[MS-OXWSEDISC]:

Electronic Discovery (eDiscovery) Web Service Protocol

development obligations or any other costs as a result of relying on this preliminary documentation, you do so at your own risk.

Revision Summary

Date	Revision History	Revision Class	Comments
7/16/2012	0.1	New	Released new document.
10/8/2012	1.0	Major	Significantly changed the technical content.
2/11/2013	2.0	Major	Significantly changed the technical content.
7/26/2013	2.0	No Change	No changes to the meaning, language, or formatting of the technical content.
11/18/2013	2.0	No Change	No changes to the meaning, language, or formatting of the technical content.
2/10/2014	2.0	No Change	No changes to the meaning, language, or formatting of the technical content.
4/30/2014	2.1	Minor	Clarified the meaning of the technical content.
7/31/2014	2.2	Minor	Clarified the meaning of the technical content.
10/30/2014	2.3	Minor	Clarified the meaning of the technical content.
5/26/2015	3.0	Major	Significantly changed the technical content.

Table of Contents

1 Introduction

The Electronic Discovery (eDiscovery) Web Service Protocol enables clients to use a **web service** to implement legal compliance holds, get user hold settings, and search for **mailboxes**.

Sections 1.8, 2, and 3 of this specification are normative and can contain the terms MAY, SHOULD, MUST, MUST NOT, and SHOULD NOT as defined in [RFC2119]. Sections 1.5 and 1.9 are also normative but do not contain those terms. All other sections and examples in this specification are informative.

1.1 Glossary

The following terms are specific to this document:

display name: A text string that is used to identify a principal or other object in the user interface. Also referred to as title.

distinguished name (DN): In the Active Directory directory service, the unique identifier of an object in Active Directory, as described in [MS-ADTS] and [RFC2251].

distribution list: A collection of users, computers, contacts, or other groups that is used only for email distribution, and addressed as a single recipient.

electronic discovery (eDiscovery): A type of legal discovery that focuses on electronic (computer) communications and files.

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.

globally unique identifier (GUID): A term used interchangeably with universally unique identifier (UUID) in Microsoft protocol technical documents (TDs). Interchanging the usage of these terms does not imply or require a specific algorithm or mechanism to generate the value. Specifically, the use of this term does not imply or require that the algorithms described in [RFC4122] or [C706] must be used for generating the **GUID**. See also universally unique identifier (UUID).

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 over Secure Sockets Layer (HTTPS): An extension of **HTTP** that securely encrypts and decrypts webpage requests.

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

recipient: An entity that can receive email messages.

Simple Mail Transfer Protocol (SMTP): A member of the TCP/IP suite of protocols that is used to transport Internet messages, as described in [RFC5321].

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.

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 service: A unit of application logic that provides data and services to other applications and can be called by using standard Internet transport protocols such as **HTTP**, **Simple Mail Transfer Protocol (SMTP)**, or File Transfer Protocol (FTP). Web services can perform functions that range from simple requests to complicated business processes.

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. 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 operation: A single action or function of a web service. The execution of a WSDL operation typically requires the exchange of messages between the service requestor and the service provider.

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

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".

[MS-OXWSCORE] Microsoft Corporation, "Core Items Web Service Protocol".

[MS-OXWSMSHR] Microsoft Corporation, "Folder Sharing Web Service Protocol".

[MS-OXWSSRCH] Microsoft Corporation, "Mailbox Search Web Service Protocol".

[MS-OXWSXPROP] Microsoft Corporation, "Extended Properties Structure".

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

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

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

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

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

[WSIBASIC] Ballinger, K., Ehnebuske, D., Gudgin, M., et al., Eds., "Basic Profile Version 1.0", Final Material, April 2004, http://www.ws-i.org/Profiles/BasicProfile-1.0-2004-04-16.html

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

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

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

1.2.2 Informative References

[MS-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".

[MS-OXWSGNI] Microsoft Corporation, "Nonindexable Item Web Service Protocol".

1.3 Overview

The eDiscovery Web Service Protocol is a federated query web service that enables external applications to query mailbox data.

Discovery consists of several phases, including identifying and preserving key data, reducing the amount of data, reviewing the data, and producing data in court. **Electronic discovery (eDiscovery)** queries facilitate the discovery process by providing a single discovery workflow.

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

This protocol uses SOAP over **HTTP**, as described in [RFC2616], and SOAP over **HTTPS**, as described in [RFC2818], as shown in the following layering diagram.
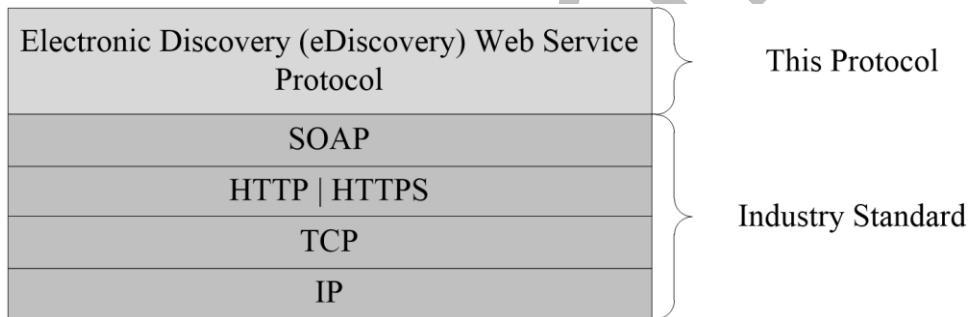
Figure 1: This protocol in relation to other protocols

The Nonindexable Item Web Service Protocol, as described in [MS-OXWSGNI], uses the mailbox search and mailbox hold information provided by this protocol.

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

1.5 Prerequisites/Preconditions

The operations that this protocol defines cannot be accessed unless the correct endpoint is identified in the HTTP web requests that target this protocol. This endpoint **URL** is returned by either the Autodiscover Publishing Lookup SOAP-Based Web Service Protocol, as specified in [MS-OXWSADISC], or the Autodiscover Publishing and Lookup Protocol, as specified in [MS-OXDSCLI].

1.6 Applicability Statement

This protocol is applicable to environments that use web services to implement electronic discovery from a user's mailbox. This protocol is applicable to all SOAP-based clients, as described in [SOAP1.1].

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 **RequestServerVersion** element, as described in [MS-OXWSCDATA] section 2.2.4.7, identifies the **Web Services Description Language (WSDL)** version of the request. The **ServerVersionInfo** element, as described in [MS-OXWSCDATA] section 2.2.4.8, identifies the version of the server responding to the request.

- **Security and Authentication Methods**: This protocol relies on the **web server** that is hosting it to perform authentication.

- **Localization**: This protocol includes date and time formats in various elements, as specified in section 3.1.4.

- **Capability Negotiation**: This protocol does not support version negotiation.

1.8 Vendor-Extensible Fields

None.

1.9 Standards Assignments

None.

2 Messages

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

2.1   Transport

This protocol uses the Simple Object Access Protocol (SOAP) 1.1, as specified in [SOAP1.1].

This protocol MUST support SOAP over HTTP, as specified in [RFC2616]. The protocol SHOULD use secure communications by means of HTTPS, as defined 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 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
m	http://schemas.microsoft.com/exchange/services/2006/messages	
soap	http://schemas.xmlsoap.org/wsdl/soap/	[SOAP1.1]
t	http://schemas.microsoft.com/exchange/services/2006/types	
wsdl	http://schemas.xmlsoap.org/wsdl/	[WSDL]
wsi	http://ws-i.org/schemas/conformanceClaim/	[WSIBASIC]
xs	http://www.w3.org/2001/XMLSchema	[XMLSCHEMA1] [XMLSCHEMA2]

2.2.2   Messages

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

2.2.3   Elements

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

2.2.4 Complex Types

The following table summarizes the set of common XML schema complex type definitions defined by this specification. XML schema complex type definitions that are specific to a particular operation are described with the operation.

Complex type	Description
ArrayOfFailedSearchMailboxesType	The **ArrayOfFailedSearchMailboxesType** complex type specifies an array of failed searches.
ArrayOfMailboxHoldStatusType	The **ArrayOfMailboxHoldStatusType** complex type specifies an array of mailbox hold statuses.
ArrayOfSearchableMailboxesType	The **ArrayOfSearchableMailboxesType** complex type specifies an array of mailbox entities returned from the **GetSearchableMailboxes** operation.
FailedSearchMailboxType	The **FailedSearchMailboxType** complex type represents a failed search of a mailbox.
MailboxHoldResultType	The **MailboxHoldResultType** complex type specifies the result of a mailbox hold.
MailboxHoldStatusType	The **MailboxHoldStatusType** complex type specifies the status of a mailbox hold.
MailboxStatisticsSearchResultType	The **MailboxStatisticsSearchResultType** complex type specifies the results of a mailbox statistics search.
SearchableMailboxType	The **SearchableMailboxType** complex type specifies the mailbox entity returned from the **GetSearchableMailboxes** operation specified in section 3.1.4.3.

2.2.4.1 ArrayOfFailedSearchMailboxesType

Namespace: http://schemas.microsoft.com/exchange/services/2006/types

The **ArrayOfFailedSearchMailboxesType** complex type specifies an array of failed searches.

```
<xs:complexType name="ArrayOfFailedSearchMailboxesType"
xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="unbounded" name="FailedMailbox"
type="t:FailedSearchMailboxType"/>
  </xs:sequence>
</xs:complexType>
```

FailedMailbox: An element of type **FailedSearchMailboxType**, as defined in section 2.2.4.4, that specifies a failed search.

2.2.4.2 ArrayOfMailboxHoldStatusType

Namespace: http://schemas.microsoft.com/exchange/services/2006/types

The **ArrayOfMailboxHoldStatusType** complex type specifies an array of mailbox hold statuses.

```
<xs:complexType name="ArrayOfMailboxHoldStatusType"
xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="unbounded" name="MailboxHoldStatus"
type="t:MailboxHoldStatusType"/>
  </xs:sequence>
</xs:complexType>
```

MailboxHoldStatus: An element of type **MailboxHoldStatusType**, as defined in section 2.2.4.6, that specifies the hold status of the mailbox.

2.2.4.3 ArrayOfSearchableMailboxesType

Namespace: http://schemas.microsoft.com/exchange/services/2006/types

The **ArrayOfSearchableMailboxesType** complex type specifies an array of mailbox entities returned from the **GetSearchableMailboxes** operation.

```
<xs:complexType name="ArrayOfSearchableMailboxesType"
xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="unbounded" name="SearchableMailbox"
type="t:SearchableMailboxType"/>
  </xs:sequence>
</xs:complexType>
```

SearchableMailbox: An element of type **SearchableMailboxType**, as defined in section 2.2.4.8, that represents the **distribution list** or mailbox entity returned from the **GetSearchableMailboxes** operation.

2.2.4.4 FailedSearchMailboxType

Namespace: http://schemas.microsoft.com/exchange/services/2006/types

The **FailedSearchMailboxType** complex type represents a failed search of a mailbox.

```
<xs:complexType name="FailedSearchMailboxType" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="1" maxOccurs="1" name="Mailbox" type="xs:string"/>
    <xs:element minOccurs="1" maxOccurs="1" name="ErrorCode" type="xs:int"/>
    <xs:element minOccurs="1" maxOccurs="1" name="ErrorMessage" type="xs:string"/>
    <xs:element minOccurs="1" maxOccurs="1" name="IsArchive" type="xs:boolean"/>
  </xs:sequence>
</xs:complexType>
```

Mailbox: An element of type **string**, as defined in [XMLSCHEMA2] section 3.2.1, that contains an identifier for the mailbox.

ErrorCode: An element of type **int**, as defined in [XMLSCHEMA2] section 3.3.17, that contains the error code of the failed search.<1>

ErrorMessage: An element of type **string** that contains the error message of the failed search.

IsArchive: An element of type **boolean**, as defined in [XMLSCHEMA2] section 3.2.2, that indicates whether the mailbox is an archive mailbox.

2.2.4.5 MailboxHoldResultType

Namespace: http://schemas.microsoft.com/exchange/services/2006/types

The **MailboxHoldResultType** complex type specifies the result of a mailbox hold.

```
<xs:complexType name="MailboxHoldResultType" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element name="HoldId" type="xs:string"/>
    <xs:element minOccurs="0" name="Query" type="xs:string"/>
    <xs:element name="MailboxHoldStatuses" type="t:ArrayOfMailboxHoldStatusType"/>
  </xs:sequence>
</xs:complexType>
```

HoldId: An element of type **string**, as defined in [XMLSCHEMA2] 3.2.1, that represents the hold identifier.

Query: An element of type **string** that represents a search query.

MailboxHoldStatuses: An element of type **ArrayOfMailboxHoldStatusType**, as defined in section 2.2.4.2, that contains an array of mailbox hold statuses.

2.2.4.6 MailboxHoldStatusType

Namespace: http://schemas.microsoft.com/exchange/services/2006/types

The **MailboxHoldStatusType** complex type specifies the status of a mailbox hold.

```
<xs:complexType name="MailboxHoldStatusType" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="1" maxOccurs="1" name="Mailbox" type="xs:string"/>
    <xs:element minOccurs="1" maxOccurs="1" name="Status" type="t:HoldStatusType"/>
    <xs:element minOccurs="0" maxOccurs="1" name="AdditionalInfo" type="xs:string"/>
  </xs:sequence>
</xs:complexType>
```

Mailbox: An element of type **string**, as defined in [XMLSCHEMA2] section 3.2.1., that contains an identifier for the mailbox.

Status: An element of type **HoldStatusType**, as defined in section 2.2.5.1, that contains the hold status for a mailbox.

AdditionalInfo: An element of type **string** that represents additional information.

2.2.4.7 MailboxStatisticsSearchResultType

Namespace: http://schemas.microsoft.com/exchange/services/2006/types

The **MailboxStatisticsSearchResultType** complex type specifies the results of a mailbox statistics search.

```
<xs:complexType name="MailboxStatisticsSearchResultType"
xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="1" maxOccurs="1" name="UserMailbox" type="t:UserMailboxType"/>
    <xs:element minOccurs="0" maxOccurs="1" name="KeywordStatisticsSearchResult"
type="t:KeywordStatisticsSearchResultType"/>
  </xs:sequence>
```

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

UserMailbox: An element of type **t:UserMailboxType**, as defined in, that specifies the user mailbox..

KeywordStatisticsSearchResult: An element of type **KeywordStatisticsSearchResultType**, as defined in section 3.1.4.4.3.12, that specifies a keyword statistics search result.

2.2.4.8 SearchableMailboxType

Namespace: http://schemas.microsoft.com/exchange/services/2006/types

The **SearchableMailboxType** complex type specifies the mailbox entity returned from the **GetSearchableMailboxes** operation specified in section 3.1.4.3.

```
<xs:complexType name="SearchableMailboxType" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="1" maxOccurs="1" name="Guid" type="t:GuidType"/>
    <xs:element minOccurs="1" maxOccurs="1" name="PrimarySmtpAddress" type="xs:string"/>
    <xs:element minOccurs="1" maxOccurs="1" name="IsExternalMailbox" type="xs:boolean"/>
    <xs:element minOccurs="1" maxOccurs="1" name="ExternalEmailAddress" type="xs:string"/>
    <xs:element minOccurs="1" maxOccurs="1" name="DisplayName" type="xs:string"/>
    <xs:element minOccurs="1" maxOccurs="1" name="IsMembershipGroup" type="xs:boolean"/>
    <xs:element minOccurs="1" maxOccurs="1" name="ReferenceId" type="xs:string"/>
  </xs:sequence>
</xs:complexType>
```

Guid: An element of type **GuidType**, as defined in [MS-OXWSXPROP] section 2.1.7, that contains the **GUID** of the mailbox.

PrimarySmtpAddress: An element of type **string**, as defined in [XMLSCHEMA2] section 3.2.1, that represents the primary **Simple Mail Transfer Protocol (SMTP)** address of the mailbox.

IsExternalMailbox: An element of type **boolean**, as defined in [XMLSCHEMA2] section 3.2.2, that indicates whether the mailbox is an external mailbox.

ExternalEmailAddress: An element of type **string** that contains the external **email address** of the mailbox.

DisplayName: An element of type **string** that specifies the name of the mailbox.

IsMembershipGroup: An element of type **boolean** that indicates whether the entity is a mailbox or a distribution list. True indicates a distribution list; otherwise, false.

ReferenceId: An element of type **string** that contains the reference identifier for the mailbox.

2.2.5 Simple Types

The following table summarizes the set of common XML schema simple type definitions defined by this specification. XML schema simple type definitions that are specific to a particular operation are described with the operation.

Simple type	Description
HoldStatusType	The **HoldStatusType** simple type specifies the hold status.

2.2.5.1 HoldStatusType

Namespace: http://schemas.microsoft.com/exchange/services/2006/types

The **HoldStatusType** simple type specifies the hold status.

```
<xs:simpleType name="HoldStatusType" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:restriction base="xs:string">
    <xs:enumeration value="NotOnHold"/>
    <xs:enumeration value="Pending"/>
    <xs:enumeration value="OnHold"/>
    <xs:enumeration value="PartialHold"/>
    <xs:enumeration value="Failed"/>
  </xs:restriction>
</xs:simpleType>
```

The following table specifies the allowable values for the **HoldStatusType** simple type.

Value	Meaning
NotOnHold	The mailbox is not on hold.
Pending	Placing or releasing a hold is in progress.
OnHold	The hold was successfully applied to the mailbox.
PartialHold	The hold was successfully applied to some mailboxes but not to all mailboxes.
Failed	The hold failed to apply to the mailbox.

2.2.6 Attributes

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

2.2.7 Groups

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

2.2.8 Attribute Groups

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

3   Protocol Details

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

In the following sections, the schema definition might be less restrictive than the processing rules imposed by the protocol. The WSDL in this specification matches the WSDL that shipped with the product and provides a base description of the schema. The text that introduces the WSDL specifies additional restrictions that reflect actual Microsoft product 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 and present.

3.1   ExchangeServicePortType Server Details

This protocol defines a single WSDL port type, the ExchangeServicePortType, and a set of operations that enable clients to perform eDiscovery searches of mailboxes and to get and set holds on mailboxes.

3.1.1   Abstract Data Model

None.

3.1.2   Timers

None.

3.1.3   Initialization

None.

3.1.4   Message Processing Events and Sequencing Rules

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

Operation	Description
GetDiscoverySearchConfiguration	The **GetDiscoverySearchConfiguration** operation retrieves a search configuration for eDiscovery.
GetHoldOnMailboxes	The **GetHoldOnMailboxes** operation retrieves the status of a query-based hold, which is set by using the **SetHoldOnMailboxes** operation, as specified in section 3.1.4.5. A query-based hold is used to preserve items based on specified query parameters.
GetSearchableMailboxes	The **GetSearchableMailboxes** operation retrieves a list of mailboxes on which the client has permission to search or to perform eDiscovery.
SearchMailboxes	The **SearchMailboxes** operation searches for items in the specified mailboxes that match query keywords.
SetHoldOnMailboxes	The **SetHoldOnMailboxes** operation sets a query-based hold on mailboxes.

