Electronic Discovery (eDiscovery) Web Service Protocol

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

1.1 Glossary

This document uses the following terms:

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

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

**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-OXWSSCORE] Microsoft Corporation, "Core Items Web Service Protocol".

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


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


1.2.2 Informative References


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.

![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 2.2.3.9, identifies the Web Services Description Language (WSDL) version of the request. The ServerVersionInfo element, as described in [MS-OXWSCDATA] section 2.2.3.10, 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.

<table>
<thead>
<tr>
<th>Prefix</th>
<th>Namespace URI</th>
<th>Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>soap</td>
<td><a href="http://schemas.xmlsoap.org/wsd1/soap/">http://schemas.xmlsoap.org/wsd1/soap/</a></td>
<td>[SOAP1.1]</td>
</tr>
<tr>
<td>t</td>
<td><a href="http://schemas.microsoft.com/exchange/services/2006/types">http://schemas.microsoft.com/exchange/services/2006/types</a></td>
<td></td>
</tr>
<tr>
<td>tns</td>
<td><a href="http://schemas.microsoft.com/exchange/services/2006/messages">http://schemas.microsoft.com/exchange/services/2006/messages</a></td>
<td></td>
</tr>
<tr>
<td>wsd1</td>
<td><a href="http://schemas.xmlsoap.org/wsd1/">http://schemas.xmlsoap.org/wsd1/</a></td>
<td>[WSDL]</td>
</tr>
<tr>
<td>wsi</td>
<td><a href="http://ws-i.org/schemas/conformanceClaim/">http://ws-i.org/schemas/conformanceClaim/</a></td>
<td>[WSIBASIC]</td>
</tr>
<tr>
<td>xs</td>
<td><a href="http://www.w3.org/2001/XMLSchema">http://www.w3.org/2001/XMLSchema</a></td>
<td>[XMLSCHEMA1/2]</td>
</tr>
<tr>
<td></td>
<td></td>
<td>[XMLSCHEMA2/2]</td>
</tr>
</tbody>
</table>

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.

<table>
<thead>
<tr>
<th>Complex type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ArrayOfFailedSearchMailboxesType</td>
<td>The <strong>ArrayOfFailedSearchMailboxesType</strong> complex type specifies an array of failed searches.</td>
</tr>
<tr>
<td>ArrayOfMailboxHoldStatusType</td>
<td>The <strong>ArrayOfMailboxHoldStatusType</strong> complex type specifies an array of mailbox hold statuses.</td>
</tr>
<tr>
<td>ArrayOfSearchableMailboxesType</td>
<td>The <strong>ArrayOfSearchableMailboxesType</strong> complex type specifies an array of mailbox entities returned from the <strong>GetSearchableMailboxes</strong> operation.</td>
</tr>
<tr>
<td>FailedSearchMailboxType</td>
<td>The <strong>FailedSearchMailboxType</strong> complex type represents a failed search of a mailbox.</td>
</tr>
<tr>
<td>MailboxHoldResultType</td>
<td>The <strong>MailboxHoldResultType</strong> complex type specifies the result of a mailbox hold.</td>
</tr>
<tr>
<td>MailboxHoldStatusType</td>
<td>The <strong>MailboxHoldStatusType</strong> complex type specifies the status of a mailbox hold.</td>
</tr>
<tr>
<td>SearchableMailboxType</td>
<td>The <strong>SearchableMailboxType</strong> complex type specifies the mailbox entity returned from the <strong>GetSearchableMailboxes</strong> operation specified in section 3.1.4.3.</td>
</tr>
</tbody>
</table>

### 2.2.4.1 ArrayOfFailedSearchMailboxesType

**Namespace:** [http://schemas.microsoft.com/exchange/services/2006/types](http://schemas.microsoft.com/exchange/services/2006/types)

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

```xml
<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, that specifies a failed search.

### 2.2.4.2 ArrayOfMailboxHoldStatusType

**Namespace:** [http://schemas.microsoft.com/exchange/services/2006/types](http://schemas.microsoft.com/exchange/services/2006/types)

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

```xml
<xs:complexType name="ArrayOfMailboxHoldStatusType"
    xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
  </xs:sequence>
</xs:complexType>
```
<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 2.2.4.7, 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.

```xml
<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.

```xml
<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 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.

```xml
<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.

<table>
<thead>
<tr>
<th>Simple type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>HoldStatusType</td>
<td>The HoldStatusType simple type specifies the hold status.</td>
</tr>
</tbody>
</table>

