[MS-OXWSPED]:

Password Expiration Date Web Service Protocol

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1 Introduction

The Password Expiration Date Web Service Protocol enables client applications to query a server to determine the date when a user's password will expire so that the application can warn the user to change the password.

Sections 1.5, 1.8, 1.9, 2, and 3 of this specification are normative. All other sections and examples in this specification are informative.

1.1 Glossary

This document uses the following terms:

email address: A string that identifies a user and enables the user to receive Internet messages.

endpoint: A communication port that is exposed by an application server for a specific shared service and to which messages can be addressed.

Hypertext Transfer Protocol (HTTP): An application-level protocol for distributed, collaborative, hypermedia information systems (text, graphic images, sound, video, and other multimedia files) on the World Wide Web.

Hypertext Transfer Protocol Secure (HTTPS): An extension of HTTP that securely encrypts and decrypts web page requests. In some older protocols, "Hypertext Transfer Protocol over Secure Sockets Layer" is still used (Secure Sockets Layer has been deprecated). For more information, see [SSL3] and [RFC5246].

mailbox: A message store that contains email, calendar items, and other Message objects for a single recipient.

SOAP: A lightweight protocol for exchanging structured information in a decentralized, distributed environment. **SOAP** uses **XML** technologies to define an extensible messaging framework, which provides a message construct that can be exchanged over a variety of underlying protocols. The framework has been designed to be independent of any particular programming model and other implementation-specific semantics. SOAP 1.2 supersedes SOAP 1.1. See [SOAP1.2-1/2003].

SOAP action: The HTTP request header field used to indicate the intent of the **SOAP** request, using a URI value. See [SOAP1.1] section 6.1.1 for more information.

SOAP body: A container for the payload data being delivered by a **SOAP message** to its recipient. See [SOAP1.2-1/2007] section 5.3 for more information.

SOAP header: A mechanism for implementing extensions to a **SOAP message** in a decentralized manner without prior agreement between the communicating parties. See [SOAP1.2-1/2007] section 5.2 for more information.

SOAP message: An **XML** document consisting of a mandatory SOAP envelope, an optional **SOAP header**, and a mandatory **SOAP body**. See [SOAP1.2-1/2007] section 5 for more information.

Uniform Resource Locator (URL): A string of characters in a standardized format that identifies a document or resource on the World Wide Web. The format is as specified in [RFC1738].

web server: A server computer that hosts websites and responds to requests from applications.

Web Services Description Language (WSDL): An XML format for describing network services as a set of endpoints that operate on messages that contain either document-oriented or procedure-oriented information. The operations and messages are described abstractly and are bound to a concrete network protocol and message format in order to define an endpoint.

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Related concrete endpoints are combined into abstract endpoints, which describe a network service. WSDL is extensible, which allows the description of endpoints and their messages regardless of the message formats or network protocols that are used.

WSDL message: An abstract, typed definition of the data that is communicated during a WSDL operation [WSDL]. Also, an element that describes the data being exchanged between web service providers and clients.

WSDL port type: A named set of logically-related, abstract **Web Services Description Language (WSDL)** operations and messages.

XML: The Extensible Markup Language, as described in [XML1.0].

XML namespace: A collection of names that is used to identify elements, types, and attributes in XML documents identified in a URI reference [RFC3986]. A combination of XML namespace and local name allows XML documents to use elements, types, and attributes that have the same names but come from different sources. For more information, see [XMLNS-2ED].

XML namespace prefix: An abbreviated form of an **XML namespace**, as described in [XML].

XML schema: A description of a type of XML document that is typically expressed in terms of constraints on the structure and content of documents of that type, in addition to the basic syntax constraints that are imposed by **XML** itself. An XML schema provides a view of a document type at a relatively high level of abstraction.

MAY, SHOULD, MUST, SHOULD NOT, MUST NOT: These terms (in all caps) are used as defined in [RFC2119]. All statements of optional behavior use either MAY, SHOULD, or SHOULD NOT.

1.2 References

Links to a document in the Microsoft Open Specifications library point to the correct section in the most recently published version of the referenced document. However, because individual documents in the library are not updated at the same time, the section numbers in the documents may not match. You can confirm the correct section numbering by checking the Errata.