3.1.4.1 GetDiscoverySearchConfiguration

The **GetDiscoverySearchConfiguration** operation retrieves a search configuration for eDiscovery.

The following is the WSDL port type specification of the **GetDiscoverySearchConfiguration WSDL operation**.

```
<wsdl:operation name="GetDiscoverySearchConfiguration"
xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input message="m:GetDiscoverySearchConfigurationSoapIn"/>
  <wsdl:output message="m:GetDiscoverySearchConfigurationSoapOut"/>
</wsdl:operation>
```

The following is the WSDL binding specification of the **GetDiscoverySearchConfiguration** operation.

```
<wsdl:operation name="GetDiscoverySearchConfiguration"
xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <soap:operation
soapAction="http://schemas.microsoft.com/exchange/services/2006/messages/GetDiscoverySearchCo
nfiguration" xmlns:soap="http://schemas.xmlsoap.org/wsdl/soap/"/>
  <wsdl:input>
    <soap:header message="m:GetDiscoverySearchConfigurationSoapIn" part="RequestVersion"
use="literal" xmlns:soap="http://schemas.xmlsoap.org/wsdl/soap/"/>
    <soap:header message="m:GetDiscoverySearchConfigurationSoapIn" part="ManagementRole"
use="literal" xmlns:soap="http://schemas.xmlsoap.org/wsdl/soap/"/>
    <soap:body use="literal" parts="request"
xmlns:soap="http://schemas.xmlsoap.org/wsdl/soap/"/>
  </wsdl:input>
  <wsdl:output>
    <soap:body use="literal" parts="GetDiscoverySearchConfigurationResult"
xmlns:soap="http://schemas.xmlsoap.org/wsdl/soap/"/>
    <soap:header message="m:GetDiscoverySearchConfigurationSoapOut" part="ServerVersion"
use="literal" xmlns:soap="http://schemas.xmlsoap.org/wsdl/soap/"/>
  </wsdl:output>
</wsdl:operation>
```

The client sends a **GetDiscoverySearchConfigurationSoapIn** request WSDL message, as specified in section 3.1.4.1.1.1, and the server responds with a **GetDiscoverySearchConfigurationSoapOut** response, as specified in section 3.1.4.1.1.2.

3.1.4.1.1 Messages

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

Message	Description
GetDiscoverySearchConfigurationSoapIn	Specifies the request to retrieve the search configuration.
GetDiscoverySearchConfigurationSoapOut	Specifies the response to the **GetDiscoverySearchConfigurationSoapIn** request message (section 3.1.4.1.1.1).

3.1.4.1.1.1 GetDiscoverySearchConfigurationSoapIn

The **GetDiscoverySearchConfigurationSoapIn** WSDL message specifies the request to retrieve the search configuration.

The following is the **GetDiscoverySearchConfigurationSoapIn** WSDL message specification.

```
<wsdl:message name="GetDiscoverySearchConfigurationSoapIn"
xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:part name="request" element="m:GetDiscoverySearchConfiguration"/>
  <wsdl:part name="RequestVersion" element="t:RequestServerVersion"/>
  <wsdl:part name="ManagementRole" element="t:ManagementRole"/>
</wsdl:message>
```

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

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

Part name	Element/type	Description
request	**GetDiscoverySearchConfiguration**	Specifies the **SOAP body** of the request for the search configuration.
RequestVersion	**RequestServerVersion** ([MS-OXWSCDATA] section 2.2.3.11)	Specifies a **SOAP header** that identifies the schema version for the **GetDiscoverySearchConfigurationSoapIn** WSDL message**.**
ManagementRole	**ManagementRole** ([MS-OXWSCDATA] section 2.2.3.8)	Specifies a SOAP header that identifies a user or application role.

3.1.4.1.1.2   GetDiscoverySearchConfigurationSoapOut

The **GetDiscoverySearchConfigurationSoapOut** WSDL message specifies the response to the **GetDiscoverySearchConfigurationSoapIn** request message specified in section 3.1.4.1.1.1.

The following is the **GetDiscoverySearchConfigurationSoapOut** WSDL message specification.

```
<wsdl:message name="GetDiscoverySearchConfigurationSoapOut"
xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:part name="GetDiscoverySearchConfigurationResult"
element="m:GetDiscoverySearchConfigurationResponse"/>
  <wsdl:part name="ServerVersion" element="t:ServerVersionInfo"/>
</wsdl:message>
```

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

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

Part name	Element/type	Description
GetDiscoverySearchConfigurationResult	**GetDiscoverySearchConfigurationResponse**	Specifies the SOAP body of the response

Part name	Element/type	Description
		that contains the requested configuration.
ServerVersion	**ServerVersionInfo** ([MS-OXWSCDATA] section 2.2.3.12)	Specifies a SOAP header that identifies the server version for the response.

A successful **GetDiscoverySearchConfiguration** request, as specified in section 3.1.4.1.2.1 returns a **GetDiscoverySearchConfigurationResponse** element with the **ResponseClass** (as specified in [MS-OXWSCDATA] section 2.2.4.65) attribute set to "Success". The **ResponseCode** (as specified in [MS-OXWSCDATA] section 2.2.4.65) element of the **GetDiscoverySearchConfigurationResponse** element is set to "NoError".

If the **GetDiscoverySearchConfiguration** request is not successful, it returns a **GetDiscoverySearchConfigurationResponse** element with the **ResponseClass** (as specified in [MS-OXWSCDATA] section 2.2.4.65) attribute set to "Error". The **ResponseCode** (as specified in [MS-OXWSCDATA] section 2.2.4.65) element of the **GetDiscoverySearchConfigurationResponse** element is set to one of the common errors defined in [MS-OXWSCDATA] section 2.2.5.24.

3.1.4.1.2 Elements

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

Element	Description
GetDiscoverySearchConfiguration	The input data for the **GetDiscoverySearchConfiguration** WSDL operation.
GetDiscoverySearchConfigurationResponse	The result data for the **GetDiscoverySearchConfiguration** WSDL operation.

3.1.4.1.2.1   GetDiscoverySearchConfiguration

The **GetDiscoverySearchConfiguration** element specifies the input data for the **GetDiscoverySearchConfiguration** WSDL operation.

```
<xs:element name="GetDiscoverySearchConfiguration"
type="m:GetDiscoverySearchConfigurationType" xmlns:xs="http://www.w3.org/2001/XMLSchema"/>
```

3.1.4.1.2.2   GetDiscoverySearchConfigurationResponse

The **GetDiscoverySearchConfigurationResponse** element specifies the result data for the **GetDiscoverySearchConfiguration** WSDL operation.

```
<xs:element name="GetDiscoverySearchConfigurationResponse"
type="m:GetDiscoverySearchConfigurationResponseMessageType"
xmlns:xs="http://www.w3.org/2001/XMLSchema"/>
```

3.1.4.1.3 Complex Types

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

Complex type	Description
ArrayOfDiscoverySearchConfigurationType	Specifies an array of **DiscoverySearchConfigurationType** complex types (section 3.1.4.1.3.4) returned from the **GetDiscoverySearchConfiguration** operation.
DiscoverySearchConfigurationType	Specifies the search configuration returned from the **GetDiscoverySearchConfiguration** operation.
GetDiscoverySearchConfigurationResponseMessageType	Specifies the response message for a **GetDiscoverySearchConfiguration** operation (section 3.1.4.1).
GetDiscoverySearchConfigurationType	Specifies a request to retrieve the search configuration.

3.1.4.1.3.1 GetDiscoverySearchConfigurationType

Namespace: http://schemas.microsoft.com/exchange/services/2006/messages

The **GetDiscoverySearchConfigurationType** complex type specifies a request to retrieve the search configuration. This type extends the **BaseRequestType** complex type, as described in [MS-OXWSCDATA] section 2.2.4.17.

```
<xs:complexType name="GetDiscoverySearchConfigurationType"
xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexContent mixed="false">
    <xs:extension base="m:BaseRequestType">
      <xs:sequence>
        <xs:element minOccurs="0" name="SearchId" type="xs:string"/>
        <xs:element minOccurs="0" name="ExpandGroupMembership" type="xs:boolean"/>
        <xs:element minOccurs="0" name="InPlaceHoldConfigurationOnly" type="xs:boolean"/>
      </xs:sequence>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>
```

SearchId: An element of type **string**, as defined in [XMLSCHEMA2] section 3.2.1, that represents the identifier of the search.

ExpandGroupMembership: An element of type **boolean**, as defined in [XMLSCHEMA2] section 3.2.2, that specifies whether to expand the group membership. The value "true" specifies extending the group membership.

InPlaceHoldConfigurationOnly: An element of type **boolean** that specifies whether to include the in-place hold configuration. An in-place hold preserves all mailbox content, including deleted items and original versions of modified items. The value "true" specifies that the in-place hold configuration is included.

3.1.4.1.3.2   GetDiscoverySearchConfigurationResponseMessageType

Namespace: http://schemas.microsoft.com/exchange/services/2006/messages

The **GetDiscoverySearchConfigurationResponseMessageType** complex type specifies the response message for a **GetDiscoverySearchConfiguration** operation, as specified in section 3.1.4.1. This type extends the **ResponseMessageType** complex type, as specified by [MS-OXWSCDATA] section 2.2.4.65.

```
<xs:complexType name="GetDiscoverySearchConfigurationResponseMessageType"
xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexContent mixed="false">
    <xs:extension base="m:ResponseMessageType">
      <xs:sequence>
        <xs:element name="DiscoverySearchConfigurations"
type="t:ArrayOfDiscoverySearchConfigurationType"/>
      </xs:sequence>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>
```

DiscoverySearchConfigurations: An element of type **ArrayOfDiscoverySearchConfigurationType**, as defined in section 3.1.4.1.3.3, that contains an array of search configurations.

3.1.4.1.3.3   ArrayOfDiscoverySearchConfigurationType

Namespace: http://schemas.microsoft.com/exchange/services/2006/types

The **ArrayOfDiscoverySearchConfigurationType** complex type specifies an array of **DiscoverySearchConfigurationType** complex types, as specified in section 3.1.4.1.3.4, returned from the **GetDiscoverySearchConfiguration** operation specified in section 3.1.4.1.

```
<xs:complexType name="ArrayOfDiscoverySearchConfigurationType"
xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="unbounded" name="DiscoverySearchConfiguration"
type="t:DiscoverySearchConfigurationType"/>
  </xs:sequence>
</xs:complexType>
```

DiscoverySearchConfiguration: An element of type **DiscoverySearchConfigurationType**, as defined in section 3.1.4.1.3.4, that represents the search configuration returned from the **GetDiscoverySearchConfiguration** operation specified in section 3.1.4.1.

3.1.4.1.3.4   DiscoverySearchConfigurationType

Namespace: http://schemas.microsoft.com/exchange/services/2006/types

The **DiscoverySearchConfigurationType** complex type specifies the search configuration returned from the **GetDiscoverySearchConfiguration** operation specified in section 3.1.4.1.

```
<xs:complexType name="DiscoverySearchConfigurationType"
xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="1" maxOccurs="1" name="SearchId" type="xs:string"/>
    <xs:element minOccurs="1" maxOccurs="1" name="SearchQuery" type="xs:string"/>
    <xs:element minOccurs="0" maxOccurs="1" name="SearchableMailboxes"
type="t:ArrayOfSearchableMailboxesType"/>
    <xs:element minOccurs="0" maxOccurs="1" name="InPlaceHoldIdentity" type="xs:string"/>
    <xs:element minOccurs="0" maxOccurs="1" name="ManagedByOrganization" type="xs:string"/>
    <xs:element minOccurs="0" maxOccurs="1" name="Language" type="xs:string"/>
  </xs:sequence>
</xs:complexType>
```

SearchId: An element of type **string**, as defined in [XMLSCHEMA2] section 3.2.1, that represents the search identifier.

SearchQuery: An element of type **string** that represents the search query.

SearchableMailboxes: An element of type **ArrayOfSearchableMailboxesType**, as defined in section 2.2.4.3, that specifies the list of searchable mailboxes.

InPlaceHoldIdentity: An element of type **string** that specifies the identity of the in-place hold.

ManagedByOrganization: An element of type **string** that specifies the managing organization.

Language:

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.

3.1.4.2 GetHoldOnMailboxes

The **GetHoldOnMailboxes** operation retrieves the status of a query-based hold, which is set by using the **SetHoldOnMailboxes** operation, as specified in section 3.1.4.5. A query-based hold is used to preserve items based on specified query parameters.

The following is the WSDL port type specification of the **GetHoldOnMailboxes** WSDL operation.

```
<wsdl:operation name="GetHoldOnMailboxes" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input message="m:GetHoldOnMailboxesSoapIn"/>
  <wsdl:output message="m:GetHoldOnMailboxesSoapOut"/>
</wsdl:operation>
```

The following is the WSDL binding specification of the **GetHoldOnMailboxes** operation.

```
<wsdl:operation name="GetHoldOnMailboxes" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <soap:operation
soapAction="http://schemas.microsoft.com/exchange/services/2006/messages/GetHoldOnMailboxes"
xmlns:soap="http://schemas.xmlsoap.org/wsdl/soap/"/>
  <wsdl:input>
    <soap:header message="m:GetHoldOnMailboxesSoapIn" part="RequestVersion" use="literal"
xmlns:soap="http://schemas.xmlsoap.org/wsdl/soap/"/>
    <soap:header message="m:GetHoldOnMailboxesSoapIn" part="ManagementRole" use="literal"
xmlns:soap="http://schemas.xmlsoap.org/wsdl/soap/"/>
    <soap:body use="literal" parts="request"
xmlns:soap="http://schemas.xmlsoap.org/wsdl/soap/"/>
  </wsdl:input>
  <wsdl:output>
    <soap:body use="literal" parts="GetHoldOnMailboxesResult"
xmlns:soap="http://schemas.xmlsoap.org/wsdl/soap/"/>
    <soap:header message="m:GetHoldOnMailboxesSoapOut" part="ServerVersion" use="literal"
xmlns:soap="http://schemas.xmlsoap.org/wsdl/soap/"/>
  </wsdl:output>
</wsdl:operation>
```

The client sends a **GetHoldOnMailboxesSoapIn** request WSDL message, as specified in section 3.1.4.2.1.1 and the server responds with a **GetHoldOnMailboxesSoapOut** response, as specified in section 3.1.4.2.1.2.

3.1.4.2.1 Messages

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

Message	Description
GetHoldOnMailboxesSoapIn	Specifies the request to retrieve the status of a query-based hold.
GetHoldOnMailboxesSoapOut	Specifies the response to the **GetHoldOnMailboxesSoapIn** request specified in section 3.1.4.2.1.1.

3.1.4.2.1.1   GetHoldOnMailboxesSoapIn

The **GetHoldOnMailboxesSoapIn** WSDL message specifies the request to retrieve the status of a query-based hold.

The following is the **GetHoldOnMailboxesSoapIn** WSDL message specification.

```
<wsdl:message name="GetHoldOnMailboxesSoapIn" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:part name="request" element="m:GetHoldOnMailboxes"/>
  <wsdl:part name="RequestVersion" element="t:RequestServerVersion"/>
  <wsdl:part name="ManagementRole" element="t:ManagementRole"/>
</wsdl:message>
```

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

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

Part name	Element/type	Description
request	**GetHoldOnMailboxes**	Specifies the SOAP body of the request to get the status of a query-based hold.
RequestVersion	**RequestServerVersion** ([MS-OXWSCDATA] section 2.2.3.11)	Specifies a SOAP header that identifies the schema version for the **GetHoldOnMailboxesSoapIn** WSDL message.
ManagementRole	**ManagementRole** ([MS-OXWSCDATA] section 2.2.3.8)	Specifies a SOAP header that identifies a user or application role.

3.1.4.2.1.2   GetHoldOnMailboxesSoapOut

The **GetHoldOnMailboxesSoapOut** WSDL message specifies the response to the **GetHoldOnMailboxesSoapIn** request specified in section 3.1.4.2.1.1.

The following is the **GetHoldOnMailboxesSoapOut** WSDL message specification.

```
<wsdl:message name="GetHoldOnMailboxesSoapOut" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:part name="GetHoldOnMailboxesResult" element="m:GetHoldOnMailboxesResponse"/>
  <wsdl:part name="ServerVersion" element="t:ServerVersionInfo"/>
</wsdl:message>
```

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

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

Part name	Element/type	Description
GetHoldOnMailboxesResult	**GetHoldOnMailboxesResponse**	Specifies the SOAP body of the response that contains the result of the request.
ServerVersion	**ServerVersionInfo** ([MS-OXWSCDATA] section 2.2.3.12)	Specifies a SOAP header that identifies the server version for the response.

A successful **GetHoldOnMailboxes** request, as specified in section 3.1.4.2.2.1, returns a **GetHoldOnMailboxesResponse** element with the **ResponseClass** (as specified in [MS-OXWSCDATA] section 2.2.4.65) attribute set to "Success". **ResponseCode** (as specified in [MS-OXWSCDATA] section 2.2.4.65) element of the **GetHoldOnMailboxesResponse** element is set to "NoError".

If the **GetHoldOnMailboxes** request is not successful, it returns a **GetHoldOnMailboxesResponse** element with the **ResponseClass** (as specified in [MS-OXWSCDATA] section 2.2.4.65) attribute set to "Error". The **ResponseCode** (as specified in [MS-OXWSCDATA] section 2.2.4.65) element of the **GetHoldOnMailboxesResponse** element is set to one of the common errors defined in [MS-OXWSCDATA] section 2.2.5.24.

3.1.4.2.2 Elements

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

Element	Description
GetHoldOnMailboxes	The input data for the **GetHoldOnMailboxes** WSDL operation.
GetHoldOnMailboxesResponse	The result data for the **GetHoldOnMailboxes** WSDL operation.

3.1.4.2.2.1 GetHoldOnMailboxes

The **GetHoldOnMailboxes** element specifies the input data for the **GetHoldOnMailboxes** WSDL operation.

```
<xs:element name="GetHoldOnMailboxes" type="m:GetHoldOnMailboxesType"
xmlns:xs="http://www.w3.org/2001/XMLSchema"/>
```

3.1.4.2.2.2 GetHoldOnMailboxesResponse

The **GetHoldOnMailboxesResponse** element specifies the result data for the **GetHoldOnMailboxes** WSDL operation.

```
<xs:element name="GetHoldOnMailboxesResponse" type="m:GetHoldOnMailboxesResponseMessageType"
xmlns:xs="http://www.w3.org/2001/XMLSchema"/>
```

3.1.4.2.3 Complex Types

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

Complex type	Description
GetHoldOnMailboxesResponseMessageType	Specifies the response message for a **GetHoldOnMailboxes** operation, as specified in section 3.1.4.2.
GetHoldOnMailboxesType	Specifies a request to retrieve the status of a query-based hold.