#### 2.2.5.1 HoldStatusType

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

The HoldStatusType simple type specifies the hold status.

```xml
<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.

<table>
<thead>
<tr>
<th>Value</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>NotOnHold</td>
<td>The mailbox is not on hold.</td>
</tr>
<tr>
<td>Pending</td>
<td>Placing or releasing a hold is in progress.</td>
</tr>
<tr>
<td>OnHold</td>
<td>The hold was successfully applied to the mailbox.</td>
</tr>
<tr>
<td>PartialHold</td>
<td>The hold was successfully applied to some mailboxes but not to all mailboxes.</td>
</tr>
<tr>
<td>Value</td>
<td>Meaning</td>
</tr>
<tr>
<td>--------</td>
<td>----------------------------------------------</td>
</tr>
<tr>
<td>Failed</td>
<td>The hold failed to apply to the mailbox.</td>
</tr>
</tbody>
</table>

### 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.

<table>
<thead>
<tr>
<th>Operation</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>GetDiscoverySearchConfiguration</td>
<td>The GetDiscoverySearchConfiguration operation retrieves a search configuration for eDiscovery.</td>
</tr>
<tr>
<td>GetHoldOnMailboxes</td>
<td>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.</td>
</tr>
<tr>
<td>GetSearchableMailboxes</td>
<td>The GetSearchableMailboxes operation retrieves a list of mailboxes on which the client has permission to search or to perform eDiscovery.</td>
</tr>
<tr>
<td>SearchMailboxes</td>
<td>The SearchMailboxes operation searches for items in the specified mailboxes that match query keywords.</td>
</tr>
<tr>
<td>SetHoldOnMailboxes</td>
<td>The SetHoldOnMailboxes operation sets a query-based hold on mailboxes.</td>
</tr>
</tbody>
</table>
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.

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

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

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

<table>
<thead>
<tr>
<th>Message</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>GetDiscoverySearchConfigurationSoapIn</td>
<td>Specifies the request to retrieve the search configuration.</td>
</tr>
<tr>
<td>GetDiscoverySearchConfigurationSoapOut</td>
<td>Specifies the response to the GetDiscoverySearchConfigurationSoapIn request message (section 3.1.4.1.1.1).</td>
</tr>
</tbody>
</table>

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="tns: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

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

<table>
<thead>
<tr>
<th>Part name</th>
<th>Element/type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>request</td>
<td>GetDiscoverySearchConfiguration</td>
<td>Specifies the <strong>SOAP body</strong> of the request for the search configuration.</td>
</tr>
<tr>
<td>RequestVersion</td>
<td>RequestServerVersion ([MS-OXWSCDATA] section 2.2.3.9)</td>
<td>Specifies a <strong>SOAP header</strong> that identifies the schema version for the GetDiscoverySearchConfigurationSoapIn WSDL message.</td>
</tr>
<tr>
<td>ManagementRole</td>
<td>ManagementRole ([MS-OXWSCDATA] section 2.2.3.7)</td>
<td>Specifies a SOAP header that identifies a user or application role.</td>
</tr>
</tbody>
</table>

### 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.

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

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

The **GetDiscoverySearchConfigurationSoapOut** WSDL message is the output message for the SOAP action

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

<table>
<thead>
<tr>
<th>Part name</th>
<th>Element/type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>GetDiscoverySearchConfigurationResult</td>
<td>GetDiscoverySearchConfigurationResponse</td>
<td>Specifies the <strong>SOAP body</strong> of the response that contains</td>
</tr>
</tbody>
</table>

---

[MS-OXWSEDISC] - v20220517
Electronic Discovery (eDiscovery) Web Service Protocol
Copyright © 2022 Microsoft Corporation
Release: May 17, 2022
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 2.2.4.66) attribute set to "Success". The `ResponseCode` (as specified in [MS-OXWSCDATA] section 2.2.4.66) 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 2.2.4.66) attribute set to "Error". The `ResponseCode` (as specified in [MS-OXWSCDATA] section 2.2.4.66) 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.

<table>
<thead>
<tr>
<th>Element</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>GetDiscoverySearchConfiguration</td>
<td>The input data for the <code>GetDiscoverySearchConfiguration</code> WSDL operation.</td>
</tr>
<tr>
<td>GetDiscoverySearchConfigurationResponse</td>
<td>The result data for the <code>GetDiscoverySearchConfiguration</code> WSDL operation.</td>
</tr>
</tbody>
</table>

#### 3.1.4.1.2.1 GetDiscoverySearchConfiguration

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

```
<xs:element name="GetDiscoverySearchConfiguration" type="tns: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="tns: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.

<table>
<thead>
<tr>
<th>Complex type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ArrayOfDiscoverySearchConfigurationType</td>
<td>Specifies an array of DiscoverySearchConfigurationType complex types (section 3.1.4.1.3.4) returned from the GetDiscoverySearchConfiguration operation.</td>
</tr>
<tr>
<td>DiscoverySearchConfigurationType</td>
<td>Specifies the search configuration returned from the GetDiscoverySearchConfiguration operation.</td>
</tr>
<tr>
<td>GetDiscoverySearchConfigurationResponseMessageType</td>
<td>Specifies the response message for a GetDiscoverySearchConfiguration operation (section 3.1.4.1).</td>
</tr>
<tr>
<td>GetDiscoverySearchConfigurationType</td>
<td>Specifies a request to retrieve the search configuration.</td>
</tr>
</tbody>
</table>

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.

```xml
<x:s:complexType name="GetDiscoverySearchConfigurationType"
xmlns:x="http://www.w3.org/2001/XMLSchema">
  <xs:complexContent mixed="false">
    <xs:extension base="tns: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 2.2.4.66.

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

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

```xml
<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="tns: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: An element of type string that specifies the language of the search.

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.

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

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

```xml
<soap:operation name="GetHoldOnMailboxes" xmlns:soap="http://schemas.xmlsoap.org/soap/">
  <soap:input message="tns:GetHoldOnMailboxesSoapIn" part="RequestVersion" use="literal" xmlns:soap="http://schemas.xmlsoap.org/soap/">
    <soap:header message="tns:GetHoldOnMailboxesSoapIn" part="RequestVersion" use="literal" xmlns:soap="http://schemas.xmlsoap.org/soap/">
      <soap:body use="literal" part="request" xmlns:soap="http://schemas.xmlsoap.org/soap/"/>
    </soap:header>
  </soap:input>
</soap: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.

<table>
<thead>
<tr>
<th>Message</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>GetHoldOnMailboxesSoapIn</td>
<td>Specifies the request to retrieve the status of a query-based hold.</td>
</tr>
<tr>
<td>GetHoldOnMailboxesSoapOut</td>
<td>Specifies the response to the GetHoldOnMailboxesSoapIn request specified in section 3.1.4.2.1.1.</td>
</tr>
</tbody>
</table>

#### 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.

```xml
<wsl:message name="GetHoldOnMailboxesSoapIn" xmlns:wsl="http://schemas.xmlsoap.org/wsd1/">
  <wsl:part name="request" element="tns:GetHoldOnMailboxes"/>
  <wsl:part name="RequestVersion" element="t:RequestServerVersion"/>
  <wsl:part name="ManagementRole" element="t:ManagementRole"/>
</wsl: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.