1.2.1 Normative References

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

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

[RFC2119] Bradner, S., "Key words for use in RFCs to Indicate Requirement Levels", BCP 14, RFC 2119, March 1997, https://www.rfc-editor.org/rfc/rfc2119.html

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

[RFC2818] Rescorla, E., "HTTP Over TLS", RFC 2818, May 2000, http://www.rfc-editor.org/rfc/rfc2818.txt

[RFC3066] Alvestrand, H., "Tags for the Identification of Languages", BCP 47, RFC 3066, January 2001, http://www.ietf.org/rfc/rfc3066.txt

[SOAP1.1] Box, D., Ehnebuske, D., Kakivaya, G., et al., "Simple Object Access Protocol (SOAP) 1.1", W3C Note, May 2000, https://www.w3.org/TR/2000/NOTE-SOAP-20000508/

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

[XMLNS] Bray, T., Hollander, D., Layman, A., et al., Eds., "Namespaces in XML 1.0 (Third Edition)", W3C Recommendation, December 2009, https://www.w3.org/TR/2009/REC-xml-names-20091208/

[XMLSCHEMA1] Thompson, H., Beech, D., Maloney, M., and Mendelsohn, N., Eds., "XML Schema Part 1: Structures", W3C Recommendation, May 2001, https://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, https://www.w3.org/TR/2001/REC-xmlschema-2-20010502/

1.2.2 Informative References

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

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

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

1.3 Overview

The Password Expiration Date Web Service Protocol provides an operation that a client application can use to request a user's password expiration date from a server. The application can use this information to present the user with an opportunity to update the password before it expires.

1.4 Relationship to Other Protocols

A client that implements this protocol can use the Autodiscover Publishing and Lookup SOAP-Based Web Service Protocol, as described in [MS-OXWSADISC], or the Autodiscover Publishing and Lookup Protocol, as described in [MS-OXDSCLI], to identify the target **endpoint** to use for each operation.

This protocol uses the SOAP Protocol, as described in [SOAP1.1], to specify the structure information that is exchanged between the client and the server. This protocol uses the XML Protocol, as described in [XMLSCHEMA1] and [XMLSCHEMA2], to describe the message content that is sent to and from the server.

The Password Expiration Date Web Service Protocol uses **SOAP** over **HTTP**, as described in [RFC2616], and SOAP over **HTTPS**, as described in [RFC2818], as shown in the following layering diagram.

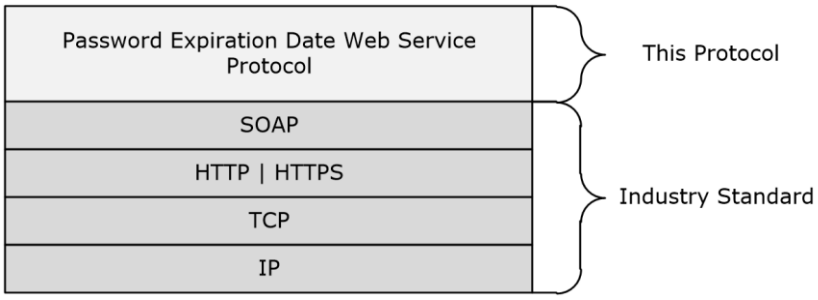

Figure 1: This protocol in relation to other protocols

For conceptual background information and overviews of the relationships and interactions between this and other protocols, see [MS-OXPROTO].

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1.5 Prerequisites/Preconditions

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

To get the endpoint URL, the client application needs a valid mail-enabled account to authenticate with the server.

1.6 Applicability Statement

This protocol is applicable to client applications that inform the user about the expiration date of passwords stored on the server.

1.7 Versioning and Capability Negotiation

This document covers versioning issues in the following areas:

- **Supported Transports:** This protocol uses SOAP 1.1, as specified in section 2.1.
- **Protocol Versions:** This protocol specifies only one **WSDL port type** version. The **WSDL** version of the request is identified by using the **t:RequestServerVersion** element, as described in [MS-OXWSCDATA] section 2.2.3.9, and the version of the server responding to the request is identified by using the **t:ServerVersionInfo** element, as described in [MS-OXWSCDATA] section 2.2.3.10.
- **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.