3.1.4.2.3.1 GetHoldOnMailboxesType

Namespace: http://schemas.microsoft.com/exchange/services/2006/messages

The **GetHoldOnMailboxesType** complex type specifies a request to retrieve the status of query-based holds on mailboxes. The **GetHoldOnMailboxesType** complex type extends the **BaseRequestType** complex type, as described in [MS-OXWSCDATA] section 2.2.4.17.

```
<xs:complexType name="GetHoldOnMailboxesType" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexContent mixed="false">
    <xs:extension base="m:BaseRequestType">
      <xs:sequence>
        <xs:element minOccurs="1" name="HoldId" type="xs:string"/>
      </xs:sequence>
    </xs:extension>
```

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

HoldId: An element of type **string**, as defined in [XMLSCHEMA2] section 3.2.1, that represents the identifier of the hold to be queried.

3.1.4.2.3.2   GetHoldOnMailboxesResponseMessageType

Namespace: http://schemas.microsoft.com/exchange/services/2006/messages

The **GetHoldOnMailboxesResponseMessageType** complex type specifies the response message for a **GetHoldOnMailboxes** operation, as specified in section 3.1.4.2. This type extends the **ResponseMessageType** complex type, as specified in [MS-OXWSCDATA] section 2.2.4.65.

```
<xs:complexType name="GetHoldOnMailboxesResponseMessageType"
xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexContent mixed="false">
    <xs:extension base="m:ResponseMessageType">
      <xs:sequence>
        <xs:element minOccurs="0" name="MailboxHoldResult" type="t:MailboxHoldResultType"/>
      </xs:sequence>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>
```

MailboxHoldResult: An element of type **MailboxHoldResultType**, as defined in section 2.2.4.5, that represents the object that contains the hold result information.

3.1.4.2.4 Simple Types

None.

3.1.4.2.5 Attributes

None.

3.1.4.2.6 Groups

None.

3.1.4.2.7 Attribute Groups

None.

3.1.4.3 GetSearchableMailboxes

The **GetSearchableMailboxes** operation retrieves a list of mailboxes on which the client has permission to search or to perform eDiscovery.

The following is the WSDL port type specification of the **GetSearchableMailboxes** WSDL operation.

```
<wsdl:operation name="GetSearchableMailboxes" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input message="m:GetSearchableMailboxesSoapIn"/>
  <wsdl:output message="m:GetSearchableMailboxesSoapOut"/>
</wsdl:operation>
```

The following is the WSDL binding specification of the **GetSearchableMailboxes** operation.

```
<wsdl:operation name="GetSearchableMailboxes" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <soap:operation
soapAction="http://schemas.microsoft.com/exchange/services/2006/messages/GetSearchableMailbox
es" xmlns:soap="http://schemas.xmlsoap.org/wsdl/soap/"/>
  <wsdl:input>
    <soap:header message="m:GetSearchableMailboxesSoapIn" part="RequestVersion" use="literal"
xmlns:soap="http://schemas.xmlsoap.org/wsdl/soap/"/>
    <soap:header message="m:GetSearchableMailboxesSoapIn" part="ManagementRole" use="literal"
xmlns:soap="http://schemas.xmlsoap.org/wsdl/soap/"/>
    <soap:body use="literal" parts="request"
xmlns:soap="http://schemas.xmlsoap.org/wsdl/soap/"/>
  </wsdl:input>
  <wsdl:output>
    <soap:body use="literal" parts="GetSearchableMailboxesResult"
xmlns:soap="http://schemas.xmlsoap.org/wsdl/soap/"/>
    <soap:header message="m:GetSearchableMailboxesSoapOut" part="ServerVersion" use="literal"
xmlns:soap="http://schemas.xmlsoap.org/wsdl/soap/"/>
  </wsdl:output>
</wsdl:operation>
```

The client sends a **GetSearchableMailboxesSoapIn** request WSDL message, as specified in section 3.1.4.3.1.1, and the server responds with **GetSearchableMailboxesSoapOut** response, as specified in section 3.1.4.3.1.2.

3.1.4.3.1 Messages

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

Message	Description
GetSearchableMailboxesSoapIn	Specifies the request to retrieve searchable mailboxes.
GetSearchableMailboxesSoapOut	Specifies the response to the **GetSearchableMailboxesSoapIn** request.

3.1.4.3.1.1   GetSearchableMailboxesSoapIn

The **GetSearchableMailboxesSoapIn** WSDL message specifies the request to retrieve searchable mailboxes.

The following is the **GetSearchableMailboxesSoapIn** WSDL message specification.

```
<wsdl:message name="GetSearchableMailboxesSoapIn"
xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:part name="request" element="m:GetSearchableMailboxes"/>
  <wsdl:part name="RequestVersion" element="t:RequestServerVersion"/>
  <wsdl:part name="ManagementRole" element="t:ManagementRole"/>
</wsdl:message>
```

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

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

Part name	Element/type	Description
request	**GetSearchableMailboxes**	Specifies the SOAP body of the request to retrieve searchable mailboxes.
RequestVersion	**RequestServerVersion** ([MS-OXWSCDATA] section 2.2.3.11)	Specifies a SOAP header that identifies the schema version for the **GetSearchableMailboxesSoapIn** WSDL message.
ManagementRole	**ManagementRole** ([MS-OXWSCDATA] section 2.2.3.8)	Specifies a SOAP header that identifies a user or application role.

3.1.4.3.1.2   GetSearchableMailboxesSoapOut

The **GetSearchableMailboxesSoapOut** WSDL message specifies the response to the **GetSearchableMailboxesSoapIn** request specified in section 3.1.4.3.1.1.

The following is the **GetSearchableMailboxesSoapOut** WSDL message specification.

```
<wsdl:message name="GetSearchableMailboxesSoapOut"
xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:part name="GetSearchableMailboxesResult" element="m:GetSearchableMailboxesResponse"/>
  <wsdl:part name="ServerVersion" element="t:ServerVersionInfo"/>
</wsdl:message>
```

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

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

Part name	Element/type	Description
GetSearchableMailboxesResult	**GetSearchableMailboxesResponse**	Specifies the SOAP body of the response that contains the requested information.
ServerVersion	**ServerVersionInfo** ([MS-OXWSCDATA] section 2.2.3.12)	Specifies a SOAP header that identifies the server version for the response.

A successful **GetSearchableMailboxes** request, as specified in section 3.1.4.3.2.1, returns a **GetSearchableMailboxesResponse** element with the **ResponseClass** (as specified in [MS-OXWSCDATA] section 2.2.4.65) attribute set to "Success". The **ResponseCode** (as specified in [MS-OXWSCDATA] section 2.2.4.65) element of the **GetSearchableMailboxesResponse** element is set to "NoError".

If the **GetSearchableMailboxes** request is not successful, it returns a **GetSearchableMailboxesResponse** element with the **ResponseClass** (as specified in [MS-OXWSCDATA] section 2.2.4.65) attribute set to "Error". The **ResponseCode** (as specified in [MS-OXWSCDATA] section 2.2.4.65) element of the **GetSearchableMailboxesResponse** element is set to one of the common errors defined in [MS-OXWSCDATA] section 2.2.5.24.

3.1.4.3.2 Elements

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

Element	Description
GetSearchableMailboxes	The input data for the **GetSearchableMailboxes** WSDL operation.
GetSearchableMailboxesResponse	The result data for the **GetSearchableMailboxes** WSDL operation.

3.1.4.3.2.1 GetSearchableMailboxes

The **GetSearchableMailboxes** element specifies the input data for the **GetSearchableMailboxes** WSDL operation.

```
<xs:element name="GetSearchableMailboxes" type="m:GetSearchableMailboxesType"
xmlns:xs="http://www.w3.org/2001/XMLSchema"/>
```

3.1.4.3.2.2 GetSearchableMailboxesResponse

The **GetSearchableMailboxesResponse** element specifies the result data for the **GetSearchableMailboxes** WSDL operation.

```
<xs:element name="GetSearchableMailboxesResponse"
type="m:GetSearchableMailboxesResponseMessageType"
xmlns:xs="http://www.w3.org/2001/XMLSchema"/>
```

3.1.4.3.3 Complex Types

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

Complex type	Description
GetSearchableMailboxesResponseMessageType	Specifies the response for a **GetSearchableMailboxes** operation, as specified in section 3.1.4.3.
GetSearchableMailboxesType	Specifies a request to retrieve searchable mailboxes.

3.1.4.3.3.1 GetSearchableMailboxesType

Namespace: http://schemas.microsoft.com/exchange/services/2006/messages

The **GetSearchableMailboxesType** complex type specifies a request to retrieve mailboxes that the client has permission to search or perform eDiscovery on.

```
<xs:complexType name="GetSearchableMailboxesType"
xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexContent mixed="false">
    <xs:extension base="m:BaseRequestType">
      <xs:sequence>
        <xs:element minOccurs="0" name="SearchFilter" type="xs:string"/>
```

```
              <xs:element minOccurs="0" name="ExpandGroupMembership" type="xs:boolean"/>
          </xs:sequence>
        </xs:extension>
      </xs:complexContent>
    </xs:complexType>
```

SearchFilter: An element of type **string**, as defined in [XMLSCHEMA2] section 3.2.1, that represents a search filter. This element can be empty or contain a specific email address, **display name**, or other property of the mailbox.

ExpandGroupMembership: An element of type **boolean**, as defined in [XMLSCHEMA2] section 3.2.2, that indicates whether to expand the group membership if the instance is a distribution list. The value "true" specifies expanding the membership.

If the **SearchFilter** element is a distribution group and if the value of the **ExpandGroupMembership** element is "false", the search results will return the mailbox information for the distribution group. If the **SearchFilter** element is a distribution group and the value of the **ExpandGroupMembership** element is "true", then the search results will return the distribution group member information. The distribution group can also take the user name of a single user.

If the **GetSearchableMailboxes** element is empty, the response will contain all searchable mailboxes. This is the same as having an empty **SearchFilter** element and the **ExpandGroupMembership** element set to "false".

3.1.4.3.3.2   GetSearchableMailboxesResponseMessageType

Namespace: http://schemas.microsoft.com/exchange/services/2006/messages

The **GetSearchableMailboxesResponseMessageType** complex type specifies the response for a **GetSearchableMailboxes** operation specified in section 3.1.4.3. This type extends the **ResponseMessageType** complex type, as specified in [MS-OXWSCDATA] section 2.2.4.65.

```
<xs:complexType name="GetSearchableMailboxesResponseMessageType"
xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexContent mixed="false">
    <xs:extension base="m:ResponseMessageType">
      <xs:sequence>
        <xs:element name="SearchableMailboxes" type="t:ArrayOfSearchableMailboxesType"/>
        <xs:element minOccurs="0" name="FailedMailboxes"
type="t:ArrayOfFailedSearchMailboxesType"/>
      </xs:sequence>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>
```

SearchableMailboxes: An element of type **ArrayOfSearchableMailboxesType**, as defined in section 2.2.4.3, that represents the object that contains the mailboxes or distribution list that match the search filter.

FailedMailboxes: An element of type **ArrayOfFailedSearchMailboxesType**, as defined in section 2.2.4.1, that contains a list of mailboxes that failed the query.

3.1.4.3.4 Simple Types

None.

3.1.4.3.5 Attributes

None.

3.1.4.3.6 Groups

None.

3.1.4.3.7 Attribute Groups

None.

3.1.4.4 SearchMailboxes

The **SearchMailboxes** operation searches for items in the specified mailboxes that match query keywords.

The following is the WSDL port type specification of the **SearchMailboxes** WSDL operation.

```
<wsdl:operation name="SearchMailboxes" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input message="m:SearchMailboxesSoapIn"/>
  <wsdl:output message="m:SearchMailboxesSoapOut"/>
</wsdl:operation>
```

The following is the WSDL binding specification of the **SearchMailboxes** operation.

```
<wsdl:operation name="SearchMailboxes" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <soap:operation
soapAction="http://schemas.microsoft.com/exchange/services/2006/messages/SearchMailboxes"
xmlns:soap="http://schemas.xmlsoap.org/wsdl/soap/"/>
  <wsdl:input>
    <soap:header message="m:SearchMailboxesSoapIn" part="RequestVersion" use="literal"
xmlns:soap="http://schemas.xmlsoap.org/wsdl/soap/"/>
    <soap:header message="m:SearchMailboxesSoapIn" part="ManagementRole" use="literal"
xmlns:soap="http://schemas.xmlsoap.org/wsdl/soap/"/>
    <soap:body use="literal" parts="request"
xmlns:soap="http://schemas.xmlsoap.org/wsdl/soap/"/>
  </wsdl:input>
  <wsdl:output>
    <soap:body use="literal" parts="SearchMailboxesResult"
xmlns:soap="http://schemas.xmlsoap.org/wsdl/soap/"/>
    <soap:header message="m:SearchMailboxesSoapOut" part="ServerVersion" use="literal"
xmlns:soap="http://schemas.xmlsoap.org/wsdl/soap/"/>
  </wsdl:output>
</wsdl:operation>
```

The client sends a **SearchMailboxesSoapIn** request WSDL message, as specified in section 3.1.4.4.1.1, and the server responds with a **SearchMailboxesSoapOut** response, as specified in section 3.1.4.4.1.2.

3.1.4.4.1 Messages

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

Message	Description
SearchMailboxesSoapIn	Specifies the request to search mailboxes.

Message	Description
SearchMailboxesSoapOut	Specifies the response to the **SearchMailboxesSoapIn** request.

3.1.4.4.1.1 SearchMailboxesSoapIn

The **SearchMailboxesSoapIn** WSDL message specifies the request to search mailboxes.

The following is the **SearchMailboxesSoapIn** WSDL message specification.

```
<wsdl:message name="SearchMailboxesSoapIn" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:part name="request" element="m:SearchMailboxes"/>
  <wsdl:part name="RequestVersion" element="t:RequestServerVersion"/>
  <wsdl:part name="ManagementRole" element="t:ManagementRole"/>
</wsdl:message>
```

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

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

Part name	Element/type	Description
request	**SearchMailboxes**	Specifies the SOAP body of the request to search mailboxes.
RequestVersion	**RequestServerVersion** ([MS-OXWSCDATA] section 2.2.3.11)	Specifies a SOAP header that identifies the schema version for the **SearchMailboxesSoapIn** WSDL message.
ManagementRole	**ManagementRole** ([MS-OXWSCDATA] section 2.2.3.8)	Specifies a SOAP header that identifies a user or application role.

3.1.4.4.1.2 SearchMailboxesSoapOut

The **SearchMailboxesSoapOut** WSDL message specifies the response to the
SearchMailboxesSoapIn request specified in section 3.1.4.3.1.1.

The following is the **SearchMailboxesSoapOut** WSDL message specification.

```
<wsdl:message name="SearchMailboxesSoapOut" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:part name="SearchMailboxesResult" element="m:SearchMailboxesResponse"/>
  <wsdl:part name="ServerVersion" element="t:ServerVersionInfo"/>
</wsdl:message>
```

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

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

Part name	Element/type	Description
SearchMailboxesResult	**SearchMailboxesResponse**	Specifies the SOAP body of the response that contains the requested search information.
ServerVersion	**ServerVersionInfo** ([MS-OXWSCDATA] section 2.2.3.12)	Specifies a SOAP header that identifies the server version for the response.

A successful **SearchMailboxes** request, as specified in section 3.1.4.4.2.1, returns a **SearchMailboxesResponse** element with the **ResponseClass** (as specified in [MS-OXWSCDATA] section 2.2.4.65) attribute set to "Success". The **ResponseCode** (as specified in [MS-OXWSCDATA] section 2.2.4.65) element of the **SearchMailboxesResponse** element is set to "NoError".

If the **SearchMailboxes** request is not successful, it returns a **SearchMailboxesResponse** element with the **ResponseClass** (as specified in [MS-OXWSCDATA] section 2.2.4.65) attribute set to "Error". The **ResponseCode** (as specified in [MS-OXWSCDATA] section 2.2.4.65) element of the **SearchMailboxesResponse** element is set to one of the common errors defined in [MS-OXWSCDATA] section 2.2.5.24.

3.1.4.4.2 Elements

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

Element	Description
SearchMailboxes	The input data for the **SearchMailboxes** WSDL operation.
SearchMailboxesResponse	The result data for the **SearchMailboxes** WSDL operation.

3.1.4.4.2.1 SearchMailboxes

The **SearchMailboxes** element specifies the input data for the **SearchMailboxes** WSDL operation.

```
<xs:element name="SearchMailboxes" type="m:SearchMailboxesType"
xmlns:xs="http://www.w3.org/2001/XMLSchema"/>
```

3.1.4.4.2.2 SearchMailboxesResponse

The **SearchMailboxesResponse** element specifies the result data for the **SearchMailboxes** WSDL operation.

```
<xs:element name="SearchMailboxesResponse" type="m:SearchMailboxesResponseType"
xmlns:xs="http://www.w3.org/2001/XMLSchema"/>
```

3.1.4.4.3 Complex Types

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

Complex type	Description
ArrayOfExtendedAttributesType	Specifies an array of extended attributes.
ArrayOfKeywordStatisticsSearchResultsType	Specifies an array of keyword statistics in the search result.
ArrayOfMailboxStatisticsItemsType	Specifies an array of mailbox statistics.
ArrayOfSearchPreviewItemsType	Specifies an array of search preview items.
ArrayOfSearchRefinerItemsType	Specifies an array of search refiner items.
ExtendedAttributeType	Specifies an extended attribute of a target mailbox.
KeywordStatisticsSearchResultType	Specifies a keyword statistics search result.
MailboxQueryType	Specifies the type of the mailbox query.
MailboxSearchScopeType	Specifies a mailbox search scope.
MailboxStatisticsItemType	Specifies a mailbox statistic.
NonEmptyArrayOfExtendedFieldURIsType	Specifies an array of extended property names.
NonEmptyArrayOfMailboxQueriesType	Specifies an array of mailbox queries.
NonEmptyArrayOfMailboxSearchScopesType	Specifies an array of mailbox search scopes.
PreviewItemMailboxType	Specifies the mailbox information in a preview item.
PreviewItemResponseShapeType	Specifies the response format of a preview item, that is, the base shape plus properties.
SearchMailboxesResponseMessageType	Specifies a response message for the **SearchMailboxes** operation specified in section 3.1.4.4.
SearchMailboxesResponseType	Specifies the response for a **SearchMailboxes** operation.
SearchMailboxesResultType	Specifies the result from the **SearchMailboxes** operation.
SearchMailboxesType	Specifies the format and content of the query response.
SearchPreviewItemType	Specifies a search preview item.
SearchRefinerItemType	Specifies a search refiner item.