<table>
<thead>
<tr>
<th>Part name</th>
<th>Element/type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>request</td>
<td>GetHoldOnMailboxes</td>
<td>Specifies the <strong>SOAP body</strong> of the request to get the status of a query-based hold.</td>
</tr>
<tr>
<td>RequestVersion</td>
<td>RequestServerVersion ([MS-OXWSCDATA] section 2.2.3.9)</td>
<td>Specifies a <strong>SOAP header</strong> that identifies the schema version for the GetHoldOnMailboxesSoapIn <strong>WSDL message</strong>.</td>
</tr>
<tr>
<td>ManagementRole</td>
<td>ManagementRole ([MS-OXWSCDATA] section 2.2.3.7)</td>
<td>Specifies a <strong>SOAP header</strong> that identifies a user or application role.</td>
</tr>
</tbody>
</table>
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.

```xml
  <wsdl:part name="GetHoldOnMailboxesResult" element="tns:GetHoldOnMailboxesResponse"/>
  <wsdl:part name="ServerVersion" element="t:ServerVersionInfo"/>
</wsdl:message>
```


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

<table>
<thead>
<tr>
<th>Part name</th>
<th>Element/type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>GetHoldOnMailboxesResult</td>
<td>GetHoldOnMailboxesResponse</td>
<td>Specifies the SOAP body of the response that contains the result of the request.</td>
</tr>
<tr>
<td>ServerVersion</td>
<td>ServerVersionInfo</td>
<td>Specifies a SOAP header that identifies the server version for the response.</td>
</tr>
</tbody>
</table>

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-OXWSDATA] section 2.2.4.66) attribute set to "Success". ResponseCode (as specified in [MS-OXWSDATA] section 2.2.4.66) 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-OXWSDATA] section 2.2.4.66) attribute set to "Error". The ResponseCode (as specified in [MS-OXWSDATA] section 2.2.4.66) element of the GetHoldOnMailboxesResponse element is set to one of the common errors defined in [MS-OXWSDATA] 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.

<table>
<thead>
<tr>
<th>Element</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>GetHoldOnMailboxes</td>
<td>The input data for the GetHoldOnMailboxes WSDL operation.</td>
</tr>
<tr>
<td>GetHoldOnMailboxesResponse</td>
<td>The result data for the GetHoldOnMailboxes WSDL operation.</td>
</tr>
</tbody>
</table>

3.1.4.2.2.1 GetHoldOnMailboxes
The `GetHoldOnMailboxes` element specifies the input data for the `GetHoldOnMailboxes` WSDL operation.

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

### 3.1.4.2.2 GetHoldOnMailboxesResponse

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

```
<xs:element name="GetHoldOnMailboxesResponse"
    type="tns: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.

<table>
<thead>
<tr>
<th>Complex type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>GetHoldOnMailboxesResponseMessageType</td>
<td>Specifies the response message for a GetHoldOnMailboxes operation, as specified in section 3.1.4.2.</td>
</tr>
<tr>
<td>GetHoldOnMailboxesType</td>
<td>Specifies a request to retrieve the status of a query-based hold.</td>
</tr>
</tbody>
</table>

#### 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="tns: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 2.2.4.66.

```xml
<xs:complexType name="GetHoldOnMailboxesResponseMessageType"
    xmlns:xs="http://www.w3.org/2001/XMLSchema">
    <xs:complexContent mixed="false">
        <xs:extension base="tns: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.

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

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

```xml
<wsdl:operation name="GetSearchableMailboxes" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
    <soap:operation
        <soap:header message="tns:GetSearchableMailboxesSoapIn" part="RequestVersion"
            use="literal" xmlns:soap="http://schemas.xmlsoap.org/wsdl/soap/">
        </soap:header>
        <soap:header message="tns:GetSearchableMailboxesSoapIn" part="ManagementRole"
            use="literal" xmlns:soap="http://schemas.xmlsoap.org/wsdl/soap/">
        </soap:header>
    </soap:operation>
</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.

<table>
<thead>
<tr>
<th>Message</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>GetSearchableMailboxesSoapIn</td>
<td>Specifies the request to retrieve searchable mailboxes.</td>
</tr>
<tr>
<td>GetSearchableMailboxesSoapOut</td>
<td>Specifies the response to the GetSearchableMailboxesSoapIn request.</td>
</tr>
</tbody>
</table>

#### 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.

```xml
<wsdl:message name="GetSearchableMailboxesSoapIn"
xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:part name="request" element="tns: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.

<table>
<thead>
<tr>
<th>Part name</th>
<th>Element/type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>request</td>
<td>GetSearchableMailboxes</td>
<td>Specifies the <strong>SOAP body</strong> of the request to retrieve searchable mailboxes.</td>
</tr>
<tr>
<td>RequestVersion</td>
<td>RequestServerVersion ([MS-OXWSDATA] section 2.2.3.9)</td>
<td>Specifies a <strong>SOAP header</strong> that identifies the schema version for the GetSearchableMailboxesSoapIn <strong>WSDL message</strong>.</td>
</tr>
<tr>
<td>ManagementRole</td>
<td>ManagementRole</td>
<td>Specifies a <strong>SOAP header</strong> that identifies a user or role.</td>
</tr>
</tbody>
</table>
### Part name | Element/type | Description
---|---|---
| ([MS-OXWSCDATA] section 2.2.3.7) | 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.

```xml
<wSDL:message name="GetSearchableMailboxesSoapOut"
xmlns:wSDL="http://schemas.xmlsoap.org/wSDL/">
   <wSDL:part name="GetSearchableMailboxesResult"
   element="tns: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.

<table>
<thead>
<tr>
<th>Part name</th>
<th>Element/type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>GetSearchableMailboxesResult</td>
<td>GetSearchableMailboxesResponse</td>
<td>Specifies the <strong>SOAP body</strong> of the response that contains the requested information.</td>
</tr>
<tr>
<td>ServerVersion</td>
<td>ServerVersionInfo ([MS-OXWSCDATA] section 2.2.3.10)</td>
<td>Specifies a <strong>SOAP header</strong> that identifies the server version for the response.</td>
</tr>
</tbody>
</table>

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 2.2.4.66) attribute set to "Success". The **ResponseCode** (as specified in [MS-OXWSCDATA] section 2.2.4.66) 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 2.2.4.66) attribute set to "Error". The **ResponseCode** (as specified in [MS-OXWSCDATA] section 2.2.4.66) 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.
### 3.1.4.3.2.1 GetSearchableMailboxes

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

```xml
<xs:element name="GetSearchableMailboxes" type="tns: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.

```xml
<xs:element name="GetSearchableMailboxesResponse" type="tns: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.

<table>
<thead>
<tr>
<th>Complex type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>GetSearchableMailboxesResponseMessageType</td>
<td>Specifies the response for a <strong>GetSearchableMailboxes</strong> operation, as specified in section 3.1.4.3.</td>
</tr>
<tr>
<td>GetSearchableMailboxesType</td>
<td>Specifies a request to retrieve searchable <strong>mailboxes</strong>.</td>
</tr>
</tbody>
</table>

### 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.

```xml
<xs:complexType name="GetSearchableMailboxesType"
xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexContent mixed="false">
    <xs:extension base="tns: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 2.2.4.66.

