minOccurs="0"/>
            <xs:element name="DescriptiveLinkKey"
type="xs:int" minOccurs="0"/>
            <xs:element name="MessageXml"
minOccurs="0">
                <xs:complexType>
                    <xs:sequence>
                        <xs:any
processContents="lax" minOccurs="0" maxOccurs="unbounded"/>
                    </xs:sequence>
                </xs:complexType>
            </xs:element>
        </xs:sequence>
        <xs:attribute name="ResponseClass"
type="t:ResponseClassType" use="required"/>
    </xs:complexType>

    <!-- GetUserOofSettingsRequest -->
    <xs:complexType name="BaseRequestType"
abstract="true"/>
    <xs:complexType name="GetUserOofSettingsRequest">
        <xs:complexContent mixed="false">
            <xs:extension base="m:BaseRequestType">
                <xs:sequence>
                    <xs:element minOccurs="1"
maxOccurs="1" ref="t:Mailbox" />
                </xs:sequence>
            </xs:extension>
        </xs:complexContent>
    </xs:complexType>

```

```

        </xs:complexType>

        <xs:element name="GetUserOofSettingsRequest"
type="tns:GetUserOofSettingsRequest" />

        <!-- GetUserOofSettingsResponse -->

        <xs:complexType name="GetUserOofSettingsResponse">
            <xs:sequence>
                <xs:element minOccurs="1" maxOccurs="1"
name="ResponseMessage" type="m:ResponseMessageType" />
                <xs:element minOccurs="0" maxOccurs="1"
ref="t:OofSettings" />
                <xs:element minOccurs="0" maxOccurs="1"
name="AllowExternalOof" type="t:ExternalAudience" />
            </xs:sequence>
        </xs:complexType>

        <xs:element name="GetUserOofSettingsResponse"
type="tns:GetUserOofSettingsResponse" />

        <!-- SetUserOofSettingsRequest -->

        <xs:complexType name="SetUserOofSettingsRequest">
            <xs:complexContent mixed="false">
                <xs:extension base="m:BaseRequestType">
                    <xs:sequence>
                        <xs:element minOccurs="1"
maxOccurs="1" ref="t:Mailbox" />
                        <xs:element minOccurs="1"
maxOccurs="1" ref="t:UserOofSettings" />
                    </xs:sequence>
                </xs:extension>
            </xs:complexContent>
        </xs:complexType>

        <xs:element name="SetUserOofSettingsRequest"
type="tns:SetUserOofSettingsRequest" />

        <!-- SetUserOofSettingsResponse -->

        <xs:complexType name="SetUserOofSettingsResponse">
            <xs:sequence>
                <xs:element minOccurs="0" maxOccurs="1"
name="ResponseMessage" type="m:ResponseMessageType" />
            </xs:sequence>
        </xs:complexType>

        <xs:element name="SetUserOofSettingsResponse"
type="tns:SetUserOofSettingsResponse" />
    </xs:schema>
</wsdl:types>

    <wsdl:message name="GetUserOofSettingsSoapIn">

```

```

    <wsdl:part name="GetUserOofSettingsRequest"
element="tns:GetUserOofSettingsRequest" />
  </wsdl:message>
  <wsdl:message name="GetUserOofSettingsSoapOut">
    <wsdl:part name="GetUserOofSettingsResult"
element="tns:GetUserOofSettingsResponse" />
    <wsdl:part name="ServerVersion" element="t:ServerVersionInfo"/>
  </wsdl:message>
  <wsdl:message name="SetUserOofSettingsSoapIn">
    <wsdl:part name="SetUserOofSettingsRequest"
element="tns:SetUserOofSettingsRequest" />
  </wsdl:message>
  <wsdl:message name="SetUserOofSettingsSoapOut">
    <wsdl:part name="SetUserOofSettingsResult"
element="tns:SetUserOofSettingsResponse" />
    <wsdl:part name="ServerVersion" element="t:ServerVersionInfo"/>
  </wsdl:message>

  <wsdl:portType name="ExchangeServicePortType">
    <!-- GetUserOofSettings -->
    <wsdl:operation name="GetUserOofSettings">
      <wsdl:input message="tns:GetUserOofSettingsSoapIn" />
      <wsdl:output message="tns:GetUserOofSettingsSoapOut" />
    </wsdl:operation>

    <!-- SetUserOofSettings -->
    <wsdl:operation name="SetUserOofSettings">
      <wsdl:input message="tns:SetUserOofSettingsSoapIn" />
      <wsdl:output message="tns:SetUserOofSettingsSoapOut" />
    </wsdl:operation>
  </wsdl:portType>

  <wsdl:binding name="ExchangeServiceBinding"
type="tns:ExchangeServicePortType">
    <wsdl:documentation>
      <wsi:Claim conformsTo="http://ws-
i.org/profiles/basic/1.0" xmlns:wsi="http://ws-
i.org/schemas/conformanceClaim/" />
    </wsdl:documentation>
    <soap:binding
transport="http://schemas.xmlsoap.org/soap/http" style="document" />

    <!-- GetUserOofSettings -->
    <wsdl:operation name="GetUserOofSettings">
      <soap:operation
soapAction="http://schemas.microsoft.com/exchange/services/2006/message
s/GetUserOofSettings" />
      <wsdl:input>
        <soap:body parts="GetUserOofSettingsRequest" use="literal" />
      </wsdl:input>
      <wsdl:output>
        <soap:body parts="GetUserOofSettingsResult" use="literal" />
        <soap:header message="tns:GetUserOofSettingsSoapOut"
part="ServerVersion" use="literal"/>
    </wsdl:operation>
  </wsdl:binding>

```

```
</wsdl:output>
</wsdl:operation>

<!-- SetUserOofSettings -->
<wsdl:operation name="SetUserOofSettings">
  <soap:operation
soapAction="http://schemas.microsoft.com/exchange/services/2006/messages/SetUserOofSettings" />
  <wsdl:input>
    <soap:body parts="SetUserOofSettingsRequest" use="literal" />
  </wsdl:input>
  <wsdl:output>
    <soap:body parts="SetUserOofSettingsResult" use="literal" />
    <soap:header message="tns:SetUserOofSettingsSoapOut"
part="ServerVersion" use="literal"/>
  </wsdl:output>
</wsdl:operation>
</wsdl:binding>
</wsdl:definitions>
```

7 Appendix B: Office/Exchange Behavior

The information in this specification is applicable to the following versions of Office/Exchange:

- Office 2007 with Service Pack 1 applied
- Exchange 2007 with Service Pack 1 applied

Exceptions, if any, are noted below. Unless otherwise specified, any statement of optional behavior in this specification prescribed using the terms SHOULD or SHOULD NOT implies Windows behavior in accordance with the SHOULD or SHOULD NOT prescription. Unless otherwise specified, the term MAY implies Windows does not follow the prescription.

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