3.1.4.4.3.1   SearchMailboxesType

Namespace: http://schemas.microsoft.com/exchange/services/2006/messages

The **SearchMailboxesType** complex type specifies the content and format of the result. This type extends the **BaseRequestType** complex type, as specified in [MS-OXWSCDATA] section 2.2.4.17.

```
<xs:complexType name="SearchMailboxesType" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexContent mixed="false">
    <xs:extension base="m:BaseRequestType">
      <xs:sequence>
        <xs:element minOccurs="1" name="SearchQueries"
type="t:NonEmptyArrayOfMailboxQueriesType"/>
        <xs:element minOccurs="1" name="ResultType" type="t:SearchResultType"/>
```

```
            <xs:element minOccurs="0" name="PreviewItemResponseShape"
    type="t:PreviewItemResponseShapeType"/>
            <xs:element minOccurs="0" name="SortBy" type="t:FieldOrderType"/>
            <xs:element minOccurs="0" name="Language" type="xs:string"/>
            <xs:element minOccurs="0" name="Deduplication" type="xs:boolean"/>
            <xs:element minOccurs="0" name="PageSize" type="xs:int"/>
            <xs:element minOccurs="0" name="PageItemReference" type="xs:string"/>
            <xs:element minOccurs="0" name="PageDirection" type="t:SearchPageDirectionType"/>
        </xs:sequence>
      </xs:extension>
    </xs:complexContent>
  </xs:complexType>
```

SearchQueries: An element of type **NonEmptyArrayOfMailboxQueriesType**, as defined in section 3.1.4.4.3.2, that represents a set of mailbox search scopes.

ResultType: An element of type **SearchResultType**, as defined in section 3.1.4.4.4.2, that represents an enumeration type to indicate the type of search result.

PreviewItemResponseShape: An element of type **PreviewItemResponseShapeType**, as defined in section 3.1.4.4.3.6, that represents what properties are returned for the preview search result.

SortBy: An element of type **FieldOrderType**, as defined in [MS-OXWSSRCH] section 3.1.4.2.3.6, that specifies a single field by which to sort results and specifies the direction of the sort.

Language: An element of type **string**, as defined in [XMLSCHEMA2] section 3.2.1, that represents the query language, for example, "en-us".

Deduplication: An element of type **boolean**, as defined in [XMLSCHEMA2] section 3.2.2, that indicates whether to remove duplicates from the search result.

PageSize: An element of type **int**, as defined in [XMLSCHEMA2] section 3.3.17, that represents the total number of items shown on a preview page.

PageItemReference: An element of type **string** that is used for paging implementation. For the first call, this element should be null. For subsequent calls, set this value to the **SortValue** of the last preview item in the response. **SortValue** is defined in section 3.1.4.4.3.14.

PageDirection: An element of type **SearchPageDirectionType**, as defined in section 3.1.4.4.4.4, that represents the paging direction; for example, "previous" or "next".

3.1.4.4.3.2   NonEmptyArrayOfMailboxQueriesType

Namespace: http://schemas.microsoft.com/exchange/services/2006/types

The **NonEmptyArrayOfMailboxQueriesType** complex type specifies an array of mailbox queries.

```
<xs:complexType name="NonEmptyArrayOfMailboxQueriesType"
xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="1" maxOccurs="unbounded" name="MailboxQuery"
type="t:MailboxQueryType"/>
  </xs:sequence>
</xs:complexType>
```

MailboxQuery: An element of type **MailboxQueryType**, as defined in section 3.1.4.4.3.3, that represents a combination of a query and a list of search scopes.

3.1.4.4.3.3   MailboxQueryType

Namespace: http://schemas.microsoft.com/exchange/services/2006/types

The **MailboxQueryType** complex type specifies the type of the mailbox query.

```
<xs:complexType name="MailboxQueryType" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="1" maxOccurs="1" name="Query" type="xs:string"/>
    <xs:element minOccurs="1" maxOccurs="1" name="MailboxSearchScopes"
type="t:NonEmptyArrayOfMailboxSearchScopesType"/>
  </xs:sequence>
</xs:complexType>
```

Query: An element of type **string**, as defined in [XMLSCHEMA2] section 3.2.1, that identifies a search query.

MailboxSearchScopes: An element of type **NonEmptyArrayOfMailboxSearchScopesType**, as defined in section 3.1.4.4.3.4, that contains a list of one or more **MailboxSearchScopeType** complex types, as defined in section 3.1.4.4.3.5.

3.1.4.4.3.4   NonEmptyArrayOfMailboxSearchScopesType

Namespace: http://schemas.microsoft.com/exchange/services/2006/types

The **NonEmptyArrayOfMailboxSearchScopesType** complex type specifies an array of mailbox search scopes.

```
<xs:complexType name="NonEmptyArrayOfMailboxSearchScopesType"
xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="1" maxOccurs="unbounded" name="MailboxSearchScope"
type="t:MailboxSearchScopeType"/>
  </xs:sequence>
</xs:complexType>
```

MailboxSearchScope: An element of type **MailboxSearchScopeType**, as defined in section 3.1.4.4.3.5, that represents a combination of a mailbox and a search scope.

3.1.4.4.3.5   MailboxSearchScopeType

Namespace: http://schemas.microsoft.com/exchange/services/2006/types

The **MailboxSearchScopeType** complex type specifies a query and a set of mailboxes.

```
<xs:complexType name="MailboxSearchScopeType" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="1" maxOccurs="1" name="Mailbox" type="xs:string"/>
    <xs:element minOccurs="1" maxOccurs="1" name="SearchScope"
type="t:MailboxSearchLocationType"/>
    <xs:element minOccurs="0" maxOccurs="1" name="ExtendedAttributes"
type="t:ArrayOfExtendedAttributesType"/>
  </xs:sequence>
</xs:complexType>
```

Mailbox: An element of type **string**, as defined in [XMLSCHEMA2] section 3.2.1, that contains an identifier for the mailbox.

SearchScope: An element of type **MailboxSearchLocationType**, as defined in section 3.1.4.4.4.1, that represents the search scope.

ExtendedAttributes:

3.1.4.4.3.6   PreviewItemResponseShapeType

Namespace: http://schemas.microsoft.com/exchange/services/2006/types

The **PreviewItemResponseShapeType** complex type specifies the response format of a preview item; that is, the base shape plus properties.

```
<xs:complexType name="PreviewItemResponseShapeType"
xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="1" maxOccurs="1" name="BaseShape"
type="t:PreviewItemBaseShapeType"/>
    <xs:element minOccurs="0" maxOccurs="1" name="AdditionalProperties"
type="t:NonEmptyArrayOfExtendedFieldURIsType"/>
  </xs:sequence>
</xs:complexType>
```

BaseShape: An element of type **PreviewItemBaseShapeType**, as defined in section 3.1.4.4.4.3, that represents either the default preview with all properties returned or a compact preview with fewer properties returned.

AdditionalProperties: An element of type **NonEmptyArrayOfExtendedFieldURIsType**, as defined in section 3.1.4.4.3.7, that represents additional item properties to be returned.

3.1.4.4.3.7   NonEmptyArrayOfExtendedFieldURIsType

Namespace: http://schemas.microsoft.com/exchange/services/2006/types

The **NonEmptyArrayOfExtendedFieldURIsType** complex type specifies an array of extended property names.

```
<xs:complexType name="NonEmptyArrayOfExtendedFieldURIsType"
xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:choice maxOccurs="unbounded">
    <xs:element name="ExtendedFieldURI" type="t:PathToExtendedFieldType"/>
  </xs:choice>
</xs:complexType>
```

ExtendedFieldURI: An element of type **PathToExtendedFieldType**, as defined in [MS-OXWSXPROP] section 2.1.6, that represents the extended property name.

3.1.4.4.3.8   SearchMailboxesResponseType

Namespace: http://schemas.microsoft.com/exchange/services/2006/messages

The **SearchMailboxesResponseType** complex type specifies a response for a **SearchMailboxes** operation, as specified in section 3.1.4.4. This type extends the **BaseResponseMessageType** complex type, as specified in [MS-OXWSCDATA] section 2.2.4.18.

```
<xs:complexType name="SearchMailboxesResponseType"
xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexContent mixed="false">
    <xs:extension base="m:BaseResponseMessageType"/>
```

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

3.1.4.4.3.9   SearchMailboxesResponseMessageType

Namespace: http://schemas.microsoft.com/exchange/services/2006/messages

The **SearchMailboxesResponseMessageType** complex type specifies a response message for the **SearchMailboxes** operation specified in section 3.1.4.4. This type extends the **ResponseMessageType** complex type, as specified in [MS-OXWSCDATA] section 2.2.4.65.

```
<xs:complexType name="SearchMailboxesResponseMessageType"
xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexContent mixed="false">
    <xs:extension base="m:ResponseMessageType">
      <xs:sequence>
        <xs:element minOccurs="0" name="SearchMailboxesResult"
type="t:SearchMailboxesResultType"/>
      </xs:sequence>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>
```

SearchMailboxesResult: An element of type **SearchMailboxesResultType**, as defined in section 3.1.4.4.3.10, that represents the result of a **SearchMailboxes** operation, as specified in section 3.1.4.4.

3.1.4.4.3.10   SearchMailboxesResultType

Namespace: http://schemas.microsoft.com/exchange/services/2006/types

The **SearchMailboxesResultType** complex type specifies the result from the **SearchMailboxes** operation specified in section 3.1.4.4.

```
<xs:complexType name="SearchMailboxesResultType" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="1" name="SearchQueries"
type="t:NonEmptyArrayOfMailboxQueriesType"/>
    <xs:element minOccurs="1" name="ResultType" type="t:SearchResultType"/>
    <xs:element minOccurs="1" name="ItemCount" type="xs:long"/>
    <xs:element minOccurs="1" name="Size" type="xs:long"/>
    <xs:element minOccurs="1" name="PageItemCount" type="xs:int"/>
    <xs:element minOccurs="1" name="PageItemSize" type="xs:long"/>
    <xs:element minOccurs="0" name="KeywordStats"
type="t:ArrayOfKeywordStatisticsSearchResultsType"/>
    <xs:element minOccurs="0" name="Items" type="t:ArrayOfSearchPreviewItemsType"/>
    <xs:element minOccurs="0" name="FailedMailboxes"
type="t:ArrayOfFailedSearchMailboxesType"/>
    <xs:element minOccurs="0" name="Refiners" type="t:ArrayOfSearchRefinerItemsType"/>
    <xs:element minOccurs="0" name="MailboxStats"
type="t:ArrayOfMailboxStatisticsItemsType"/>
  </xs:sequence>
</xs:complexType>
```

SearchQueries: An element of type **NonEmptyArrayOfMailboxQueriesType** complex, as defined in section 3.1.4.4.3.2, that contains a list of mailboxes plus the query to be searched.

ResultType: An element of type **SearchResultType**, as defined in section 3.1.4.4.4.2, that contains the type of search, either statistics only or preview only.

ItemCount: An element of type **long**, as defined in [XMLSCHEMA2] section 3.3.16, that contains a value for the total number of items in a search result.

Size: An element of type **long** that contains the total size of the search result.

PageItemCount: An element of type **int**, as defined in [XMLSCHEMA2] section 3.3.17, that contains the number of pages returned in a search result pagination.

PageItemSize: An element of type **long** that contains the number of items to return in a search result pagination.

KeywordStats: An element of type **ArrayOfKeywordStatisticsSearchResultsType**, as defined in section 3.1.4.4.3.11, that contains a list of one or more **KeywordStat** elements.

Items: An element of type **ArrayOfSearchPreviewItemsType**, as defined in section 3.1.4.4.3.13, that contains a list of items available for preview.

FailedMailboxes: An element of type **ArrayOfFailedSearchMailboxesType**, as defined in section 2.2.4.1, that contains a list of mailboxes that failed the search.

Refiners: An element of type **ArrayOfSearchRefinerItemsType**, as defined in section 3.1.4.4.3.16, that contains a list of one or more **Refiner** elements.

MailboxStats: An element of type **ArrayOfMailboxStatisticsItemsType**, as defined in section 3.1.4.4.3.18, that contains a list of one or more mailbox statistics.

3.1.4.4.3.11   ArrayOfKeywordStatisticsSearchResultsType

Namespace: http://schemas.microsoft.com/exchange/services/2006/types

The **ArrayOfKeywordStatisticsSearchResultsType** complex type specifies an array of keyword statistics in the search result.

```
<xs:complexType name="ArrayOfKeywordStatisticsSearchResultsType"
xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="unbounded" name="KeywordStat"
type="t:KeywordStatisticsSearchResultType"/>
  </xs:sequence>
</xs:complexType>
```

KeywordStat: An element of type **KeywordStatisticsSearchResultType**, as defined in section 3.1.4.4.3.12, that represents keyword statistics information.

3.1.4.4.3.12   KeywordStatisticsSearchResultType

Namespace: http://schemas.microsoft.com/exchange/services/2006/types

The **KeywordStatisticsSearchResultType** complex type specifies a keyword statistics search result.

```
<xs:complexType name="KeywordStatisticsSearchResultType"
xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="1" maxOccurs="1" name="Keyword" type="xs:string"/>
    <xs:element minOccurs="1" maxOccurs="1" name="ItemHits" type="xs:int"/>
    <xs:element minOccurs="1" maxOccurs="1" name="Size" type="xs:long"/>
  </xs:sequence>
</xs:complexType>
```

Keyword: An element of type **string**, as defined in [XMLSCHEMA2] section 3.2.1, that represents the word to be searched for.

ItemHits: An element of type **int**, as defined in [XMLSCHEMA2] section 3.3.17, that represents the number of times that an item appears.

Size: An element of type **long**, as defined in [XMLSCHEMA2] section 3.3.16, that represents the total number of items that have the keyword.

3.1.4.4.3.13   ArrayOfSearchPreviewItemsType

Namespace: http://schemas.microsoft.com/exchange/services/2006/types

The **ArrayOfSearchPreviewItemsType** complex type specifies an array of search preview items.

```
<xs:complexType name="ArrayOfSearchPreviewItemsType"
xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="unbounded" name="SearchPreviewItem"
type="t:SearchPreviewItemType"/>
  </xs:sequence>
</xs:complexType>
```

SearchPreviewItem: An element of type **SearchPreviewItemType**, as defined in section 3.1.4.4.3.14, that represents a search preview item.

3.1.4.4.3.14   SearchPreviewItemType

Namespace: http://schemas.microsoft.com/exchange/services/2006/types

The **SearchPreviewItemType** complex type specifies a search preview item.

```
<xs:complexType name="SearchPreviewItemType" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="1" maxOccurs="1" name="Id" type="t:ItemIdType"/>
    <xs:element minOccurs="0" maxOccurs="1" name="Mailbox" type="t:PreviewItemMailboxType"/>
    <xs:element minOccurs="0" maxOccurs="1" name="ParentId" type="t:ItemIdType"/>
    <xs:element minOccurs="0" maxOccurs="1" name="ItemClass" type="t:ItemClassType"/>
    <xs:element minOccurs="0" maxOccurs="1" name="UniqueHash" type="xs:string"/>
    <xs:element minOccurs="0" maxOccurs="1" name="SortValue" type="xs:string"/>
    <xs:element minOccurs="0" maxOccurs="1" name="OwaLink" type="xs:string"/>
    <xs:element minOccurs="0" maxOccurs="1" name="Sender" type="xs:string"/>
    <xs:element minOccurs="0" maxOccurs="1" name="ToRecipients"
type="t:ArrayOfSmtpAddressType"/>
    <xs:element minOccurs="0" maxOccurs="1" name="CcRecipients"
type="t:ArrayOfSmtpAddressType"/>
    <xs:element minOccurs="0" maxOccurs="1" name="BccRecipients"
type="t:ArrayOfSmtpAddressType"/>
    <xs:element minOccurs="0" maxOccurs="1" name="CreatedTime" type="xs:dateTime"/>
    <xs:element minOccurs="0" maxOccurs="1" name="ReceivedTime" type="xs:dateTime"/>
    <xs:element minOccurs="0" maxOccurs="1" name="SentTime" type="xs:dateTime"/>
    <xs:element minOccurs="0" maxOccurs="1" name="Subject" type="xs:string"/>
    <xs:element minOccurs="0" maxOccurs="1" name="Size" type="xs:long"/>
    <xs:element minOccurs="0" maxOccurs="1" name="Preview" type="xs:string"/>
    <xs:element minOccurs="0" maxOccurs="1" name="Importance"
type="t:ImportanceChoicesType"/>
    <xs:element minOccurs="0" maxOccurs="1" name="Read" type="xs:boolean"/>
    <xs:element minOccurs="0" maxOccurs="1" name="HasAttachment" type="xs:boolean"/>
    <xs:element minOccurs="0" maxOccurs="1" name="ExtendedProperties"
type="t:NonEmptyArrayOfExtendedPropertyType"/>
  </xs:sequence>
```

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

Id: An element of type **ItemIdType**, as defined in [MS-OXWSCORE] section 2.2.4.24, that represents the item identifier.

Mailbox: An element of the **PreviewItemMailboxType** complex type, as defined in section 3.1.4.4.3.15, that contains an identifier for the mailbox.

ParentId: An element of type **ItemIdType** that contains the identifier of the parent of the item.

ItemClass: An element of type **ItemClassType**, as defined in [MS-OXWSCORE] section 2.2.5.4, that contains the message class of the item.

UniqueHash: An element of type **string**, as defined in [XMLSCHEMA2] section 3.2.1, that contains a unique hash value used to identify and eliminate duplicates.

SortValue: An element of type **string** that contains a value used for sorting. Preview items are returned ordered by this **SortValue**. To fetch the next page of results, a subsequent call should be made with the **SortValue** of the last item as the **PageItemReference** of the next request.

OwaLink: An element of type **string** that contains the link to preview the item.

Sender: An element of type **string** that contains the address of the person who sent the item.

ToRecipients: An element of type **ArrayOfSmtpAddressType**, as defined in [MS-OXWSMSHR] section 3.1.4.4.3.1, that contains a list of **recipients** to whom the item was sent.

CcRecipients: An element of type **ArrayOfSmtpAddressType** that contains a list of recipients who are carbon copied for the item.

BccRecipients: An element of type **ArrayOfSmtpAddressType** that contains a list of recipients who are blind carbon copied for the item.

CreatedTime: An element of type **dateTime**, as defined in [XMLSCHEMA2] section 3.2.7, that contains the time at which the item was created.

ReceivedTime: An element of type **dateTime** that contains the time at which the item was received.

SentTime: An element of type **dateTime** that contains the time at which the item was sent.

Subject: An element of type **string** that contains the subject of a message item.

Size: An element of type **long**, as defined in [XMLSCHEMA2] section 3.3.16, that contains the size of the item.

Preview: An element of type **string** that is not used and always returns an empty string.

Importance: An element of type **ImportanceChoicesType**, as defined in [MS-OXWSCORE] section 2.2.5.3, that indicates the urgency of the item. The possible values are "High", "Normal", and "Low".

Read: An element of type **boolean**, as defined in [XMLSCHEMA2] section 3.2.2, that indicates whether an item has been read.

HasAttachment: An element of type **boolean** that indicates whether the item has attachments.