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

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

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

```xml
<wsdl:operation name="SearchMailboxes" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
      xmlns:soap="http://schemas.xmlsoap.org/wsdl/soap/">
    <wsdl:input>
      <soap:header message="tns:SearchMailboxesSoapIn" part="RequestVersion" use="literal"
        xmlns:soap="http://schemas.xmlsoap.org/wsdl/soap/"/>
      <soap:header message="tns: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="tns:SearchMailboxesSoapOut" part="ServerVersion" use="literal"
        xmlns:soap="http://schemas.xmlsoap.org/wsdl/soap/"/>
    </wsdl:output>
  </soap:operation>
</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.

<table>
<thead>
<tr>
<th>Message</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>SearchMailboxesSoapIn</td>
<td>Specifies the request to search mailboxes.</td>
</tr>
<tr>
<td>SearchMailboxesSoapOut</td>
<td>Specifies the response to the SearchMailboxesSoapIn request.</td>
</tr>
</tbody>
</table>

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.
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.

<table>
<thead>
<tr>
<th>Part name</th>
<th>Element/type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>request</td>
<td>SearchMailboxes</td>
<td>Specifies the <strong>SOAP body</strong> of the request to search mailboxes.</td>
</tr>
<tr>
<td>RequestVersion</td>
<td>RequestServerVersion</td>
<td>Specifies a <strong>SOAP header</strong> that identifies the schema version for the SearchMailboxesSoapIn WSDL message.</td>
</tr>
<tr>
<td>ManagementRole</td>
<td>ManagementRole</td>
<td>Specifies a <strong>SOAP header</strong> that identifies a user or application role.</td>
</tr>
</tbody>
</table>

### 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.

```xml
<wsdl:message name="SearchMailboxesSoapOut" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/"
<wsdl:part name="SearchMailboxesResult" element="tns: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.

<table>
<thead>
<tr>
<th>Part name</th>
<th>Element/type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>SearchMailboxesResult</td>
<td>SearchMailboxesResponse</td>
<td>Specifies the <strong>SOAP body</strong> of the response that contains the requested search information.</td>
</tr>
<tr>
<td>ServerVersion</td>
<td>ServerVersionInfo</td>
<td>Specifies a <strong>SOAP header</strong> that identifies the server version for the response.</td>
</tr>
</tbody>
</table>

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 2.2.4.66) attribute set to "Success". The \texttt{ResponseCode} (as specified in [MS-OXWSCDATA] section 2.2.4.66) element of the \texttt{SearchMailboxesResponse} element is set to "NoError".

If the \texttt{SearchMailboxes} request is not successful, it returns a \texttt{SearchMailboxesResponse} element with the \texttt{ResponseClass} (as specified in [MS-OXWSCDATA] section 2.2.4.66) set to "Error". The \texttt{ResponseCode} (as specified in [MS-OXWSCDATA] section 2.2.4.66) element of the \texttt{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.

<table>
<thead>
<tr>
<th>Element</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>SearchMailboxes</td>
<td>The input data for the \texttt{SearchMailboxes WSDL operation}.</td>
</tr>
<tr>
<td>SearchMailboxesResponse</td>
<td>The result data for the \texttt{SearchMailboxes WSDL operation}.</td>
</tr>
</tbody>
</table>

#### 3.1.4.4.2.1 SearchMailboxes

The \texttt{SearchMailboxes} element specifies the input data for the \texttt{SearchMailboxes WSDL operation}.

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

#### 3.1.4.4.2.2 SearchMailboxesResponse

The \texttt{SearchMailboxesResponse} element specifies the result data for the \texttt{SearchMailboxes WSDL operation}.

```xml
<xs:element name="SearchMailboxesResponse" type="tns:SearchMailboxesResponseType"
xmins="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.

<table>
<thead>
<tr>
<th>Complex type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ArrayOfExtendedAttributesType</td>
<td>For internal use only.</td>
</tr>
<tr>
<td>ArrayOfKeywordStatisticsSearchResultsType</td>
<td>Specifies an array of keyword statistics in the search result.</td>
</tr>
<tr>
<td>ArrayOfMailboxStatisticsItemsType</td>
<td>Specifies an array of mailbox statistics.</td>
</tr>
<tr>
<td>ArrayOfSearchPreviewItemsType</td>
<td>Specifies an array of search preview items.</td>
</tr>
<tr>
<td>ArrayOfSearchRefinerItemsType</td>
<td>Specifies an array of search refiner items.</td>
</tr>
<tr>
<td>ExtendedAttributeType</td>
<td>For internal use only.</td>
</tr>
<tr>
<td>KeywordStatisticsSearchResultType</td>
<td>Specifies a keyword statistics search result.</td>
</tr>
</tbody>
</table>
Complex type | Description
--- | ---
**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.

<table>
<thead>
<tr>
<th>Complex type</th>
<th>Description</th>
</tr>
</thead>
</table>
**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.

```xml
<xs:complexType name="SearchMailboxesType" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexContent mixed="false">
    <xs:extension base="tns: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 3.1.4.4.2, that represents an enumeration type to indicate the type of search result.

**PreviewItemResponseShape**: An element of type **PreviewItemResponseShapeType**, as defined in section 3.1.4.3.6, 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, 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.

```xml
<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 3.1.4.3.3, 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.

```xml
<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.

```xml
<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.

```xml
<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: For internal use only. <2>

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.

```xml
<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:sequence>
</xs:complexType>
```
BaseShape: An element of type PreviewItemBaseShapeType, as defined in section 3.1.4.4.3, that represents either the default preview with all properties returned or a compact preview with fewer properties returned.

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

3.1.4.4.3.7 NonEmptyArrayOfExtendedFieldURIType

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

The NonEmptyArrayOfExtendedFieldURIType complex type specifies an array of extended property names.

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.

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 2.2.4.66.
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.

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.

```xml
<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.

```xml
<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">
  <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.

```xml
<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 2.2.4.25, 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.

```xml
<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.

```xml
<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.

```xml
<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.

```xml
<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.

```xml
<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, in bytes, 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 is intended for internal use only.

```xml
<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:** For internal use only.

3.1.4.4.3.21 ExtendedAttributeType

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

The ExtendedAttributeType complex type is intended for internal use only.

```xml
<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:** For internal use only.