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2 Messages

In the following sections, the schema definition might differ from the processing rules imposed by the protocol. The **WSDL** in this specification provides a base description of the protocol. The schema in this specification provides a base description of the message syntax. The text that specifies the WSDL and schema might specify restrictions that reflect actual protocol behavior. For example, the schema definition might allow for an element to be **empty**, **null**, or **not present** but the behavior of the protocol as specified restricts the same elements to being **non-empty**, **not null**, or **present**.

2.1 Transport

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

This protocol relies on the **web server** that hosts the application to perform authentication. The protocol MUST support HTTP, as specified in [RFC2616].The protocol SHOULD use secure communications by means of **HTTPS**, as specified in [RFC2818].

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]
tns	http://schemas.microsoft.com/exchange/services/2006/messages	
xs	http://www.w3.org/2001/XMLSchema	[XMLSCHEMA1] [XMLSCHEMA2]
wsdl	http://schemas.xmlsoap.org/wsdl/	[WSDL]
t	http://schemas.microsoft.com/exchange/services/2006/types	
m	http://schemas.microsoft.com/exchange/services/2006/messages	

2.2.2 Messages

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

2.2.3 Elements

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

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2.2.4 Complex Types

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

2.2.5 Simple Types

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

2.2.6 Attributes

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

2.2.7 Groups

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

2.2.8 Attribute Groups

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

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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 ExchangeServerPortType Server Details

The Password Expiration Date Web Service Protocol defines a single port type that enables clients to retrieve the password expiration date for a **mailbox** account.

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.

This protocol is used to retrieve password expiration dates from the server so that client applications can pass this information on to users. Note that the client in each case is not required to maintain the password expiration date. Rather, the client can use this protocol to request the password expiration date whenever it is needed.

3.1.2 Timers

None.

3.1.3 Initialization

None.

3.1.4 Message Processing Events and Sequencing Rules

This protocol includes the operation that is listed and described in the following table.

Operation name	Description
GetPasswordExpirationDate	Gets the password expiration date for a **mailbox** account.

3.1.4.1 GetPasswordExpirationDate Operation

The **GetPasswordExpirationDate** operation provides the **mailbox** account with the password expiration date.

The following is the **WSDL port type** specification for this operation.

```
<wsdl:portType name="ExchangeServicePortType">
   <wsdl:operation name="GetPasswordExpirationDate">
      <wsdl:input message="tns:GetPasswordExpirationDateSoapIn" />
      <wsdl:output message="tns:GetPasswordExpirationDateSoapOut" />
   </wsdl:operation>
```


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```
</wsdl:portType>
```

The following is the **WSDL** binding specification for this operation.

```
<wsdl:operation name="GetPasswordExpirationDate">
   <soap:operation
soapAction="http://schemas.microsoft.com/exchange/services/2006/messages/GetPasswordExpiratio
nDate" />
      <wsdl:input>
         <soap:header message="tns:GetPasswordExpirationDateSoapIn" part="MailboxCulture"
use="literal"/>
         <soap:header message="tns:GetPasswordExpirationDateSoapIn" part="RequestVersion"
use="literal"/>
         <soap:body parts="request" use="literal" />
      </wsdl:input>
      <wsdl:output>
         <soap:body parts="GetPasswordExpirationDateResult" use="literal" />
         <soap:header message="tns:GetPasswordExpirationDateSoapOut" part="ServerVersion"
use="literal"/>
   </wsdl:output>
</wsdl:operation>
```

3.1.4.1.1 Messages

The following table summarizes the set of **WSDL message** definitions that are specific to the **GetPasswordExpirationDate** operation.

Message name	Description
GetPasswordExpirationDateSoapIn	Specifies the **SOAP message** that requests the password expiration date.
GetPasswordExpirationDateSoapOut	Specifies the SOAP message that is returned by the server in response.

3.1.4.1.1.1 GetPasswordExpirationDateSoapIn Message

The **GetPasswordExpirationDateSoapIn** **WSDL message** specifies the **GetPasswordExpirationDate** operation request to return the password expiration date.