ExtendedProperties: A element of type **NonEmptyArrayOfExtendedPropertyType**, as defined in [MS-OXWSXPROP] section 2.1.3, that contains an array of additional properties.

3.1.4.4.3.15 PreviewItemMailboxType

Namespace: http://schemas.microsoft.com/exchange/services/2006/types

The **PreviewItemMailboxType** complex type specifies the mailbox information in a preview item.

```
<xs:complexType name="PreviewItemMailboxType" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="1" maxOccurs="1" name="MailboxId" type="xs:string"/>
    <xs:element minOccurs="1" maxOccurs="1" name="PrimarySmtpAddress" type="xs:string"/>
  </xs:sequence>
</xs:complexType>
```

MailboxId: An element of type **string**, as defined in [XMLSCHEMA2] section 3.2.1, that contains an identifier for the mailbox.

PrimarySmtpAddress: An element of type **string** that represents the primary SMTP address of the mailbox.

3.1.4.4.3.16   ArrayOfSearchRefinerItemsType

Namespace: http://schemas.microsoft.com/exchange/services/2006/types

The **ArrayOfSearchRefinerItemsType** complex type specifies an array of search refiner items.

```
<xs:complexType name="ArrayOfSearchRefinerItemsType"
xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="unbounded" name="Refiner"
type="t:SearchRefinerItemType"/>
  </xs:sequence>
</xs:complexType>
```

Refiner: An element of the **SearchRefinerItemType** complex type, as defined in section 3.1.4.4.3.17, that represents a search refiner.

3.1.4.4.3.17   SearchRefinerItemType

Namespace: http://schemas.microsoft.com/exchange/services/2006/types

The **SearchRefinerItemType** complex type specifies a search refiner item.

```
<xs:complexType name="SearchRefinerItemType" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="1" maxOccurs="1" name="Name" type="xs:string"/>
    <xs:element minOccurs="1" maxOccurs="1" name="Value" type="xs:string"/>
    <xs:element minOccurs="1" maxOccurs="1" name="Count" type="xs:long"/>
    <xs:element minOccurs="1" maxOccurs="1" name="Token" type="xs:string"/>
  </xs:sequence>
</xs:complexType>
```

Name: An element of type **string**, as defined in [XMLSCHEMA2] section 3.2.1, that represents the name of the search refiner.

Value: An element of type **string** that represents the search refiner value.

Count: An element of type **long**, as defined in [XMLSCHEMA2] section 3.3.16, that represents the item count in the search refiner.

Token: An element of type **string** that represents the search refiner token.

3.1.4.4.3.18 ArrayOfMailboxStatisticsItemsType

Namespace: http://schemas.microsoft.com/exchange/services/2006/types

The **ArrayOfMailboxStatisticsItemsType** complex type specifies an array of mailbox statistics.

```
<xs:complexType name="ArrayOfMailboxStatisticsItemsType"
xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="unbounded" name="MailboxStat"
type="t:MailboxStatisticsItemType"/>
  </xs:sequence>
</xs:complexType>
```

MailboxStat: A element of type **MailboxStatisticsItemType**, as defined in section 3.1.4.4.3.19, that contains a value for the mailbox statistic.

3.1.4.4.3.19 MailboxStatisticsItemType

Namespace: http://schemas.microsoft.com/exchange/services/2006/types

The **MailboxStatisticsItemType** complex type specifies a mailbox statistic.

```
<xs:complexType name="MailboxStatisticsItemType" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="1" maxOccurs="1" name="MailboxId" type="xs:string"/>
    <xs:element minOccurs="1" maxOccurs="1" name="DisplayName" type="xs:string"/>
    <xs:element minOccurs="1" maxOccurs="1" name="ItemCount" type="xs:long"/>
    <xs:element minOccurs="1" maxOccurs="1" name="Size" type="xs:long"/>
  </xs:sequence>
</xs:complexType>
```

MailboxId: An element of type **string**, as defined in [XMLSCHEMA2] section 3.2.1, that contains an identifier for the mailbox.

DisplayName: An element of type **string** that specifies the name of the mailbox.

ItemCount: An element of type **long**, as defined in [XMLSCHEMA2] section 3.3.16, that contains the total number of items in a search result.

Size: An element of type **long** that contains the size of the mailbox items returned from a search.

3.1.4.4.3.20 ArrayOfExtendedAttributesType

Namespace: http://schemas.microsoft.com/exchange/services/2006/types

The **ArrayOfExtendedAttributesType** complex type specifies the extended attributes of a mailbox.<2>

```
<xs:complexType name="ArrayOfExtendedAttributesType"
xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="unbounded" name="ExtendedAttribute"
type="t:ExtendedAttributeType"/>
  </xs:sequence>
```

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

ExtendedAttribute: The extended attribute of the mailbox.

3.1.4.4.3.21   ExtendedAttributeType

Namespace: http://schemas.microsoft.com/exchange/services/2006/types

The **ExtendedAttributeType** complex type specified an extended attribute for a mailbox. <3>

```
    <xs:complexType name="ExtendedAttributeType" xmlns:xs="http://www.w3.org/2001/XMLSchema">
      <xs:sequence>
        <xs:element minOccurs="1" maxOccurs="1" name="Name" type="xs:string"/>
        <xs:element minOccurs="1" maxOccurs="1" name="Value" type="xs:string"/>
      </xs:sequence>
    </xs:complexType>
```

Name: The name of the extended attribute.

Value: The value of the extended attribute.

3.1.4.4.4 Simple Types

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

Simple type	Description
MailboxSearchLocationType	Specifies the location to be searched.
PreviewItemBaseShapeType	Specifies whether an item is previewed with all its properties or it is compacted.
SearchPageDirectionType	Specifies the direction in which to search.
SearchResultType	Specifies a search result.

3.1.4.4.4.1   MailboxSearchLocationType

Namespace: http://schemas.microsoft.com/exchange/services/2006/types

The **MailboxSearchLocationType** simple type specifies the location to be searched.

```
    <xs:simpleType name="MailboxSearchLocationType" xmlns:xs="http://www.w3.org/2001/XMLSchema">
      <xs:restriction base="xs:string">
        <xs:enumeration value="PrimaryOnly"/>
        <xs:enumeration value="ArchiveOnly"/>
        <xs:enumeration value="All"/>
      </xs:restriction>
    </xs:simpleType>
```

The following table specifies the allowable values for the **MailboxSearchLocationType** simple type.

Value	Meaning
PrimaryOnly	Search in primary mailbox only.
ArchiveOnly	Search in archive mailbox only.
All	Search in all mailboxes.

3.1.4.4.4.2 SearchResultType

Namespace: http://schemas.microsoft.com/exchange/services/2006/types

The **SearchResultType** simple type specifies a search result.

```
<xs:simpleType name="SearchResultType" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:restriction base="xs:string">
    <xs:enumeration value="StatisticsOnly"/>
    <xs:enumeration value="PreviewOnly"/>
  </xs:restriction>
</xs:simpleType>
```

The following table specifies the allowable values for the **SearchResultType** simple type.

Value	Meaning
StatisticsOnly	Perform statistics search only.
PreviewOnly	Perform preview search only.

3.1.4.4.4.3 PreviewItemBaseShapeType

Namespace: http://schemas.microsoft.com/exchange/services/2006/types

The **PreviewItemBaseShapeType** simple type specifies whether an item is previewed with all its properties or it is compacted.

```
<xs:simpleType name="PreviewItemBaseShapeType" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:restriction base="xs:string">
    <xs:enumeration value="Default"/>
    <xs:enumeration value="Compact"/>
  </xs:restriction>
</xs:simpleType>
```

The following table specifies the allowable values for the **PreviewItemBaseShapeType** simple type.

Value	Meaning
Default	Indicates the default view with all properties for the item preview.
Compact	Indicates a compact view with only a few properties for the item preview.

3.1.4.4.4 SearchPageDirectionType

Namespace: http://schemas.microsoft.com/exchange/services/2006/types

The **SearchPageDirectionType** simple type specifies the direction in which to search.

```
<xs:simpleType name="SearchPageDirectionType" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:restriction base="xs:string">
    <xs:enumeration value="Previous"/>
    <xs:enumeration value="Next"/>
  </xs:restriction>
</xs:simpleType>
```

The following table specifies the allowable values for the **SearchPageDirectionType** simple type.

Value	Meaning
Previous	Navigate to the previous page.
Next	Navigate to the next page.

3.1.4.4.5 Attributes

None.

3.1.4.4.6 Groups

None.

3.1.4.4.7 Attribute Groups

None.

3.1.4.5 SetHoldOnMailboxes

The **SetHoldOnMailboxes** operation sets a query-based hold on mailboxes.

The following is the WSDL port type specification of the **SetHoldOnMailboxes** WSDL operation.

```
<wsdl:operation name="SetHoldOnMailboxes" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input message="m:SetHoldOnMailboxesSoapIn"/>
  <wsdl:output message="m:SetHoldOnMailboxesSoapOut"/>
</wsdl:operation>
```

The following is the WSDL binding specification of the **SetHoldOnMailboxes** operation.

```
<wsdl:operation name="SetHoldOnMailboxes" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <soap:operation
soapAction="http://schemas.microsoft.com/exchange/services/2006/messages/SetHoldOnMailboxes"
xmlns:soap="http://schemas.xmlsoap.org/wsdl/soap/"/>
  <wsdl:input>
    <soap:header message="m:SetHoldOnMailboxesSoapIn" part="RequestVersion" use="literal"
xmlns:soap="http://schemas.xmlsoap.org/wsdl/soap/"/>
    <soap:header message="m:SetHoldOnMailboxesSoapIn" part="ManagementRole" use="literal"
xmlns:soap="http://schemas.xmlsoap.org/wsdl/soap/"/>
```

```
      <soap:body use="literal" parts="request"
xmlns:soap="http://schemas.xmlsoap.org/wsdl/soap/"/>
    </wsdl:input>
    <wsdl:output>
      <soap:body use="literal" parts="SetHoldOnMailboxesResult"
xmlns:soap="http://schemas.xmlsoap.org/wsdl/soap/"/>
      <soap:header message="m:SetHoldOnMailboxesSoapOut" part="ServerVersion" use="literal"
xmlns:soap="http://schemas.xmlsoap.org/wsdl/soap/"/>
    </wsdl:output>
</wsdl:operation>
```

The client sends a **SetHoldOnMailboxesSoapIn** request WSDL message, as specified in section 3.1.4.5.1.1, and the server responds with a **SetHoldOnMailboxesSoapOut** response, as specified in section 3.1.4.5.1.2.

3.1.4.5.1 Messages

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

Message	Description
SetHoldOnMailboxesSoapIn	Specifies the request to set a query-based hold on mailboxes.
SetHoldOnMailboxesSoapOut	Specifies the response to the **SetHoldOnMailboxesSoapIn** request specified in section 3.1.4.5.1.1.

3.1.4.5.1.1   SetHoldOnMailboxesSoapIn

The **SetHoldOnMailboxesSoapIn** WSDL message specifies the request to set a query-based hold on mailboxes.

The following is the **SetHoldOnMailboxesSoapIn** WSDL message specification.

```
<wsdl:message name="SetHoldOnMailboxesSoapIn" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:part name="request" element="m:SetHoldOnMailboxes"/>
  <wsdl:part name="RequestVersion" element="t:RequestServerVersion"/>
  <wsdl:part name="ManagementRole" element="t:ManagementRole"/>
</wsdl:message>
```

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

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

Part name	Element/type	Description
request	**SetHoldOnMailboxes**	Specifies the SOAP body of the request to set a query-based hold on mailboxes.
RequestVersion	**RequestServerVersion** ([MS-OXWSCDATA] section 2.2.3.11)	Specifies a SOAP header that identifies the schema version for the **SetHoldOnMailboxesSoapIn** WSDL message.
ManagementRole	**ManagementRole**	Specifies a SOAP header that identifies a user or application

Part name	Element/type	Description
	([MS-OXWSCDATA] section 2.2.3.8)	role.

3.1.4.5.1.2 SetHoldOnMailboxesSoapOut

The **SetHoldOnMailboxesSoapOut** WSDL message specifies the response to the **SetHoldOnMailboxesSoapIn** request specified in section 3.1.4.5.1.1.

The following is the **SetHoldOnMailboxesSoapOut** WSDL message specification.

```
<wsdl:message name="SetHoldOnMailboxesSoapOut" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:part name="SetHoldOnMailboxesResult" element="m:SetHoldOnMailboxesResponse"/>
  <wsdl:part name="ServerVersion" element="t:ServerVersionInfo"/>
</wsdl:message>
```

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

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

Part name	Element/type	Description
SetHoldOnMailboxesResult	**SetHoldOnMailboxesResponse**	Specifies the SOAP body of the response that contains the result of the request.
ServerVersion	**ServerVersionInfo** ([MS-OXWSCDATA] section 2.2.3.12)	Specifies a SOAP header that identifies the server version for the response.

A successful **SetHoldOnMailboxes** request, as specified in section 3.1.4.5.2.1, returns a **SetHoldOnMailboxesResponse** element with the **ResponseClass** (as specified in [MS-OXWSCDATA] section 2.2.4.65) attribute set to "Success". The **ResponseCode** (as specified in [MS-OXWSCDATA] section 2.2.4.65) element of the **SetHoldOnMailboxesResponse** element is set to "NoError".

If the **SetHoldOnMailboxes** request is not successful, it returns a **SetHoldOnMailboxesResponse** element with the **ResponseClass** (as specified in [MS-OXWSCDATA] section 2.2.4.65) attribute set to "Error". The **ResponseCode** (as specified in [MS-OXWSCDATA] section 2.2.4.65) element of the **SetHoldOnMailboxesResponse** element is set to one of the common errors defined in [MS-OXWSCDATA] section 2.2.5.24.

3.1.4.5.2 Elements

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

Element	Description
SetHoldOnMailboxes	The input data for the **SetHoldOnMailboxes** WSDL operation.
SetHoldOnMailboxesResponse	The result data for the **SetHoldOnMailboxes** WSDL operation.

3.1.4.5.2.1   SetHoldOnMailboxes

The **SetHoldOnMailboxes** element specifies the input data for the **SetHoldOnMailboxes** WSDL operation.

```
<xs:element name="SetHoldOnMailboxes" type="m:SetHoldOnMailboxesType"
xmlns:xs="http://www.w3.org/2001/XMLSchema"/>
```

3.1.4.5.2.2   SetHoldOnMailboxesResponse

The **SetHoldOnMailboxesResponse** element specifies the result data for the **SetHoldOnMailboxes** WSDL operation.

```
<xs:element name="SetHoldOnMailboxesResponse" type="m:SetHoldOnMailboxesResponseMessageType"
xmlns:xs="http://www.w3.org/2001/XMLSchema"/>
```

3.1.4.5.3 Complex Types

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

Complex type	Description
SetHoldOnMailboxesResponseMessageType	Specifies the response message for a **SetHoldOnMailboxes** operation, as specified in section 3.1.4.5.
SetHoldOnMailboxesType	Specifies a request to set a query-based hold on mailboxes.

3.1.4.5.3.1   SetHoldOnMailboxesType

Namespace: http://schemas.microsoft.com/exchange/services/2006/messages

The **SetHoldOnMailboxesType** complex type specifies a request to set a query-based hold on mailboxes. This type extends the **BaseRequestType** complex type, as described in [MS-OXWSCDATA] section 2.2.4.17.

```
<xs:complexType name="SetHoldOnMailboxesType" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexContent mixed="false">
    <xs:extension base="m:BaseRequestType">
      <xs:sequence>
        <xs:element minOccurs="1" name="ActionType" type="t:HoldActionType"/>
        <xs:element minOccurs="1" name="HoldId" type="xs:string"/>
        <xs:element minOccurs="1" name="Query" type="xs:string"/>
        <xs:element minOccurs="0" name="Mailboxes" type="t:ArrayOfStringsType"/>
        <xs:element minOccurs="0" name="Language" type="xs:string"/>
        <xs:element minOccurs="0" name="IncludeNonIndexableItems" type="xs:boolean"/>
        <xs:element minOccurs="0" name="Deduplication" type="xs:boolean"/>
        <xs:element minOccurs="0" name="InPlaceHoldIdentity" type="xs:string"/>
        <xs:element minOccurs="0" name="ItemHoldPeriod" type="xs:string"/>
      </xs:sequence>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>
```

ActionType: An element of type **HoldActionType** , as defined in section 3.1.4.5.4.1 that represents the type of action.

HoldId: An element of type **string**, as defined in [XMLSCHEMA2] section 3.2.1, that represents the identifier of the hold.

Query: An element of type **string** that represents a query.

Mailboxes: An element of type **ArrayOfStringsType**, as defined in [MS-OXWSCDATA] section 2.2.4.13, contains a set of **distinguished names (DN)** that represent the mailboxes to which the query-based hold will apply.

Language: An element of type **string** that represents the language of the query, for example, "en-us".<4>

IncludeNonIndexableItems: An element of type **boolean**, as defined in [XMLSCHEMA2] section 3.2.2, that indicates whether to include items that cannot be indexed.

Deduplication: An element of type **boolean** that indicates whether to remove duplicates from the search result.

InPlaceHoldIdentity: An element of type **string** that specifies the identity of a hold that preserves the mailbox items.

ItemHoldPeriod: An element of type **string** that specifies the time period for the hold.

3.1.4.5.3.2 SetHoldOnMailboxesResponseMessageType

Namespace: http://schemas.microsoft.com/exchange/services/2006/messages

The **SetHoldOnMailboxesResponseMessageType** complex type specifies the response message for a **SetHoldOnMailboxes** operation, as specified in section 3.1.4.5. This type extends the **ResponseMessageType** complex type, as described in [MS-OXWSCDATA] section 2.2.4.65.

```
<xs:complexType name="SetHoldOnMailboxesResponseMessageType"
xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexContent mixed="false">
    <xs:extension base="m:ResponseMessageType">
      <xs:sequence>
        <xs:element minOccurs="0" name="MailboxHoldResult" type="t:MailboxHoldResultType"/>
      </xs:sequence>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>
```

MailboxHoldResult: An element of type **MailboxHoldResultType** complex type, as defined in section 2.2.4.5, that represents the result of a **SetHoldOnMailboxes** operation, as specified in section 3.1.4.5.

3.1.4.5.4 Simple Types

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

Simple type	Description
HoldActionType	Specifies a hold action.

3.1.4.5.4.1   HoldActionType

Namespace: http://schemas.microsoft.com/exchange/services/2006/types

The **HoldActionType** simple type specifies a hold action.

```
<xs:simpleType name="HoldActionType" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:restriction base="xs:string">
    <xs:enumeration value="Create"/>
    <xs:enumeration value="Update"/>
    <xs:enumeration value="Remove"/>
  </xs:restriction>
</xs:simpleType>
```

The following table specifies the allowable values for the **HoldActionType** simple type.

Value	Meaning
Create	The action is placing a hold.
Update	The action is updating a hold.
Remove	The action is releasing a hold.

3.1.4.5.5 Attributes

None.