**Value:** For internal use only.
3.1.4.4.4 Simple Types

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

<table>
<thead>
<tr>
<th>Simple type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>MailboxSearchLocationType</td>
<td>Specifies the location to be searched.</td>
</tr>
<tr>
<td>PreviewItemBaseShapeType</td>
<td>Specifies whether an item is previewed with all its properties or it is</td>
</tr>
<tr>
<td></td>
<td>compacted.</td>
</tr>
<tr>
<td>SearchPageDirectionType</td>
<td>Specifies the direction in which to search.</td>
</tr>
<tr>
<td>SearchResultType</td>
<td>Specifies a search result.</td>
</tr>
</tbody>
</table>

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.

```xml
<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.

<table>
<thead>
<tr>
<th>Value</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>PrimaryOnly</td>
<td>Search in primary mailbox only.</td>
</tr>
<tr>
<td>ArchiveOnly</td>
<td>Search in archive mailbox only.</td>
</tr>
<tr>
<td>All</td>
<td>Search in all mailboxes.</td>
</tr>
</tbody>
</table>

3.1.4.4.4.2 SearchResultType

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

The SearchResultType simple type specifies a search result.

```xml
<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.
### 3.1.4.4.3 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.

<table>
<thead>
<tr>
<th>Value</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>Default</td>
<td>Indicates the default view with all properties for the item preview.</td>
</tr>
<tr>
<td>Compact</td>
<td>Indicates a compact view with only a few properties for the item preview.</td>
</tr>
</tbody>
</table>

### 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.

<table>
<thead>
<tr>
<th>Value</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>Previous</td>
<td>Navigate to the previous page.</td>
</tr>
<tr>
<td>Next</td>
<td>Navigate to the next page.</td>
</tr>
</tbody>
</table>

### 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.

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

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

```xml
<wsdl:operation name="SetHoldOnMailboxes" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
    <wsdl:input>
      <soap:header message="tns:SetHoldOnMailboxesSoapIn" part="RequestVersion" use="literal" xmlns:soap="http://schemas.xmlsoap.org/wsdl/soap/">
        <soap:header message="tns:SetHoldOnMailboxesSoapIn" part="ManagementRole" use="literal" xmlns:soap="http://schemas.xmlsoap.org/wsdl/soap/">
          <soap:body use="literal" parts="SetHoldOnMailboxesResult" xmlns:soap="http://schemas.xmlsoap.org/wsdl/soap/">
              <soap:body use="literal" parts="SetHoldOnMailboxesSoapOut" xmlns:soap="http://schemas.xmlsoap.org/wsdl/soap/">
                </soap:body>
              </soap:output>
            </soap:body>
          </soap:header>
        </soap:header>
      </soap:header>
    </wsdl:input>
  </soap:operation>
</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.

<table>
<thead>
<tr>
<th>Message</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>SetHoldOnMailboxesSoapIn</td>
<td>Specifies the request to set a query-based hold on mailboxes.</td>
</tr>
<tr>
<td>SetHoldOnMailboxesSoapOut</td>
<td>Specifies the response to the SetHoldOnMailboxesSoapIn request specified in section 3.1.4.5.1.1.</td>
</tr>
</tbody>
</table>
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.

```xml
<wsdl:message name="SetHoldOnMailboxesSoapIn" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:part name="request" element="tns: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.

<table>
<thead>
<tr>
<th>Part name</th>
<th>Element/type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>request</td>
<td>SetHoldOnMailboxes</td>
<td>Specifies the SOAP body of the request to set a query-based hold on mailboxes.</td>
</tr>
<tr>
<td>RequestVersion</td>
<td>RequestServerVersion ([MS-OXWSCDATA] section 2.2.3.9)</td>
<td>Specifies a SOAP header that identifies the schema version for the SetHoldOnMailboxesSoapIn WSDL message.</td>
</tr>
<tr>
<td>ManagementRole</td>
<td>ManagementRole ([MS-OXWSCDATA] section 2.2.3.7)</td>
<td>Specifies a SOAP header that identifies a user or application role.</td>
</tr>
</tbody>
</table>

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.

```xml
<wsdl:message name="SetHoldOnMailboxesSoapOut" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:part name="SetHoldOnMailboxesResult" element="tns: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.

<table>
<thead>
<tr>
<th>Part name</th>
<th>Element/type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>SetHoldOnMailboxesResult</td>
<td>SetHoldOnMailboxesResponse</td>
<td>Specifies the SOAP body of the response that contains the result of the request.</td>
</tr>
<tr>
<td>ServerVersion</td>
<td>ServerVersionInfo ([MS-OXWSCDATA] section)</td>
<td>Specifies a SOAP header that identifies the server version for the response.</td>
</tr>
</tbody>
</table>
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 2.2.4.66) attribute set to "Success". The `ResponseCode` (as specified in [MS-OXWSCDATA] section 2.2.4.66) 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 2.2.4.66) attribute set to "Error". The `ResponseCode` (as specified in [MS-OXWSCDATA] section 2.2.4.66) 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.

<table>
<thead>
<tr>
<th>Element</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>SetHoldOnMailboxes</td>
<td>The input data for the SetHoldOnMailboxes WSDL operation.</td>
</tr>
<tr>
<td>SetHoldOnMailboxesResponse</td>
<td>The result data for the SetHoldOnMailboxes WSDL operation.</td>
</tr>
</tbody>
</table>

3.1.4.5.2.1 SetHoldOnMailboxes

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

```xml
<xs:element name="SetHoldOnMailboxes" type="tns: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.

```xml
<xs:element name="SetHoldOnMailboxesResponse" type="tns: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.

<table>
<thead>
<tr>
<th>Complex type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>SetHoldOnMailboxesResponseMessageType</td>
<td>Specifies the response message for a SetHoldOnMailboxes</td>
</tr>
</tbody>
</table>
### 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.

```xml
<xs:complexType name="SetHoldOnMailboxesType" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <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: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".<5>

**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.

### 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 2.2.4.66.

```xml
<xs:complexType name="SetHoldOnMailboxesResponseMessageType"
xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexContent mixed="false">
    <xs:extension base="tns: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.

<table>
<thead>
<tr>
<th>Simple type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>HoldActionType</td>
<td>Specifies a hold action.</td>
</tr>
</tbody>
</table>

#### 3.1.4.5.4.1 HoldActionType

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

The `HoldActionType` simple type specifies a hold action.