```
<wsdl:message name="GetPasswordExpirationDateSoapIn">
   <wsdl:part name="request" element="tns:GetPasswordExpirationDate"/>
   <wsdl:part name="MailboxCulture" element="t:MailboxCulture" />
   <wsdl:part name="RequestVersion" element="t:RequestServerVersion" />
</wsdl:message>
```

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

The parts of the **GetPasswordExpirationDateSoapIn** message are listed and described in the following table.

Part name	Element/type	Description
request	**m:GetPasswordExpirationDate** (section 3.1.4.1.2.1)	Specifies the **SOAP body** of the request containing the information that is required to check the

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Part name	Element/type	Description
		mailbox account password expiration date.
MailboxCulture	**t:MailboxCulture** ([MS-OXWSCDATA] section 2.2.3.6)	Specifies a **SOAP header** that identifies the culture to be used for accessing the mailbox. The cultures are defined in [RFC3066].
RequestVersion	**t:RequestServerVersion** ([MS-OXWSCDATA] section 2.2.3.9)	Specifies a SOAP header that identifies the schema version for the **GetPasswordExpirationDate** operation request.

3.1.4.1.1.2 GetPasswordExpirationDateSoapOut Message

The **GetPasswordExpirationDateSoapOut** **WSDL message** specifies the server response to a **GetPasswordExpirationDate** operation request.

```
<wsdl:message name="GetPasswordExpirationDateSoapOut">
   <wsdl:part name="GetPasswordExpirationDateResult"
element="tns:GetPasswordExpirationDateResponse" />
   <wsdl:part name="ServerVersion" element="t:ServerVersionInfo" />
</wsdl:message>
```

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

The parts of the **GetPasswordExpirationDateSoapOut** WSDL message are listed and described in the following table.

Part name	Element/type	Description
GetPasswordExpirationDateResult	**m:GetPasswordExpirationDateResponse** (section 3.1.4.1.2.2)	Specifies the **SOAP body** of the response that contains the requested password expiration date.
ServerVersion	**t:ServerVersionInfo** ([MS-OXWSCDATA] section 2.2.3.10)	Specifies a **SOAP header** that identifies the server version for the response.

3.1.4.1.2 Elements

The following table summarizes the **XML schema** element definitions that are specific to the **GetPasswordExpirationDate** operation.

Element name	Description
GetPasswordExpirationDate	Specifies the root element in a **GetPasswordExpirationDate** operation request.
GetPasswordExpirationDateResponse	Specifies the root element in the response to a **GetPasswordExpirationDate** operation request.

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3.1.4.1.2.1 m:GetPasswordExpirationDate Element

The **GetPasswordExpirationDate** element specifies the root element in a **GetPasswordExpirationDate** operation request.

```
<xs:element name="GetPasswordExpirationDate" type="m:GetPasswordExpirationDateType" />
```

3.1.4.1.2.2 m:GetPasswordExpirationDateResponse Element

The **GetPasswordExpirationDateResponse** element specifies the root element in the response to a **GetPasswordExpirationDate** operation request.

```
<xs:element name="GetPasswordExpirationDateResponse"
type="m:GetPasswordExpirationDateResponseMessageType"/>
```

3.1.4.1.3 Complex Types

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

Complex type name	Description
GetPasswordExpirationDateType	Specifies the parameters that are used to obtain the password expiration date.
GetPasswordExpirationDateResponseMessageType	Specifies the data to be returned in the response.

3.1.4.1.3.1 m:GetPasswordExpirationDateType Complex Type

The **GetPasswordExpirationDateType** complex type specifies the parameters that are used to obtain the password expiration date. The **GetPasswordExpirationDateType** complex type extends the **BaseRequestType** complex type, as specified in [MS-OXWSCDATA] section 2.2.4.17.

```
<xs:complexType name="GetPasswordExpirationDateType">
   <xs:complexContent>
      <xs:extension base="m:BaseRequestType">
         <xs:sequence>
            <xs:element name="MailboxSmtpAddress" type="xs:string" minOccurs="0"
maxOccurs="1"/>
         </xs:sequence>
      </xs:extension>
   </xs:complexContent>
</xs:complexType>
```

The following table lists and describes the child element of the **GetPasswordExpirationDateType** complex type.

Element name	Type	Description
MailboxSmtpAddress	**xs:string** [XMLSCHEMA2]	Specifies the **email address** of the **mailbox** account for which password expiration information will be returned. If it is present, it MUST appear only once. If it is empty or

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Element name	Type	Description
		omitted, the email address of the logged on user is used.

3.1.4.1.3.2 m:GetPasswordExpirationDateResponseMessageType

The **GetPasswordExpirationDateResponseMessageType** complex type specifies the password expiration date information returned in a **GetPasswordExpirationDate** operation response. The **GetPasswordExpirationDateResponseMessageType** complex type extends the **ResponseMessageType** complex type, as specified in [MS-OXWSCDATA] section 2.2.4.65.