3.1.4.5.6 Groups

None.

3.1.4.5.7 Attribute Groups

None.

3.1.5   Timer Events

None.

3.1.6   Other Local Events

None.

4 Protocol Examples

4.1 Setting Holds On Mailboxes

This example of the **SetHoldOnMailboxes** operation, as defined in section 3.1.4.5, shows how the client requests the server to set holds on mailboxes. In this example, the client requests holds on two mailboxes and assigns the hold ID "HoldId2".

```
<?xml version="1.0" encoding="UTF-8"?>
<soap:Envelope xmlns:soap="http://schemas.xmlsoap.org/soap/envelope/"
          xmlns:t="http://schemas.microsoft.com/exchange/services/2006/types"
          xmlns:m="http://schemas.microsoft.com/exchange/services/2006/messages">
  <soap:Header>
    <t:RequestServerVersion Version="Exchange2013" />
  </soap:Header>
  <soap:Body >
    <m:SetHoldOnMailboxes>
      <m:ActionType>Create</m:ActionType>
      <m:HoldId>HoldId2</m:HoldId>
      <m:Query>test</m:Query>
      <m:Mailboxes>
        <t:String>/o=First Organization/ou=Exchange Administrative Group
(FYDIBOHF23SPDLT)/cn=Recipients/cn=1fa841ff5e4749ba93ecc0fd98c2cadf-Willi</t:String>
         <t:String>/o=First Organization/ou=Exchange Administrative Group
(FYDIBOHF23SPDLT)/cn=Recipients/cn=aed2146adaa24ffc9f0f279917e8de95-Micha</t:String>
      </m:Mailboxes>
      <m:Language>English</m:Language>
      <m:IncludeNonIndexableItems>false</m:IncludeNonIndexableItems>
      <m:Deduplication>true</m:Deduplication>
    </m:SetHoldOnMailboxes>
  </soap:Body>
</soap:Envelope>
```

The server returns the following successful response to the client.

```
<?xml version="1.0" encoding="utf-8"?>
<s:Envelope xmlns:s="http://schemas.xmlsoap.org/soap/envelope/">
  <s:Header>
    <h:ServerVersionInfo MajorVersion="15"
                         MinorVersion="0"
                         MajorBuildNumber="526"
                         MinorBuildNumber="0"
                         Version="Exchange2013"
          xmlns:h="http://schemas.microsoft.com/exchange/services/2006/types"
          xmlns="http://schemas.microsoft.com/exchange/services/2006/types"
          xmlns:xsd="http://www.w3.org/2001/XMLSchema"
          xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"/>
  </s:Header>
  <s:Body xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
        xmlns:xsd="http://www.w3.org/2001/XMLSchema">
    <SetHoldOnMailboxesResponse ResponseClass="Success"
          xmlns="http://schemas.microsoft.com/exchange/services/2006/messages">
      <ResponseCode>NoError</ResponseCode>
      <MailboxHoldResult>
        <HoldId
xmlns="http://schemas.microsoft.com/exchange/services/2006/types">HoldId2</HoldId>
        <Query xmlns="http://schemas.microsoft.com/exchange/services/2006/types">test</Query>
        <MailboxHoldStatuses
xmlns="http://schemas.microsoft.com/exchange/services/2006/types">
          <MailboxHoldStatus>
            <Mailbox>/o=First Organization/ou=Exchange Administrative Group
(FYDIBOHF23SPDLT)/cn=Recipients/cn=1fa841ff5e4749ba93ecc0fd98c2cadf-Willi</Mailbox>
```

```
            <Status>Pending</Status>
            <AdditionalInfo/>
          </MailboxHoldStatus>
          <MailboxHoldStatus>
            <Mailbox>/o=First Organization/ou=Exchange Administrative Group
(FYDIBOHF23SPDLT)/cn=Recipients/cn=aed2146adaa24ffc9f0f279917e8de95-Micha</Mailbox>
            <Status>Pending</Status>
            <AdditionalInfo/>
          </MailboxHoldStatus>
        </MailboxHoldStatuses>
      </MailboxHoldResult>
    </SetHoldOnMailboxesResponse>
  </s:Body>
</s:Envelope>
```

4.2   Getting Mailboxes With Holds

This example of the **GetHoldOnMailboxes** operation, as defined in section 3.1.4.2, shows how the client sends a request to the server to get all mailboxes with hold ID "HoldId2".

```
<?xml version="1.0" encoding="UTF-8"?>
<soap:Envelope xmlns:soap="http://schemas.xmlsoap.org/soap/envelope/"
        xmlns:t=http://schemas.microsoft.com/exchange/services/2006/types
        xmlns:m="http://schemas.microsoft.com/exchange/services/2006/messages">
  <soap:Header>
    <t:RequestServerVersion Version="Exchange2013" />
  </soap:Header>
  <soap:Body >
    <m:GetHoldOnMailboxes>
      <m:HoldId>HoldId2</m:HoldId>
    </m:GetHoldOnMailboxes>
  </soap:Body>
</soap:Envelope>
```

The server sends the following successful response to the client. This response returns two mailboxes.

```
<?xml version="1.0" encoding="utf-8"?>
<s:Envelope xmlns:s="http://schemas.xmlsoap.org/soap/envelope/">
  <s:Header>
    <h:ServerVersionInfo MajorVersion="15"
                         MinorVersion="0"
                         MajorBuildNumber="526"
                         MinorBuildNumber="0"
                         Version="Exchange2013"
          xmlns:h="http://schemas.microsoft.com/exchange/services/2006/types"
          xmlns="http://schemas.microsoft.com/exchange/services/2006/types"
          xmlns:xsd="http://www.w3.org/2001/XMLSchema"
          xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"/>
  </s:Header>
  <s:Body xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
          xmlns:xsd="http://www.w3.org/2001/XMLSchema">
    <GetHoldOnMailboxesResponse ResponseClass="Success"
        xmlns="http://schemas.microsoft.com/exchange/services/2006/messages">
      <ResponseCode>NoError</ResponseCode>
        <MailboxHoldResult>
          <HoldId
xmlns="http://schemas.microsoft.com/exchange/services/2006/types">HoldId2</HoldId>
          <Query
xmlns="http://schemas.microsoft.com/exchange/services/2006/types">test</Query>
          <MailboxHoldStatuses
xmlns="http://schemas.microsoft.com/exchange/services/2006/types">
          <MailboxHoldStatus>
```

```
                <Mailbox>/o=First Organization/ou=Exchange Administrative Group
(FYDIBOHF23SPDLT)/cn=Recipients/cn=1fa841ff5e4749ba93ecc0fd98c2cadf-Willi</Mailbox>
                <Status>OnHold</Status>
                <AdditionalInfo/>
            </MailboxHoldStatus>
            <MailboxHoldStatus>
                <Mailbox>/o=First Organization/ou=Exchange Administrative Group
(FYDIBOHF23SPDLT)/cn=Recipients/cn=aed2146adaa24ffc9f0f279917e8de95-Micha</Mailbox>
                <Status>OnHold</Status>
                <AdditionalInfo/>
            </MailboxHoldStatus>
          </MailboxHoldStatuses>
        </MailboxHoldResult>
      </GetHoldOnMailboxesResponse>
    </s:Body>
</s:Envelope>
```

4.3   Getting Searchable Mailboxes

This example of the **GetSearchableMailboxes** operation, as defined in section 3.1.4.3, shows a
request from the client to get searchable mailboxes.

```
<?xml version="1.0" encoding="UTF-8"?>
<soap:Envelope xmlns:soap="http://schemas.xmlsoap.org/soap/envelope/"
         xmlns:t="http://schemas.microsoft.com/exchange/services/2006/types"
         xmlns:m="http://schemas.microsoft.com/exchange/services/2006/messages">
  <soap:Header>
    <t:RequestServerVersion Version="Exchange2013" />
  </soap:Header>
  <soap:Body >
    <m:GetSearchableMailboxes>
      <m:SearchFilter>lolgroup</m:SearchFilter>
      <m:ExpandGroupMembership>true</m:ExpandGroupMembership>
    </m:GetSearchableMailboxes>
  </soap:Body>
</soap:Envelope>
```

This server sends the following successful response for an unexpanded distribution group.

```
<?xml version="1.0" encoding="utf-8"?>
<s:Envelope xmlns:s="http://schemas.xmlsoap.org/soap/envelope/">
  <s:Header>
    <h:ServerVersionInfo MajorVersion="15"
                         MinorVersion="0"
                         MajorBuildNumber="526"
                         MinorBuildNumber="0"
                         Version="Exchange2013"
            xmlns:h="http://schemas.microsoft.com/exchange/services/2006/types"
            xmlns="http://schemas.microsoft.com/exchange/services/2006/types"
            xmlns:xsd="http://www.w3.org/2001/XMLSchema"
            xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"/>
  </s:Header>
  <s:Body xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
          xmlns:xsd="http://www.w3.org/2001/XMLSchema">
    <GetSearchableMailboxesResponse ResponseClass="Success"
          xmlns="http://schemas.microsoft.com/exchange/services/2006/messages">
      <ResponseCode>NoError</ResponseCode>
      <SearchableMailboxes>
        <SearchableMailbox xmlns="http://schemas.microsoft.com/exchange/services/2006/types">
          <Guid>33a408fe-1574-4e3b-99f5-6e1e001f3035</Guid>
          <PrimarySmtpAddress>LOLgroup@exhb-
93591dom.extest.microsoft.com</PrimarySmtpAddress>
```

```
            <IsExternalMailbox>false</IsExternalMailbox>
            <ExternalEmailAddress/>
            <DisplayName>LOLgroup</DisplayName>
            <IsMembershipGroup>true</IsMembershipGroup>
            <ReferenceId>/o=First Organization/ou=Exchange Administrative Group
(FYDIBOHF23SPDLT)/cn=Recipients/cn=85793b958a0b4295b13b8f02b81bf9cc-LOLgroup</ReferenceId>
          </SearchableMailbox>
        </SearchableMailboxes>
      </GetSearchableMailboxesResponse>
    </s:Body>
</s:Envelope>
```

The server sends the following response for an expanded distribution group.

```
<?xml version="1.0" encoding="utf-8"?>
<s:Envelope xmlns:s="http://schemas.xmlsoap.org/soap/envelope/">
  <s:Header>
    <h:ServerVersionInfo MajorVersion="15"
                         MinorVersion="0"
                         MajorBuildNumber="526"
                         MinorBuildNumber="0"
                         Version="Exchange2013"
              xmlns:h="http://schemas.microsoft.com/exchange/services/2006/types"
              xmlns="http://schemas.microsoft.com/exchange/services/2006/types"
              xmlns:xsd="http://www.w3.org/2001/XMLSchema"
              xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"/>
  </s:Header>
  <s:Body xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
          xmlns:xsd="http://www.w3.org/2001/XMLSchema">
    <GetSearchableMailboxesResponse ResponseClass="Success"
            xmlns="http://schemas.microsoft.com/exchange/services/2006/messages">
      <ResponseCode>NoError</ResponseCode>
      <SearchableMailboxes>
        <SearchableMailbox
              xmlns="http://schemas.microsoft.com/exchange/services/2006/types">
          <Guid>e5d42cdf-a027-4ec6-986b-6fa0ecadb9f5</Guid>
          <PrimarySmtpAddress>JSmith@exhb-
              93591dom.extest.microsoft.com</PrimarySmtpAddress>
          <IsExternalMailbox>false</IsExternalMailbox>
          <ExternalEmailAddress/>
          <DisplayName>Julia Smith</DisplayName>
          <IsMembershipGroup>false</IsMembershipGroup>
          <ReferenceId>/o=First Organization/ou=Exchange Administrative Group
(FYDIBOHF23SPDLT)/cn=Recipients/cn=0a4fc86f888246159405d60956dd02d7-Julia</ReferenceId>
        </SearchableMailbox>
        <SearchableMailbox xmlns="http://schemas.microsoft.com/exchange/services/2006/types">
          <Guid>45d0fffb-5013-459a-a34c-52453b30e9ca</Guid>
          <PrimarySmtpAddress>LMoore@exhb-93591dom.extest.microsoft.com</PrimarySmtpAddress>
          <IsExternalMailbox>false</IsExternalMailbox>
          <ExternalEmailAddress/>
          <DisplayName>Laura Moore</DisplayName>
          <IsMembershipGroup>false</IsMembershipGroup>
          <ReferenceId>/o=First Organization/ou=Exchange Administrative Group
(FYDIBOHF23SPDLT)/cn=Recipients/cn=2910d8f8222f4374bbf9338d8f9d714b-Laura</ReferenceId>
        </SearchableMailbox>
        <SearchableMailbox xmlns="http://schemas.microsoft.com/exchange/services/2006/types">
          <Guid>3c620d04-8b33-435e-95be-5b9351599576</Guid>
          <PrimarySmtpAddress>SBrown@exhb-93591dom.extest.microsoft.com</PrimarySmtpAddress>
          <IsExternalMailbox>false</IsExternalMailbox>
          <ExternalEmailAddress/>
          <DisplayName>Steven Brown</DisplayName>
          <IsMembershipGroup>false</IsMembershipGroup>
          <ReferenceId>/o=First Organization/ou=Exchange Administrative Group
(FYDIBOHF23SPDLT)/cn=Recipients/cn=35181a742f0e47e392c8201a60d13ecf-Steve</ReferenceId>
        </SearchableMailbox>
```

```
            </SearchableMailboxes>
        </GetSearchableMailboxesResponse>
    </s:Body>
</s:Envelope> -->
```

4.4   Searching Mailboxes

This example of the **SearchMailboxes** operation, as defined in section 3.1.4.4, shows a request from the client to the server to search the specified mailboxes.

```
<?xml version="1.0" encoding="UTF-8"?>
<soap:Envelope xmlns:soap="http://schemas.xmlsoap.org/soap/envelope/"
           xmlns:t="http://schemas.microsoft.com/exchange/services/2006/types"
           xmlns:m="http://schemas.microsoft.com/exchange/services/2006/messages">
  <soap:Header>
    <t:RequestServerVersion Version="Exchange2013" />
  </soap:Header>
  <soap:Body >
    <m:SearchMailboxes>
      <m:SearchQueries>
        <t:MailboxQuery>
          <t:Query>Test Item</t:Query>
            <t:MailboxSearchScopes>
              <t:MailboxSearchScope>
                <t:Mailbox>/o=First Organization/ou=Exchange Administrative Group
(FYDIBOHF23SPDLT)/cn=Recipients/cn=35181a742f0e47e392c8201a60d13ecf-Steve</t:Mailbox>
                <t:SearchScope>All</t:SearchScope>
              </t:MailboxSearchScope>
              <t:MailboxSearchScope>
                <t:Mailbox>/o=First Organization/ou=Exchange Administrative Group
(FYDIBOHF23SPDLT)/cn=Recipients/cn=f00c9f70539844beb04001d8f40c572e-Antho</t:Mailbox>
                <t:SearchScope>PrimaryOnly</t:SearchScope>
              </t:MailboxSearchScope>
            </t:MailboxSearchScopes>
        </t:MailboxQuery>
        <t:MailboxQuery>
          <t:Query></t:Query>
            <t:MailboxSearchScopes>
              <t:MailboxSearchScope>
                <t:Mailbox>/o=First Organization/ou=Exchange Administrative Group
(FYDIBOHF23SPDLT)/cn=Recipients/cn=accba4fd5ddf4356b8a0e82ce1645f4e-Danie</t:Mailbox>
                <t:SearchScope>ArchiveOnly</t:SearchScope>
              </t:MailboxSearchScope>
            </t:MailboxSearchScopes>
        </t:MailboxQuery>
      </m:SearchQueries>
      <m:ResultType>StatisticsOnly</m:ResultType>
    </m:SearchMailboxes>
  </soap:Body>
</soap:Envelope>
```

The server sends the following successful response to the client.

```
<?xml version="1.0" encoding="utf-8"?>
<s:Envelope xmlns:s="http://schemas.xmlsoap.org/soap/envelope/">
  <s:Header>
    <h:ServerVersionInfo MajorVersion="15"
                         MinorVersion="0"
                         MajorBuildNumber="526"
                         MinorBuildNumber="0"
                         Version="Exchange2013"
```

```
                xmlns:h="http://schemas.microsoft.com/exchange/services/2006/types"
                xmlns="http://schemas.microsoft.com/exchange/services/2006/types"
                xmlns:xsd="http://www.w3.org/2001/XMLSchema"
                xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"/>
   </s:Header>
   <s:Body xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
           xmlns:xsd="http://www.w3.org/2001/XMLSchema">
     <m:SearchMailboxesResponse
xmlns:m="http://schemas.microsoft.com/exchange/services/2006/messages"

xmlns:t="http://schemas.microsoft.com/exchange/services/2006/types">
       <m:ResponseMessages>
         <m:SearchMailboxesResponseMessage ResponseClass="Success">
           <m:ResponseCode>NoError</m:ResponseCode>
            <m:SearchMailboxesResult>
             <t:SearchQueries>
               <t:MailboxQuery>
                 <t:Query>Test Item</t:Query>
                   <t:MailboxSearchScopes>
                     <t:MailboxSearchScope>
                       <t:Mailbox>/o=First Organization/ou=Exchange Administrative Group
FYDIBOHF23SPDLT)/cn=Recipients/cn=35181a742f0e47e392c8201a60d13ecf-Steve</t:Mailbox>
                          <t:SearchScope>All</t:SearchScope>


                     </t:MailboxSearchScope>
                     <t:MailboxSearchScope>
                       <t:Mailbox>/o=First Organization/ou=Exchange Administrative Group
(FYDIBOHF23SPDLT)/cn=Recipients/cn=f00c9f70539844beb04001d8f40c572e-Antho</t:Mailbox>
                          <t:SearchScope>PrimaryOnly</t:SearchScope>
                     </t:MailboxSearchScope>
                   </t:MailboxSearchScopes>
                </t:MailboxQuery>
               </t:SearchQueries>
               <t:ResultType>StatisticsOnly</t:ResultType>
               <t:ItemCount>2</t:ItemCount>
               <t:Size>20206</t:Size>
               <t:PageItemCount>0</t:PageItemCount>
               <t:PageItemSize>0</t:PageItemSize>
               <t:KeywordStats>
                 <t:KeywordStat>
                    <t:Keyword>Test Item</t:Keyword>
                    <t:ItemHits>2</t:ItemHits>
                    <t:Size>20206</t:Size>
                 </t:KeywordStat>
               </t:KeywordStats>
               <t:FailedMailboxes>
                 <t:FailedMailbox>
                    <t:Mailbox>/o=First Organization/ou=Exchange Administrative Group
(FYDIBOHF23SPDLT)/cn=Recipients/cn=accba4fd5ddf4356b8a0e82ce1645f4e-Danie</t:Mailbox>
                    <t:ErrorCode>0</t:ErrorCode>
                    <t:ErrorMessage>The search query can't be empty.</t:ErrorMessage>
                    <t:IsArchive>true</t:IsArchive>
                 </t:FailedMailbox>
               </t:FailedMailboxes>
            </m:SearchMailboxesResult>
          </m:SearchMailboxesResponseMessage>
       </m:ResponseMessages>
     </m:SearchMailboxesResponse>
   </s:Body>
</s:Envelope>
```

5 Security

5.1 Security Considerations for Implementers

None.