```xml
<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.

<table>
<thead>
<tr>
<th>Value</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>Create</td>
<td>The action is placing a hold.</td>
</tr>
<tr>
<td>Update</td>
<td>The action is updating a hold.</td>
</tr>
<tr>
<td>Remove</td>
<td>The action is releasing a hold.</td>
</tr>
</tbody>
</table>
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
<?xml version="1.0" encoding="UTF-8"?>
<soap:Envelope xmlns:soap="http://schemas.xmlsoap.org/soap/envelope/
    xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
    xmlns:ns1="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=1fa841ff5e4749ba93ecc0fd98c2cacf-Willi</t:String>
                <t:String>/o=First Organization/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=aed2146adaa24fffc9f0f279971e8de95-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
<?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="http://schemas.microsoft.com/exchange/services/2006/types"
            xmlns:schema="http://www.w3.org/2001/XMLSchema"
            xmlns:xsd="http://www.w3.org/2001/XMLSchema-instance"/>
    </s:Header>
    <s:Body xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
        xmlns:schema="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=1fa841ff5e4749ba93ecc0fd98c2cacf-Willi</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
<?xml version="1.0" encoding="UTF-8"?>
<soap:Envelope xmlns:soap="http://schemas.xmlsoap.org/soap/envelope/">
  <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
<?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>
          <MailboxHoldStatus>
            <Mailbox>/o=First Organization/ou=Exchange Administrative Group (FYDIOHF23SPDLT)/cn=Recipients/cn=cbfe7449ba92ccc0fd98c2cadf-Willi</Mailbox>
            <Status>OnHold</Status>
            <AdditionalInfo/>
          </MailboxHoldStatus>
          <MailboxHoldStatus>
            <Mailbox>/o=First Organization/ou=Exchange Administrative Group (FYDIOHF23SPDLT)/cn=Recipients/cn=1fa841ff5e4749ba93ecc0fd98c2cadf-Willi</Mailbox>
            <Status>Pending</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
<?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
<?xml version="1.0" encoding="utf-8"?>
<s:Envelope xmlns:s="http://schemas.xmlsoap.org/soap/envelope/"
  xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
  <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:xsd="http://www.w3.org/2001/XMLSchema"
      xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"/>
  </s:Header>
  <s:Body>
    <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@exh93591dom.extest.microsoft.com</PrimarySmtpAddress>
          <IsExternalMailbox>false</IsExternalMailbox>
          <DisplayName>LOLgroup</DisplayName>
        </SearchableMailbox>
      </SearchableMailboxes>
    </GetSearchableMailboxesResponse>
  </s:Body>
</s:Envelope>
```
The server sends the following response for an expanded distribution group.

```xml
<?xml version="1.0" encoding="utf-8"?>
<envelope xmlns:s="http://schemas.xmlsoap.org/soap/envelope/">
  <header />
    <getSearchableMailboxesResponse ResponseClass="Success">
      <SearchableMailbox xmlns="http://schemas.microsoft.com/exchange/services/2006/types">
        <Guid>e5d42cdf-a027-4ec6-986b-6fa0ecadb9f5</Guid>
        <PrimarySmtpAddress>JSmith@exhb93591dom.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@exhb93591dom.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=2910d8f822f4374bbf9338d8f9d714b-Laura</ReferenceId>
      </SearchableMailbox>
      <SearchableMailbox xmlns="http://schemas.microsoft.com/exchange/services/2006/types">
        <Guid>3c620d04-8b33-435e-95be-5b935159576</Guid>
        <PrimarySmtpAddress>SBrown@exhb93591dom.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=35181a742f0e47e39c8201a60d13ecf-Steve</ReferenceId>
      </SearchableMailbox>
    </getSearchableMailboxesResponse>
  </body>
</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
<?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>Test Item</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
<?xml version="1.0" encoding="utf-8"?>
<s:Envelope xmlns:s="http://schemas.xmlsoap.org/soap/envelope/"
 xmlns:h="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>
    <h:ServerVersionInfo MajorVersion="15"
      MinorVersion="0"
      MajorBuildNumber="526"
      MinorBuildNumber="0"
      Version="Exchange2013">
      xmlns:h="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: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>
          </t:MailboxQuery>
          <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:MailboxSearchScopes>
            <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>
          </t:MailboxQuery>
        </m:SearchMailboxesResponseMessage>
      </m:ResponseMessages>
    </m:SearchMailboxesResponse>
  </m:ResponseMessages>
</s:Body>
</s:Envelope>
5 Security