```
<xs:complexType name="GetPasswordExpirationDateResponseMessageType">
   <xs:complexContent>
      <xs:extension base="m:ResponseMessageType">
         <xs:sequence>
            <xs:element name="PasswordExpirationDate" type="xs:dateTime"/>
         </xs:sequence>
      </xs:extension>
   </xs:complexContent>
</xs:complexType>
```

The following table lists and describes the child element of the **GetPasswordExpirationDateResponseMessageType** complex type.

Element name	Type	Description
PasswordExpirationDate	**xs:dateTime** [XMLSCHEMA2]	Specifies the password expiration date for a **mailbox** account. This element MUST be present, and it MUST appear only once.

3.1.4.1.4 Simple Types

None.

3.1.4.1.5 Attributes

None.

3.1.4.1.6 Groups

None.

3.1.4.1.7 Attribute Groups

None.

3.1.5 Timer Events

None.

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3.1.6 Other Local Events

None.

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4 Protocol Examples

4.1 GetPasswordExpirationDate Request

The following XML example is a request to the **GetPasswordExpirationDate** operation, as described in section 3.1.4.1.

```
<soap:Envelope xmlns:soap="http://schemas.xmlsoap.org/soap/envelope/"
               xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
               xmlns:m="http://schemas.microsoft.com/exchange/services/2006/messages"
               xmlns:t="http://schemas.microsoft.com/exchange/services/2006/types">
  <soap:Header>
  </soap:Header>
  <soap:Body>
    <tns:GetPasswordExpirationDate>
      <tns:MailboxSmtpAddress>user1@contoso.com</tns:MailboxSmtpAddress>
    </tns:GetPasswordExpirationDate>
  </soap:Body>
</soap:Envelope>
```


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5 Security

5.1 Security Considerations for Implementers

None.

5.2 Index of Security Parameters

None.

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6 Appendix A: Full WSDL

The **XML** files that are listed in the following table are required in order to implement the functionality specified in this document.

File name	Description	Section
MS-OXWSPED.wsdl	Contains the **WSDL** for the implementation of this protocol.	6
MS-OXWSPED-messages.xsd	Contains the **XML schema** type definitions that are used in this protocol.	7

These files have to be placed in a common folder in order for the WSDL to validate and operate. Also, any schema files that are included in or imported into the MS-OXWSPED-messages.xsd schema have to be placed in the common folder with these files.

This section contains the contents of the MS-OXWSPED.wsdl file.

```
<?xml version="1.0" encoding="UTF-8"?>
<wsdl:definitions xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/"
xmlns:soap="http://schemas.xmlsoap.org/wsdl/soap/"
xmlns:t="http://schemas.microsoft.com/exchange/services/2006/types"
xmlns:tns="http://schemas.microsoft.com/exchange/services/2006/messages"
targetNamespace="http://schemas.microsoft.com/exchange/services/2006/messages">
   <wsdl:types>
   <xs:schema id="messages" elementFormDefault="qualified" version="Exchange2016"
      xmlns:t="http://schemas.microsoft.com/exchange/services/2006/tpes"
      xmlns:xs="http://www.w3.org/2001/XMLSchema"
      targetNamespace="http://schemas.microsoft.com/exchange/services/2006/messages">
         <xs:include schemaLocation="MS-OXWSPED-messages.xsd" />
      </xs:schema>
</wsdl:types>
   <wsdl:message name="GetPasswordExpirationDateSoapIn">
      <wsdl:part name="request" element="tns:GetPasswordExpirationDate"/>
      <wsdl:part name="MailboxCulture" element="t:MailboxCulture" />
      <wsdl:part name="RequestVersion" element="t:RequestServerVersion" />
   </wsdl:message>
   <wsdl:message name="GetPasswordExpirationDateSoapOut">
      <wsdl:part name="GetPasswordExpirationDateResult"
element="tns:GetPasswordExpirationDateResponse" />
      <wsdl:part name="ServerVersion" element="t:ServerVersionInfo" />
   </wsdl:message>