5.2 Index of Security Parameters

None.

6   Appendix A: Full WSDL

For ease of implementation, the full WSDL is provided in this appendix.

```xml
<?xml version="1.0" encoding="UTF-8"?>
<wsdl:definitions xmlns:m="http://schemas.microsoft.com/exchange/services/2006/messages"
xmlns:soap="http://schemas.xmlsoap.org/wsdl/soap/"
xmlns:t="http://schemas.microsoft.com/exchange/services/2006/types"
targetNamespace="http://schemas.microsoft.com/exchange/services/2006/messages"
xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:types>
    <xs:schema elementFormDefault="qualified"
targetNamespace="http://schemas.microsoft.com/exchange/services/2006/messages"
version="Exchange2016" id="messages" xmlns:xs="http://www.w3.org/2001/XMLSchema">
      <xs:include schemaLocation="MS-OXWSEDISC-messages.xsd"/>
    </xs:schema>
  </wsdl:types>
  <wsdl:portType name="ExchangeServicePortType">
    <wsdl:operation name="GetDiscoverySearchConfiguration">
      <wsdl:input message="m:GetDiscoverySearchConfigurationSoapIn"/>
      <wsdl:output message="m:GetDiscoverySearchConfigurationSoapOut"/>
    </wsdl:operation>
    <wsdl:operation name="GetHoldOnMailboxes">
      <wsdl:input message="m:GetHoldOnMailboxesSoapIn"/>
      <wsdl:output message="m:GetHoldOnMailboxesSoapOut"/>
    </wsdl:operation>
    <wsdl:operation name="GetSearchableMailboxes">
      <wsdl:input message="m:GetSearchableMailboxesSoapIn"/>
      <wsdl:output message="m:GetSearchableMailboxesSoapOut"/>
    </wsdl:operation>
    <wsdl:operation name="SearchMailboxes">
      <wsdl:input message="m:SearchMailboxesSoapIn"/>
      <wsdl:output message="m:SearchMailboxesSoapOut"/>
    </wsdl:operation>
    <wsdl:operation name="SetHoldOnMailboxes">
      <wsdl:input message="m:SetHoldOnMailboxesSoapIn"/>
      <wsdl:output message="m:SetHoldOnMailboxesSoapOut"/>
    </wsdl:operation>
  </wsdl:portType>
  <wsdl:binding name="ExchangeServiceBinding" type="m: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"/>
    <wsdl:operation name="GetDiscoverySearchConfiguration">
      <soap:operation
soapAction="http://schemas.microsoft.com/exchange/services/2006/messages/GetDiscoverySearchCo
nfiguration"/>
      <wsdl:input>
        <soap:header message="m:GetDiscoverySearchConfigurationSoapIn" part="RequestVersion"
use="literal"/>
        <soap:header message="m:GetDiscoverySearchConfigurationSoapIn" part="ManagementRole"
use="literal"/>
        <soap:body use="literal" parts="request"/>
      </wsdl:input>
      <wsdl:output>
        <soap:body use="literal" parts="GetDiscoverySearchConfigurationResult"/>
        <soap:header message="m:GetDiscoverySearchConfigurationSoapOut" part="ServerVersion"
use="literal"/>
      </wsdl:output>
    </wsdl:operation>
    <wsdl:operation name="GetHoldOnMailboxes">
      <soap:operation
soapAction="http://schemas.microsoft.com/exchange/services/2006/messages/GetHoldOnMailboxes"/
>
```

```
      <wsdl:input>
        <soap:header message="m:GetHoldOnMailboxesSoapIn" part="RequestVersion"
use="literal"/>
        <soap:header message="m:GetHoldOnMailboxesSoapIn" part="ManagementRole"
use="literal"/>
        <soap:body use="literal" parts="request"/>
      </wsdl:input>
      <wsdl:output>
        <soap:body use="literal" parts="GetHoldOnMailboxesResult"/>
        <soap:header message="m:GetHoldOnMailboxesSoapOut" part="ServerVersion"
use="literal"/>
      </wsdl:output>
    </wsdl:operation>
    <wsdl:operation name="GetSearchableMailboxes">
      <soap:operation
soapAction="http://schemas.microsoft.com/exchange/services/2006/messages/GetSearchableMailbox
es"/>
      <wsdl:input>
        <soap:header message="m:GetSearchableMailboxesSoapIn" part="RequestVersion"
use="literal"/>
        <soap:header message="m:GetSearchableMailboxesSoapIn" part="ManagementRole"
use="literal"/>
        <soap:body use="literal" parts="request"/>
      </wsdl:input>
      <wsdl:output>
        <soap:body use="literal" parts="GetSearchableMailboxesResult"/>
        <soap:header message="m:GetSearchableMailboxesSoapOut" part="ServerVersion"
use="literal"/>
      </wsdl:output>
    </wsdl:operation>
    <wsdl:operation name="SearchMailboxes">
      <soap:operation
soapAction="http://schemas.microsoft.com/exchange/services/2006/messages/SearchMailboxes"/>
      <wsdl:input>
        <soap:header message="m:SearchMailboxesSoapIn" part="RequestVersion" use="literal"/>
        <soap:header message="m:SearchMailboxesSoapIn" part="ManagementRole" use="literal"/>
        <soap:body use="literal" parts="request"/>
      </wsdl:input>
      <wsdl:output>
        <soap:body use="literal" parts="SearchMailboxesResult"/>
        <soap:header message="m:SearchMailboxesSoapOut" part="ServerVersion" use="literal"/>
      </wsdl:output>
    </wsdl:operation>
    <wsdl:operation name="SetHoldOnMailboxes">
      <soap:operation
soapAction="http://schemas.microsoft.com/exchange/services/2006/messages/SetHoldOnMailboxes"/
>
      <wsdl:input>
        <soap:header message="m:SetHoldOnMailboxesSoapIn" part="RequestVersion"
use="literal"/>
        <soap:header message="m:SetHoldOnMailboxesSoapIn" part="ManagementRole"
use="literal"/>
        <soap:body use="literal" parts="request"/>
      </wsdl:input>
      <wsdl:output>
        <soap:body use="literal" parts="SetHoldOnMailboxesResult"/>
        <soap:header message="m:SetHoldOnMailboxesSoapOut" part="ServerVersion"
use="literal"/>
      </wsdl:output>
    </wsdl:operation>
  </wsdl:binding>
  <wsdl:message name="GetDiscoverySearchConfigurationSoapIn">
    <wsdl:part name="request" element="m:GetDiscoverySearchConfiguration"/>
    <wsdl:part name="RequestVersion" element="t:RequestServerVersion"/>
    <wsdl:part name="ManagementRole" element="t:ManagementRole"/>
  </wsdl:message>
  <wsdl:message name="GetDiscoverySearchConfigurationSoapOut">
```

```
        <wsdl:part name="GetDiscoverySearchConfigurationResult"
  element="m:GetDiscoverySearchConfigurationResponse"/>
        <wsdl:part name="ServerVersion" element="t:ServerVersionInfo"/>
    </wsdl:message>
    <wsdl:message name="GetHoldOnMailboxesSoapIn">
        <wsdl:part name="request" element="m:GetHoldOnMailboxes"/>
        <wsdl:part name="RequestVersion" element="t:RequestServerVersion"/>
        <wsdl:part name="ManagementRole" element="t:ManagementRole"/>
    </wsdl:message>
    <wsdl:message name="GetHoldOnMailboxesSoapOut">
        <wsdl:part name="GetHoldOnMailboxesResult" element="m:GetHoldOnMailboxesResponse"/>
        <wsdl:part name="ServerVersion" element="t:ServerVersionInfo"/>
    </wsdl:message>
    <wsdl:message name="GetSearchableMailboxesSoapIn">
        <wsdl:part name="request" element="m:GetSearchableMailboxes"/>
        <wsdl:part name="RequestVersion" element="t:RequestServerVersion"/>
        <wsdl:part name="ManagementRole" element="t:ManagementRole"/>
    </wsdl:message>
    <wsdl:message name="GetSearchableMailboxesSoapOut">
        <wsdl:part name="GetSearchableMailboxesResult"
  element="m:GetSearchableMailboxesResponse"/>
        <wsdl:part name="ServerVersion" element="t:ServerVersionInfo"/>
    </wsdl:message>
    <wsdl:message name="SearchMailboxesSoapIn">
        <wsdl:part name="request" element="m:SearchMailboxes"/>
        <wsdl:part name="RequestVersion" element="t:RequestServerVersion"/>
        <wsdl:part name="ManagementRole" element="t:ManagementRole"/>
    </wsdl:message>
    <wsdl:message name="SearchMailboxesSoapOut">
        <wsdl:part name="SearchMailboxesResult" element="m:SearchMailboxesResponse"/>
        <wsdl:part name="ServerVersion" element="t:ServerVersionInfo"/>
    </wsdl:message>
    <wsdl:message name="SetHoldOnMailboxesSoapIn">
        <wsdl:part name="request" element="m:SetHoldOnMailboxes"/>
        <wsdl:part name="RequestVersion" element="t:RequestServerVersion"/>
        <wsdl:part name="ManagementRole" element="t:ManagementRole"/>
    </wsdl:message>
    <wsdl:message name="SetHoldOnMailboxesSoapOut">
        <wsdl:part name="SetHoldOnMailboxesResult" element="m:SetHoldOnMailboxesResponse"/>
        <wsdl:part name="ServerVersion" element="t:ServerVersionInfo"/>
    </wsdl:message>
</wsdl:definitions>
```

7 Appendix B: Full XML Schema

Schema name	Prefix	Section
http://schemas.microsoft.com/exchange/services/2006/messages	m	7.1
http://schemas.microsoft.com/exchange/services/2006/types	t	7.2

For ease of implementation, the following sections provide the full XML schema for this protocol.

7.1 http://schemas.microsoft.com/exchange/services/2006/messages Schema

This section contains the contents of the MS-OXWSEDISC-messages.xsd file and information about additional files that this schema file requires to operate correctly.

MS-OXWSEDISC-messages.xsd includes the files listed in the following table. For the schema file to operate correctly, these files have to be present in the folder that contains the WSDL, types schema, and messages schema files for this protocol.

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

```xml
<?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"
elementFormDefault="qualified"
targetNamespace="http://schemas.microsoft.com/exchange/services/2006/messages"
version="Exchange2016" id="messages" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:import schemaLocation="MS-OXWSEDISC-types.xsd"
namespace="http://schemas.microsoft.com/exchange/services/2006/types"/>
  <xs:include schemaLocation="MS-OXWSCDATA-messages.xsd"/>
  <xs:element name="GetHoldOnMailboxes" type="m:GetHoldOnMailboxesType"/>
  <xs:element name="GetHoldOnMailboxesResponse"
type="m:GetHoldOnMailboxesResponseMessageType"/>
  <xs:complexType name="GetDiscoverySearchConfigurationType">
    <xs:complexContent mixed="false">
      <xs:extension base="m:BaseRequestType">
        <xs:sequence>
          <xs:element minOccurs="0" name="SearchId" type="xs:string"/>
          <xs:element minOccurs="0" name="ExpandGroupMembership" type="xs:boolean"/>
          <xs:element minOccurs="0" name="InPlaceHoldConfigurationOnly" type="xs:boolean"/>
        </xs:sequence>
      </xs:extension>
    </xs:complexContent>
  </xs:complexType>
  <xs:element name="GetDiscoverySearchConfiguration"
type="m:GetDiscoverySearchConfigurationType"/>
  <xs:complexType name="GetDiscoverySearchConfigurationResponseMessageType">
    <xs:complexContent mixed="false">
      <xs:extension base="m:ResponseMessageType">
        <xs:sequence>
          <xs:element name="DiscoverySearchConfigurations"
type="t:ArrayOfDiscoverySearchConfigurationType"/>
        </xs:sequence>
      </xs:extension>
```

```
        </xs:complexContent>
      </xs:complexType>
      <xs:element name="GetDiscoverySearchConfigurationResponse"
type="m:GetDiscoverySearchConfigurationResponseMessageType"/>
      <xs:complexType name="GetHoldOnMailboxesResponseMessageType">
        <xs:complexContent mixed="false">
          <xs:extension base="m:ResponseMessageType">
            <xs:sequence>
              <xs:element minOccurs="0" name="MailboxHoldResult" type="t:MailboxHoldResultType"/>
            </xs:sequence>
          </xs:extension>
        </xs:complexContent>
      </xs:complexType>
      <xs:complexType name="GetHoldOnMailboxesType">
        <xs:complexContent mixed="false">
          <xs:extension base="m:BaseRequestType">
            <xs:sequence>
              <xs:element minOccurs="1" name="HoldId" type="xs:string"/>
            </xs:sequence>
          </xs:extension>
        </xs:complexContent>
      </xs:complexType>
      <xs:complexType name="GetSearchableMailboxesType">
        <xs:complexContent mixed="false">
          <xs:extension base="m:BaseRequestType">
            <xs:sequence>
              <xs:element minOccurs="0" name="SearchFilter" type="xs:string"/>
              <xs:element minOccurs="0" name="ExpandGroupMembership" type="xs:boolean"/>
            </xs:sequence>
          </xs:extension>
        </xs:complexContent>
      </xs:complexType>
      <xs:element name="GetSearchableMailboxes" type="m:GetSearchableMailboxesType"/>
      <xs:complexType name="GetSearchableMailboxesResponseMessageType">
        <xs:complexContent mixed="false">
          <xs:extension base="m:ResponseMessageType">
            <xs:sequence>
              <xs:element name="SearchableMailboxes" type="t:ArrayOfSearchableMailboxesType"/>
              <xs:element minOccurs="0" name="FailedMailboxes"
type="t:ArrayOfFailedSearchMailboxesType"/>
            </xs:sequence>
          </xs:extension>
        </xs:complexContent>
      </xs:complexType>
      <xs:element name="GetSearchableMailboxesResponse"
type="m:GetSearchableMailboxesResponseMessageType"/>
      <xs:complexType name="SearchMailboxesType">
        <xs:complexContent mixed="false">
          <xs:extension base="m:BaseRequestType">
            <xs:sequence>
              <xs:element minOccurs="1" name="SearchQueries"
type="t:NonEmptyArrayOfMailboxQueriesType"/>
              <xs:element minOccurs="1" name="ResultType" type="t:SearchResultType"/>
              <xs:element minOccurs="0" name="PreviewItemResponseShape"
type="t:PreviewItemResponseShapeType"/>
              <xs:element minOccurs="0" name="SortBy" type="t:FieldOrderType"/>
              <xs:element minOccurs="0" name="Language" type="xs:string"/>
              <xs:element minOccurs="0" name="Deduplication" type="xs:boolean"/>
              <xs:element minOccurs="0" name="PageSize" type="xs:int"/>
              <xs:element minOccurs="0" name="PageItemReference" type="xs:string"/>
              <xs:element minOccurs="0" name="PageDirection" type="t:SearchPageDirectionType"/>
            </xs:sequence>
          </xs:extension>
        </xs:complexContent>
      </xs:complexType>
      <xs:element name="SearchMailboxes" type="m:SearchMailboxesType"/>
      <xs:complexType name="SearchMailboxesResponseType">
        <xs:complexContent mixed="false">
```

```
        <xs:extension base="m:BaseResponseMessageType"/>
      </xs:complexContent>
    </xs:complexType>
    <xs:element name="SearchMailboxesResponse" type="m:SearchMailboxesResponseType"/>
    <xs:complexType name="SearchMailboxesResponseMessageType">
      <xs:complexContent mixed="false">
        <xs:extension base="m:ResponseMessageType">
          <xs:sequence>
            <xs:element minOccurs="0" name="SearchMailboxesResult"
  type="t:SearchMailboxesResultType"/>
          </xs:sequence>
        </xs:extension>
      </xs:complexContent>
    </xs:complexType>
    <xs:complexType name="SetHoldOnMailboxesType">
      <xs:complexContent mixed="false">
        <xs:extension base="m:BaseRequestType">
          <xs:sequence>
            <xs:element minOccurs="1" name="ActionType" type="t:HoldActionType"/>
            <xs:element minOccurs="1" name="HoldId" type="xs:string"/>
            <xs:element minOccurs="1" name="Query" type="xs:string"/>
            <xs:element minOccurs="0" name="Mailboxes" type="t:ArrayOfStringsType"/>
            <xs:element minOccurs="0" name="Language" type="xs:string"/>
            <xs:element minOccurs="0" name="IncludeNonIndexableItems" type="xs:boolean"/>
            <xs:element minOccurs="0" name="Deduplication" type="xs:boolean"/>
            <xs:element minOccurs="0" name="InPlaceHoldIdentity" type="xs:string"/>
            <xs:element minOccurs="0" name="ItemHoldPeriod" type="xs:string"/>
          </xs:sequence>
        </xs:extension>
      </xs:complexContent>
    </xs:complexType>
    <xs:element name="SetHoldOnMailboxes" type="m:SetHoldOnMailboxesType"/>
    <xs:complexType name="SetHoldOnMailboxesResponseMessageType">
      <xs:complexContent mixed="false">
        <xs:extension base="m:ResponseMessageType">
          <xs:sequence>
            <xs:element minOccurs="0" name="MailboxHoldResult" type="t:MailboxHoldResultType"/>
          </xs:sequence>
        </xs:extension>
      </xs:complexContent>
    </xs:complexType>
    <xs:element name="SetHoldOnMailboxesResponse"
  type="m:SetHoldOnMailboxesResponseMessageType"/>
  </xs:schema>
```

7.2   http://schemas.microsoft.com/exchange/services/2006/types Schema

This section contains the contents of the MS-OXWSEDISC-types.xsd file and information about
additional files that this schema file requires to operate correctly.

MS-OXWSEDISC-types.xsd includes the files listed in the following table. For the schema file to
operate correctly, these files have to be present in the folder that contains the WSDL, types schema,
and messages schema files for this protocol.