5.1 Security Considerations for Implementers
None.

5.2 Index of Security Parameters
None.
Appendix A: Full WSDL

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

```xml
<?xml version="1.0" encoding="UTF-8"?>
xmlns:soap="http://schemas.xmlsoap.org/wsdl/soap/
xmlns: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" xs:xmlns:xs="http://www.w3.org/2001/XMLSchema">
<xs:include schemaLocation="MS-OWSEDISC-messages.xsd"/>
</xs:schema>
</wsdl:types>
<wsdl:portType name="ExchangeServicePortType">
<wsdl:operation name="GetDiscoverySearchConfiguration">
<wsdl:input message="tns:GetDiscoverySearchConfigurationSoapIn"/>
<wsdl:output message="tns:GetDiscoverySearchConfigurationSoapOut"/>
</wsdl:operation>
<wsdl:operation name="GetHoldOnMailboxes">
<wsdl:input message="tns:GetHoldOnMailboxesSoapIn"/>
<wsdl:output message="tns:GetHoldOnMailboxesSoapOut"/>
</wsdl:operation>
<wsdl:operation name="GetSearchableMailboxes">
<wsdl:input message="tns:GetSearchableMailboxesSoapIn"/>
<wsdl:output message="tns:GetSearchableMailboxesSoapOut"/>
</wsdl:operation>
<wsdl:operation name="SearchMailboxes">
<wsdl:input message="tns:SearchMailboxesSoapIn"/>
<wsdl:output message="tns:SearchMailboxesSoapOut"/>
</wsdl:operation>
<wsdl:operation name="SetHoldOnMailboxes">
<wsdl:input message="tns:SetHoldOnMailboxesSoapIn"/>
<wsdl:output message="tns:SetHoldOnMailboxesSoapOut"/>
</wsdl:operation>
</wsdl:portType>
<wsdl:binding name="ExchangeServiceBinding" type="tns:ExchangeServicePortType">
<soap:binding transport="http://schemas.xmlsoap.org/soap/http"/>
<soap:operation name="GetDiscoverySearchConfiguration">
<soap:input>
<soap:header message="tns:GetDiscoverySearchConfigurationSoapIn" part="RequestVersion" use="literal"/>
<soap:header message="tns:GetDiscoverySearchConfigurationSoapIn" part="ManagementRole" use="literal"/>
<soap:body use="literal" parts="request"/>
</soap:input>
<soap:output>
<soap:body use="literal" parts="GetDiscoverySearchConfigurationResult"/>
</soap:output>
</soap:operation>
<soap:operation name="GetHoldOnMailboxes">
<soap:input>
<soap:header message="tns:GetHoldOnMailboxesSoapIn" part="ServerVersion" use="literal"/>
</soap:input>
</soap:operation>
</wsdl:binding>
</wsdl:portType>
</wsdl:definitions>
```
<soap:header message="tns:GetHoldOnMailboxesSoapIn" part="RequestVersion" use="literal"/>
<soap:header message="tns:GetHoldOnMailboxesSoapIn" part="ManagementRole" use="literal"/>
<soap:body use="literal" parts="request"/>
</wsdl:input>
<wsdl:output>
<soap:body use="literal" parts="GetHoldOnMailboxesResult"/>
<soap:header message="tns:GetHoldOnMailboxesSoapOut" part="ServerVersion" use="literal"/>
</wsdl:output>
</wsdl:operation>
<wsdl:operation name="GetSearchableMailboxes">
<wsdl:input>
<soap:header message="tns:GetSearchableMailboxesSoapIn" part="RequestVersion" use="literal"/>
<soap:header message="tns:GetSearchableMailboxesSoapIn" part="ManagementRole" use="literal"/>
<soap:body use="literal" parts="request"/>
</wsdl:input>
<wsdl:output>
<soap:body use="literal" parts="GetSearchableMailboxesResult"/>
<soap:header message="tns:GetSearchableMailboxesSoapOut" part="ServerVersion" use="literal"/>
</wsdl:output>
</wsdl:operation>
<wsdl:operation name="SearchMailboxes">
<wsdl:input>
<soap:header message="tns:SearchMailboxesSoapIn" part="RequestVersion" use="literal"/>
<soap:header message="tns:SearchMailboxesSoapIn" part="ManagementRole" use="literal"/>
<soap:body use="literal" parts="request"/>
</wsdl:input>
<wsdl:output>
<soap:body use="literal" parts="SearchMailboxesResult"/>
<soap:header message="tns:SearchMailboxesSoapOut" part="ServerVersion" use="literal"/>
</wsdl:output>
</wsdl:operation>
<wsdl:operation name="SetHoldOnMailboxes">
<wsdl:input>
<soap:header message="tns:SetHoldOnMailboxesSoapIn" part="RequestVersion" use="literal"/>
<soap:header message="tns:SetHoldOnMailboxesSoapIn" part="ManagementRole" use="literal"/>
<soap:body use="literal" parts="request"/>
</wsdl:input>
<wsdl:output>
<soap:body use="literal" parts="SetHoldOnMailboxesResult"/>
<soap:header message="tns:SetHoldOnMailboxesSoapOut" part="ServerVersion" use="literal"/>
</wsdl:output>
</wsdl:operation>
</wsdl:binding>
<wSDL:message name="GetDiscoverySearchConfigurationSoapIn">
<wSDL:part name="request" element="tns:GetDiscoverySearchConfiguration"/>
</wSDL:message>
<wSDL:message name="GetDiscoverySearchConfigurationSoapOut">
<wSDL:part name="RequestVersion" element="t:RequestServerVersion"/>
</wSDL:message>
</wSDL:service>

<wsdl:message name="GetDiscoverySearchConfigurationResult"
  element="tns:GetDiscoverySearchConfigurationResponse"/>

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

<wsdl:message name="GetHoldOnMailboxesSoapIn">
  <wsdl:part name="request" element="tns: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="tns:GetHoldOnMailboxesResponse"/>
  <wsdl:part name="ServerVersion" element="t:ServerVersionInfo"/>
</wsdl:message>

<wsdl:message name="GetSearchableMailboxesSoapIn">
  <wsdl:part name="request" element="tns: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="tns:GetSearchableMailboxesResponse"/>
  <wsdl:part name="ServerVersion" element="t:ServerVersionInfo"/>
</wsdl:message>

<wsdl:message name="SearchMailboxesSoapIn">
  <wsdl:part name="request" element="tns: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="tns:SearchMailboxesResponse"/>
  <wsdl:part name="ServerVersion" element="t:ServerVersionInfo"/>
</wsdl:message>

<wsdl:message name="SetHoldOnMailboxesSoapIn">
  <wsdl:part name="request" element="tns: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="tns:SetHoldOnMailboxesResponse"/>
  <wsdl:part name="ServerVersion" element="t:ServerVersionInfo"/>
</wsdl:message>
</wsdl:definitions>
Appendix B: Full XML Schema

<table>
<thead>
<tr>
<th>Schema name</th>
<th>Prefix</th>
<th>Section</th>
</tr>
</thead>
<tbody>
<tr>
<td><a href="http://schemas.microsoft.com/exchange/services/2006/types">http://schemas.microsoft.com/exchange/services/2006/types</a></td>
<td>t</td>
<td>7.2</td>
</tr>
<tr>
<td><a href="http://schemas.microsoft.com/exchange/services/2006/messages">http://schemas.microsoft.com/exchange/services/2006/messages</a></td>
<td>tns</td>
<td>7.1</td>
</tr>
</tbody>
</table>

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.