   <wsdl:portType name="ExchangeServicePortType">
        <wsdl:operation name="GetPasswordExpirationDate">
          <wsdl:input message="tns:GetPasswordExpirationDateSoapIn" />
          <wsdl:output message="tns:GetPasswordExpirationDateSoapOut" />
        </wsdl:operation>
   </wsdl:portType>
  <wsdl:binding name="ExchangeServiceBinding" type="tns:ExchangeServicePortType">
    <wsdl:documentation>
      <wsi:Claim conformsTo="http://ws-i.org/profiles/basic/1.0" xmlns:wsi="http://ws-
i.org/schemas/conformanceClaim/" />
    </wsdl:documentation>
    <soap:binding transport="http://schemas.xmlsoap.org/soap/http" style="document" />
         <wsdl:operation name="GetPasswordExpirationDate">
        <soap:operation
soapAction="http://schemas.microsoft.com/exchange/services/2006/messages/GetPasswordExpiratio
nDate" />
        <wsdl:input>
          <soap:header message="tns:GetPasswordExpirationDateSoapIn" part="MailboxCulture"
use="literal"/>
          <soap:header message="tns:GetPasswordExpirationDateSoapIn" part="RequestVersion"
use="literal"/>
          <soap:body parts="request" use="literal" />
```


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```
        </wsdl:input>
        <wsdl:output>
          <soap:body parts="GetPasswordExpirationDateResult" use="literal" />
          <soap:header message="tns:GetPasswordExpirationDateSoapOut" part="ServerVersion"
use="literal"/>
        </wsdl:output>
      </wsdl:operation>
  </wsdl:binding>
</wsdl:definitions>
```


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7 Appendix B: Full XML Schema

For ease of implementation, this section includes the full XML schema for this protocol.

This file has to be placed in a common folder in order for the WSDL to validate and operate.

This schema includes the file listed in the following table. To operate correctly, this file has to be present in the folder that contains the WSDL and schema file for this protocol.

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

```
<?xml version="1.0" encoding="UTF-8"?>
<xs:schema xmlns:m="http://schemas.microsoft.com/exchange/services/2006/messages"
xmlns:t="http://schemas.microsoft.com/exchange/services/2006/types"
xmlns:xs="http://www.w3.org/2001/XMLSchema"
targetNamespace="http://schemas.microsoft.com/exchange/services/2006/messages"
elementFormDefault="qualified" version="Exchange2016" id="messages">
   <xs:include schemaLocation="MS-OXWSCDATA-messages.xsd"/>
   <xs:complexType name="GetPasswordExpirationDateType">
      <xs:complexContent>
         <xs:extension base="m:BaseRequestType">
            <xs:sequence>
               <xs:element name="MailboxSmtpAddress" type="xs:string" minOccurs="0"
maxOccurs="1"/>
            </xs:sequence>
         </xs:extension>
      </xs:complexContent>
   </xs:complexType>

   <xs:element name="GetPasswordExpirationDate" type="m:GetPasswordExpirationDateType" />

   <xs:complexType name="GetPasswordExpirationDateResponseMessageType">
      <xs:complexContent>
         <xs:extension base="m:ResponseMessageType">
            <xs:sequence>
               <xs:element name="PasswordExpirationDate" type="xs:dateTime"/>
            </xs:sequence>
         </xs:extension>
      </xs:complexContent>
   </xs:complexType>

   <xs:element name="GetPasswordExpirationDateResponse"
type="m:GetPasswordExpirationDateResponseMessageType"/>
</xs:schema>
```


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8 Appendix C: Product Behavior

The information in this specification is applicable to the following Microsoft products or supplemental software. References to product versions include updates to those products.

- Microsoft Exchange Server 2010 Service Pack 2 (SP2)
- Microsoft Exchange Server 2013
- Microsoft Exchange Server 2016
- Microsoft Exchange Server 2019

Exceptions, if any, are noted in this section. If an update version, service pack or Knowledge Base (KB) number appears with a product name, the behavior changed in that update. The new behavior also applies to subsequent updates unless otherwise specified. If a product edition appears with the product version, behavior is different in that product edition.

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

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9 Change Tracking

No table of changes is available. The document is either new or has had no changes since its last release.

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