File name	Defining specification
MS-OXWSXPROP-types.xsd	[MS-OXWSXPROP] section 2.1
MS-OXWSMSHR-types.xsd	[MS-OXWSMSHR] section 7.2

```xml
<?xml version="1.0" encoding="UTF-8"?>
<xs:schema xmlns:t="http://schemas.microsoft.com/exchange/services/2006/types"
elementFormDefault="qualified"
targetNamespace="http://schemas.microsoft.com/exchange/services/2006/types"
version="Exchange2016" id="types" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:import namespace="http://www.w3.org/XML/1998/namespace"/>
  <xs:include schemaLocation="MS-OXWSXPROP-types.xsd"/>
  <xs:include schemaLocation="MS-OXWSMSHR-types.xsd"/>
  <xs:complexType name="ArrayOfDiscoverySearchConfigurationType">
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="unbounded" name="DiscoverySearchConfiguration"
type="t:DiscoverySearchConfigurationType"/>
    </xs:sequence>
  </xs:complexType>
  <xs:complexType name="ArrayOfFailedSearchMailboxesType">
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="unbounded" name="FailedMailbox"
type="t:FailedSearchMailboxType"/>
    </xs:sequence>
  </xs:complexType>
  <xs:complexType name="ArrayOfKeywordStatisticsSearchResultsType">
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="unbounded" name="KeywordStat"
type="t:KeywordStatisticsSearchResultType"/>
    </xs:sequence>
  </xs:complexType>
  <xs:complexType name="ArrayOfMailboxHoldStatusType">
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="unbounded" name="MailboxHoldStatus"
type="t:MailboxHoldStatusType"/>
    </xs:sequence>
  </xs:complexType>
  <xs:complexType name="ArrayOfMailboxStatisticsItemsType">
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="unbounded" name="MailboxStat"
type="t:MailboxStatisticsItemType"/>
    </xs:sequence>
  </xs:complexType>
  <xs:complexType name="ArrayOfSearchableMailboxesType">
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="unbounded" name="SearchableMailbox"
type="t:SearchableMailboxType"/>
    </xs:sequence>
  </xs:complexType>
  <xs:complexType name="ArrayOfSearchPreviewItemsType">
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="unbounded" name="SearchPreviewItem"
type="t:SearchPreviewItemType"/>
    </xs:sequence>
  </xs:complexType>
  <xs:complexType name="ArrayOfSearchRefinerItemsType">
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="unbounded" name="Refiner"
type="t:SearchRefinerItemType"/>
    </xs:sequence>
  </xs:complexType>
  <xs:complexType name="DiscoverySearchConfigurationType">
    <xs:sequence>
      <xs:element minOccurs="1" maxOccurs="1" name="SearchId" type="xs:string"/>
      <xs:element minOccurs="1" maxOccurs="1" name="SearchQuery" type="xs:string"/>
      <xs:element minOccurs="0" maxOccurs="1" name="SearchableMailboxes"
type="t:ArrayOfSearchableMailboxesType"/>
      <xs:element minOccurs="0" maxOccurs="1" name="InPlaceHoldIdentity" type="xs:string"/>
      <xs:element minOccurs="0" maxOccurs="1" name="ManagedByOrganization" type="xs:string"/>
      <xs:element minOccurs="0" maxOccurs="1" name="Language" type="xs:string"/>
    </xs:sequence>
  </xs:complexType>
  <xs:complexType name="FailedSearchMailboxType">
```

```xml
    <xs:sequence>
      <xs:element minOccurs="1" maxOccurs="1" name="Mailbox" type="xs:string"/>
      <xs:element minOccurs="1" maxOccurs="1" name="ErrorCode" type="xs:int"/>
      <xs:element minOccurs="1" maxOccurs="1" name="ErrorMessage" type="xs:string"/>
      <xs:element minOccurs="1" maxOccurs="1" name="IsArchive" type="xs:boolean"/>
    </xs:sequence>
  </xs:complexType>
  <xs:simpleType name="HoldActionType">
    <xs:restriction base="xs:string">
      <xs:enumeration value="Create"/>
      <xs:enumeration value="Update"/>
      <xs:enumeration value="Remove"/>
    </xs:restriction>
  </xs:simpleType>
  <xs:simpleType name="HoldStatusType">
    <xs:restriction base="xs:string">
      <xs:enumeration value="NotOnHold"/>
      <xs:enumeration value="Pending"/>
      <xs:enumeration value="OnHold"/>
      <xs:enumeration value="PartialHold"/>
      <xs:enumeration value="Failed"/>
    </xs:restriction>
  </xs:simpleType>
  <xs:complexType name="KeywordStatisticsSearchResultType">
    <xs:sequence>
      <xs:element minOccurs="1" maxOccurs="1" name="Keyword" type="xs:string"/>
      <xs:element minOccurs="1" maxOccurs="1" name="ItemHits" type="xs:int"/>
      <xs:element minOccurs="1" maxOccurs="1" name="Size" type="xs:long"/>
    </xs:sequence>
  </xs:complexType>
  <xs:complexType name="ArrayOfKeywordStatisticsSearchResultsType">
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="unbounded" name="KeywordStat"
type="t:KeywordStatisticsSearchResultType"/>
    </xs:sequence>
  </xs:complexType>
  <xs:complexType name="MailboxStatisticsSearchResultType">
    <xs:sequence>
      <xs:element minOccurs="1" maxOccurs="1" name="UserMailbox" type="t:UserMailboxType"/>
      <xs:element minOccurs="0" maxOccurs="1" name="KeywordStatisticsSearchResult"
type="t:KeywordStatisticsSearchResultType"/>
    </xs:sequence>
  </xs:complexType>
  <xs:complexType name="MailboxHoldResultType">
    <xs:sequence>
      <xs:element name="HoldId" type="xs:string"/>
      <xs:element minOccurs="0" name="Query" type="xs:string"/>
      <xs:element name="MailboxHoldStatuses" type="t:ArrayOfMailboxHoldStatusType"/>
    </xs:sequence>
  </xs:complexType>
  <xs:complexType name="MailboxHoldStatusType">
    <xs:sequence>
      <xs:element minOccurs="1" maxOccurs="1" name="Mailbox" type="xs:string"/>
      <xs:element minOccurs="1" maxOccurs="1" name="Status" type="t:HoldStatusType"/>
      <xs:element minOccurs="0" maxOccurs="1" name="AdditionalInfo" type="xs:string"/>
    </xs:sequence>
  </xs:complexType>
  <xs:complexType name="MailboxQueryType">
    <xs:sequence>
      <xs:element minOccurs="1" maxOccurs="1" name="Query" type="xs:string"/>
      <xs:element minOccurs="1" maxOccurs="1" name="MailboxSearchScopes"
type="t:NonEmptyArrayOfMailboxSearchScopesType"/>
    </xs:sequence>
  </xs:complexType>
  <xs:simpleType name="MailboxSearchLocationType">
    <xs:restriction base="xs:string">
      <xs:enumeration value="PrimaryOnly"/>
      <xs:enumeration value="ArchiveOnly"/>
```

```
          <xs:enumeration value="All"/>
        </xs:restriction>
      </xs:simpleType>
      <xs:complexType name="ExtendedAttributeType">
        <xs:sequence>
          <xs:element minOccurs="1" maxOccurs="1" name="Name" type="xs:string"/>
          <xs:element minOccurs="1" maxOccurs="1" name="Value" type="xs:string"/>
        </xs:sequence>
      </xs:complexType>
      <xs:complexType name="ArrayOfExtendedAttributesType">
        <xs:sequence>
          <xs:element minOccurs="0" maxOccurs="unbounded" name="ExtendedAttribute"
type="t:ExtendedAttributeType"/>
        </xs:sequence>
      </xs:complexType>
      <xs:complexType name="MailboxSearchScopeType">
        <xs:sequence>
          <xs:element minOccurs="1" maxOccurs="1" name="Mailbox" type="xs:string"/>
          <xs:element minOccurs="1" maxOccurs="1" name="SearchScope"
type="t:MailboxSearchLocationType"/>
          <xs:element minOccurs="0" maxOccurs="1" name="ExtendedAttributes"
type="t:ArrayOfExtendedAttributesType"/>
        </xs:sequence>
      </xs:complexType>
      <xs:complexType name="MailboxStatisticsItemType">
        <xs:sequence>
          <xs:element minOccurs="1" maxOccurs="1" name="MailboxId" type="xs:string"/>
          <xs:element minOccurs="1" maxOccurs="1" name="DisplayName" type="xs:string"/>
          <xs:element minOccurs="1" maxOccurs="1" name="ItemCount" type="xs:long"/>
          <xs:element minOccurs="1" maxOccurs="1" name="Size" type="xs:long"/>
        </xs:sequence>
      </xs:complexType>
      <xs:complexType name="NonEmptyArrayOfExtendedFieldURIsType">
        <xs:choice maxOccurs="unbounded">
          <xs:element name="ExtendedFieldURI" type="t:PathToExtendedFieldType"/>
        </xs:choice>
      </xs:complexType>
      <xs:complexType name="NonEmptyArrayOfMailboxSearchScopesType">
        <xs:sequence>
          <xs:element minOccurs="1" maxOccurs="unbounded" name="MailboxSearchScope"
type="t:MailboxSearchScopeType"/>
        </xs:sequence>
      </xs:complexType>
      <xs:complexType name="NonEmptyArrayOfMailboxQueriesType">
        <xs:sequence>
          <xs:element minOccurs="1" maxOccurs="unbounded" name="MailboxQuery"
type="t:MailboxQueryType"/>
        </xs:sequence>
      </xs:complexType>
      <xs:simpleType name="PreviewItemBaseShapeType">
        <xs:restriction base="xs:string">
          <xs:enumeration value="Default"/>
          <xs:enumeration value="Compact"/>
        </xs:restriction>
      </xs:simpleType>
      <xs:complexType name="PreviewItemMailboxType">
        <xs:sequence>
          <xs:element minOccurs="1" maxOccurs="1" name="MailboxId" type="xs:string"/>
          <xs:element minOccurs="1" maxOccurs="1" name="PrimarySmtpAddress" type="xs:string"/>
        </xs:sequence>
      </xs:complexType>
      <xs:complexType name="PreviewItemResponseShapeType">
        <xs:sequence>
          <xs:element minOccurs="1" maxOccurs="1" name="BaseShape"
type="t:PreviewItemBaseShapeType"/>
          <xs:element minOccurs="0" maxOccurs="1" name="AdditionalProperties"
type="t:NonEmptyArrayOfExtendedFieldURIsType"/>
        </xs:sequence>
```

```
      </xs:complexType>
      <xs:complexType name="SearchableMailboxType">
        <xs:sequence>
          <xs:element minOccurs="1" maxOccurs="1" name="Guid" type="t:GuidType"/>
          <xs:element minOccurs="1" maxOccurs="1" name="PrimarySmtpAddress" type="xs:string"/>
          <xs:element minOccurs="1" maxOccurs="1" name="IsExternalMailbox" type="xs:boolean"/>
          <xs:element minOccurs="1" maxOccurs="1" name="ExternalEmailAddress" type="xs:string"/>
          <xs:element minOccurs="1" maxOccurs="1" name="DisplayName" type="xs:string"/>
          <xs:element minOccurs="1" maxOccurs="1" name="IsMembershipGroup" type="xs:boolean"/>
          <xs:element minOccurs="1" maxOccurs="1" name="ReferenceId" type="xs:string"/>
        </xs:sequence>
      </xs:complexType>
      <xs:complexType name="SearchMailboxesResultType">
        <xs:sequence>
          <xs:element minOccurs="1" name="SearchQueries"
type="t:NonEmptyArrayOfMailboxQueriesType"/>
          <xs:element minOccurs="1" name="ResultType" type="t:SearchResultType"/>
          <xs:element minOccurs="1" name="ItemCount" type="xs:long"/>
          <xs:element minOccurs="1" name="Size" type="xs:long"/>
          <xs:element minOccurs="1" name="PageItemCount" type="xs:int"/>
          <xs:element minOccurs="1" name="PageItemSize" type="xs:long"/>
          <xs:element minOccurs="0" name="KeywordStats"
type="t:ArrayOfKeywordStatisticsSearchResultsType"/>
          <xs:element minOccurs="0" name="Items" type="t:ArrayOfSearchPreviewItemsType"/>
          <xs:element minOccurs="0" name="FailedMailboxes"
type="t:ArrayOfFailedSearchMailboxesType"/>
          <xs:element minOccurs="0" name="Refiners" type="t:ArrayOfSearchRefinerItemsType"/>
          <xs:element minOccurs="0" name="MailboxStats"
type="t:ArrayOfMailboxStatisticsItemsType"/>
        </xs:sequence>
      </xs:complexType>
      <xs:simpleType name="SearchPageDirectionType">
        <xs:restriction base="xs:string">
          <xs:enumeration value="Previous"/>
          <xs:enumeration value="Next"/>
        </xs:restriction>
      </xs:simpleType>
      <xs:complexType name="SearchPreviewItemType">
        <xs:sequence>
          <xs:element minOccurs="1" maxOccurs="1" name="Id" type="t:ItemIdType"/>
          <xs:element minOccurs="0" maxOccurs="1" name="Mailbox"
type="t:PreviewItemMailboxType"/>
          <xs:element minOccurs="0" maxOccurs="1" name="ParentId" type="t:ItemIdType"/>
          <xs:element minOccurs="0" maxOccurs="1" name="ItemClass" type="t:ItemClassType"/>
          <xs:element minOccurs="0" maxOccurs="1" name="UniqueHash" type="xs:string"/>
          <xs:element minOccurs="0" maxOccurs="1" name="SortValue" type="xs:string"/>
          <xs:element minOccurs="0" maxOccurs="1" name="OwaLink" type="xs:string"/>
          <xs:element minOccurs="0" maxOccurs="1" name="Sender" type="xs:string"/>
          <xs:element minOccurs="0" maxOccurs="1" name="ToRecipients"
type="t:ArrayOfSmtpAddressType"/>
          <xs:element minOccurs="0" maxOccurs="1" name="CcRecipients"
type="t:ArrayOfSmtpAddressType"/>
          <xs:element minOccurs="0" maxOccurs="1" name="BccRecipients"
type="t:ArrayOfSmtpAddressType"/>
          <xs:element minOccurs="0" maxOccurs="1" name="CreatedTime" type="xs:dateTime"/>
          <xs:element minOccurs="0" maxOccurs="1" name="ReceivedTime" type="xs:dateTime"/>
          <xs:element minOccurs="0" maxOccurs="1" name="SentTime" type="xs:dateTime"/>
          <xs:element minOccurs="0" maxOccurs="1" name="Subject" type="xs:string"/>
          <xs:element minOccurs="0" maxOccurs="1" name="Size" type="xs:long"/>
          <xs:element minOccurs="0" maxOccurs="1" name="Preview" type="xs:string"/>
          <xs:element minOccurs="0" maxOccurs="1" name="Importance"
type="t:ImportanceChoicesType"/>
          <xs:element minOccurs="0" maxOccurs="1" name="Read" type="xs:boolean"/>
          <xs:element minOccurs="0" maxOccurs="1" name="HasAttachment" type="xs:boolean"/>
          <xs:element minOccurs="0" maxOccurs="1" name="ExtendedProperties"
type="t:NonEmptyArrayOfExtendedPropertyType"/>
        </xs:sequence>
      </xs:complexType>
```

```xml
    <xs:complexType name="SearchRefinerItemType">
      <xs:sequence>
        <xs:element minOccurs="1" maxOccurs="1" name="Name" type="xs:string"/>
        <xs:element minOccurs="1" maxOccurs="1" name="Value" type="xs:string"/>
        <xs:element minOccurs="1" maxOccurs="1" name="Count" type="xs:long"/>
        <xs:element minOccurs="1" maxOccurs="1" name="Token" type="xs:string"/>
      </xs:sequence>
    </xs:complexType>
    <xs:simpleType name="SearchResultType">
      <xs:restriction base="xs:string">
        <xs:enumeration value="StatisticsOnly"/>
        <xs:enumeration value="PreviewOnly"/>
      </xs:restriction>
    </xs:simpleType>
  </xs:schema>
```

8 Appendix C: Product Behavior

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

- Microsoft Exchange Server 2013

- Microsoft SharePoint Server 2013

- Microsoft Exchange Server 2016 Preview

- Microsoft SharePoint Server 2016 Preview

Exceptions, if any, are noted below. If a service pack or Quick Fix Engineering (QFE) number appears with the product version, behavior changed in that service pack or QFE. The new behavior also applies to subsequent service packs of the product unless otherwise specified. If a product edition appears with the product version, behavior is different in that product edition.

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

<1> Section 2.2.4.4: Exchange 2013 and Exchange 2016 Preview do not use the **ErrorCode** element. This value is always 0.

<2> Section 3.1.4.4.3.20: Microsoft Exchange Server 2007, Microsoft Exchange Server 2010, and the initial release of Exchange 2013 do not support the **ArrayOfExtendedAttributesType** complex type. This type was introduced in Microsoft Exchange Server 2013 Service Pack 1 (SP1).

<3> Section 3.1.4.4.3.21: Exchange 2007, Exchange 2010, and the initial release Exchange 2013 do not support the **ExtendedAttributeType** complex type. This type was introduced in Exchange 2013 SP1.

<4> Section 3.1.4.5.3.1: Exchange 2013 and Exchange 2016 Preview do not use the **Language** element; it can be set to any value.

9   Change Tracking

This section identifies changes that were made to this document since the last release. Changes are classified as New, Major, Minor, Editorial, or No change.

The revision class **New** means that a new document is being released.

The revision class **Major** means that the technical content in the document was significantly revised. Major changes affect protocol interoperability or implementation. Examples of major changes are:

- A document revision that incorporates changes to interoperability requirements or functionality.

- The removal of a document from the documentation set.

The revision class **Minor** means that the meaning of the technical content was clarified. Minor changes do not affect protocol interoperability or implementation. Examples of minor changes are updates to clarify ambiguity at the sentence, paragraph, or table level.

The revision class **Editorial** means that the formatting in the technical content was changed. Editorial changes apply to grammatical, formatting, and style issues.

The revision class **No change** means that no new technical changes were introduced. Minor editorial and formatting changes may have been made, but the technical content of the document is identical to the last released version.

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

- New content added.

- Content updated.

- Content removed.

- New product behavior note added.

- Product behavior note updated.

- Product behavior note removed.

- New protocol syntax added.

- Protocol syntax updated.

- Protocol syntax removed.

- New content added due to protocol revision.

- Content updated due to protocol revision.

- Content removed due to protocol revision.

- New protocol syntax added due to protocol revision.

- Protocol syntax updated due to protocol revision.

- Protocol syntax removed due to protocol revision.

- Obsolete document removed.

Editorial changes are always classified with the change type **Editorially updated**.

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

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

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

The changes made to this document are listed in the following table. For more information, please contact dochelp@microsoft.com.

Section	Tracking number (if applicable) and description	Major change (Y or N)	Change type
3.1.4.4.3.20 ArrayOfExtendedAttributesType	Added new complex type ArrayOfExtendedAttributesType.	Y	Content update.
3.1.4.4.3.20 ArrayOfExtendedAttributesType	Specified that complex type ArrayOfExtendedAttributesType was introduced in Exchange 2013 SP1.	Y	New product behavior note added.
3.1.4.4.3.21 ExtendedAttributeType	Specified that complex type ExtendedAttributeType was introduced in Exchange 2013 SP1.	Y	New product behavior note added.
3.1.4.4.3.21 ExtendedAttributeType	Added new complex type ExtendedAttributeType.	Y	Content update.
8 Appendix C: Product Behavior	Added Exchange 2016 and SharePoint Server 2016 to list of applicable products.	Y	Content update.

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