<table>
<thead>
<tr>
<th>File name</th>
<th>Defining specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>MS-OXWSCDATA-messages.xsd</td>
<td>[MS-OXWSCDATA] section 7.1</td>
</tr>
<tr>
<td>MS-OXWSWDISC-types.xsd</td>
<td>7.2</td>
</tr>
</tbody>
</table>

```xml
<?xml version="1.0" encoding="UTF-8"?>
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:hs="http://www.w3.org/2001/XMLSchema">  
<xs:include schemaLocation="MS-OXWSCDATA-messages.xsd"/>
<xs:element name="GetHoldOnMailboxes" type="tns:GetHoldOnMailboxesType"/>
<xs:element name="GetHoldOnMailboxesResponse" type="tns:GetHoldOnMailboxesResponseMessageType"/>
<xs:complexType name="GetDiscoverySearchConfigurationType">
<xs:complexContent mixed="false">
<xs:extension base="tns: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="tns:GetDiscoverySearchConfigurationType"/>
<xs:complexType name="GetDiscoverySearchConfigurationResponseMessageType">
<xs:complexContent mixed="false">
<xs:extension base="tns:ResponseMessageType">
<xs:sequence>
<xs:element name="DiscoverySearchConfigurations" type="t:ArrayOfDiscoverySearchConfigurationType"/>
</xs:sequence>
</xs:extension>
</xs:complexContent>
</xs:complexType>
```
<xs:complexType>
  <xs:element name="GetDiscoverySearchConfigurationResponse"
    type="tns:GetDiscoverySearchConfigurationResponseMessageType"/>
<xs:complexType name="GetHoldOnMailboxesResponseMessageType">
  <xs:complexContent mixed="false">
    <xs:extension base="tns:ResponseMessageType">
      <xs:sequence>
        <xs:element minOccurs="0" name="MailboxHoldResult" type="tns:MailboxHoldResultType"/>
      </xs:sequence>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>
</xs:complexType>
</xs:complexType>
</xs:complexType>
</xs:complexType>
<xs:complexType name="GetSearchableMailboxesType">
  <xs:complexContent mixed="false">
    <xs:extension base="tns:BaseRequestType">
      <xs:sequence>
        <xs:element minOccurs="1" name="HoldId" type="xs:string"/>
      </xs:sequence>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>
<xs:element name="GetSearchableMailboxes" type="tns:GetSearchableMailboxesType"/>
<xs:complexType name="GetSearchableMailboxesResponseMessageType">
  <xs:complexContent mixed="false">
    <xs:extension base="tns:ResponseMessageType">
      <xs:sequence>
        <xs:element name="SearchableMailboxes" type="tns:ArrayOfSearchableMailboxesType"/>
        <xs:element minOccurs="0" name="FailedMailboxes" type="tns:ArrayOfFailedSearchMailboxesType"/>
      </xs:sequence>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>
<xs:element name="GetSearchableMailboxesResponse" type="tns:GetSearchableMailboxesResponseMessageType"/>
<xs:complexType name="SearchMailboxesType">
  <xs:complexContent mixed="false">
    <xs:extension base="tns:BaseRequestType">
      <xs:sequence>
        <xs:element minOccurs="1" name="SearchQueries" type="tns:NonEmptyArrayOfMailboxQueriesType"/>
        <xs:element minOccurs="1" name="ResultType" type="tns:SearchResultType"/>
        <xs:element minOccurs="0" name="PreviewItemResponseShape" type="tns:PreviewItemResponseShapeType"/>
        <xs:element minOccurs="0" name="SortBy" type="tns: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="tns:SearchPageDirectionType"/>
      </xs:sequence>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>
<xs:element name="SearchMailboxes" type="tns:SearchMailboxesType"/>
<xs:complexType name="SearchMailboxesResponseType">
  <xs:complexContent mixed="false">
    <xs:extension base="tns:BaseResponseMessageType"/>
  </xs:complexContent>
</xs:complexType>
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.

<table>
<thead>
<tr>
<th>File name</th>
<th>Defining specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>MS-OXWSXPROP-types.xsd</td>
<td>[MS-OXWSXPROP] section 2.1</td>
</tr>
<tr>
<td>MS-OXWSMSHR-types.xsd</td>
<td>[MS-OXWSMSHR] section 7.2</td>
</tr>
</tbody>
</table>

<?xml version="1.0" encoding="UTF-8"?>
<xs:schema xmlns:t="http://schemas.microsoft.com/exchange/services/2006/types" elementFormDefault="qualified"/>
<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="KeywordStatisticsSearchResult" 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="MailboxStatisticsItem" 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="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: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="1" maxOccurs="1" name="HasAttachment" type="xs:boolean"/>
    <xs:element minOccurs="0" maxOccurs="1" name="ExtendedProperties" type="t:NonEmptyArrayOfExtendedPropertyType"/>
  </xs:sequence>
</xs:complexType>

<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="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>

<xs:simpleType name="SearchResultType">
  <xs:restriction base="xs:string">
    <xs:enumeration value="StatisticsOnly"/>
    <xs:enumeration value="PreviewOnly"/>
  </xs:restriction>
</xs:simpleType>
<xs:schema>  
  <xs:simpleType name="UserMailboxType">  
    <xs:attribute name="Id" type="xs:string" use="required"/>  
    <xs:attribute name="IsArchive" type="xs:boolean" use="required"/>  
  </xs:complexType>  
</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 updates to those products.

- Microsoft Exchange Server 2013
- Microsoft SharePoint Server 2013
- Microsoft Exchange Server 2016
- Microsoft Exchange Server 2019
- Microsoft SharePoint Server 2016

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

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

<1> Section 2.2.4.4:  Exchange 2013, Exchange 2016, and Exchange 2019 do not use the ErrorCode element. This value is always 0.

<2> Section 3.1.4.4.3.5:  Microsoft Exchange Server 2007, Microsoft Exchange Server 2010, and the initial release of Exchange 2013 do not support the ExtendedAttributes element. This element was introduced in Microsoft Exchange Server 2013 Service Pack 1 (SP1).

<3> Section 3.1.4.4.3.20:  Exchange 2007, Exchange 2010, and the initial release of Exchange 2013 do not support the ArrayOfExtendedAttributesType complex type. This type was introduced in Exchange 2013 SP1.

<4> 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.

<5> Section 3.1.4.5.3.1:  Exchange 2013, Exchange 2016, and Exchange 2019 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 Major, Minor, or None.

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.
- A document revision that captures changes to protocol functionality.

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 **None** means that no new technical changes were introduced. Minor editorial and formatting changes may have been made, but the relevant technical content is identical to the last released version.

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

<table>
<thead>
<tr>
<th>Section</th>
<th>Description</th>
<th>Revision class</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.2.4 Complex Types</td>
<td>Removed unused Complex Types MailboxStatisticSearchResultType and UserMailboxType.</td>
<td>Major</td>
</tr>
</tbody>
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