[MS-OXWAVLS]:
Availability Web Service Protocol Specification

Revision Summary

Date	Revision History	Revision Class	Comments
04/04/2008	0.1	Major	Initial Availability.
04/25/2008	0.2	Minor	Revised and updated property names and other technical content.
06/27/2008	1.0	Major	Initial Release.
08/06/2008	1.0.1	Editorial	Updated references to reflect date of initial release.
09/03/2008	1.0.2	Editorial	Revised and edited technical content.
12/03/2008	1.0.3	Editorial	Revised and edited technical content.
03/04/2009	1.0.4	Editorial	Revised and edited technical content.
04/10/2009	2.0	Major	Updated technical content and applicable product releases.
07/15/2009	3.0	Major	Revised and edited for technical content.
11/04/2009	3.1.0	Minor	Updated the technical content.
02/10/2010	4.0.0	Major	Updated and revised the technical content.
05/05/2010	5.0.0	Major	Updated and revised the technical content.
08/04/2010	5.1	Minor	Clarified the meaning of the technical content.

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Contents

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1   Introduction

This document specifies the Availability Web Service protocol, which enables a client to get status information for a set of users, rooms, and resources within a specified time window.

This document also specifies how a client can get suggestions for alternate meeting times.

1.1   Glossary

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

Coordinated Universal Time (UTC)
free/busy
Calendar folder
distribution list
entry ID
Hypertext Transfer Protocol (HTTP)
Hypertext Transfer Protocol over Secure Sockets Layer (HTTPS)
mailbox
Out of Office (OOF)
public folder
Web Services Description Language (WSDL)
WSDL message
Server object
SOAP body
SOAP message
XML schema

The following terms are specific to this document:

meeting suggestion: A possible alternate meeting time for the attendees of the meeting.

Merged Free/Busy: A string representation of the attendee's free/busy information for the duration specified.

proxy request: A request that is forwarded by a service to another service so that the requested data can then be processed. The original service acts as a proxy for the service that handles the request.

working hours: Times of the day that are valid for meetings to be considered for an attendee.

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

1.2   References

1.2.1   Normative References

We conduct frequent surveys of the normative references to assure their continued availability. If you have any issue with finding a normative reference, please contact dochelp@microsoft.com. We will assist you in finding the relevant information. Please check the archive site, http://msdn2.microsoft.com/en-us/library/E4BD6494-06AD-4aed-9823-445E921C9624, as an additional source.

[MS-OXCPERM] Microsoft Corporation, "Exchange Access and Operation Permissions Protocol Specification", April 2008.

[MS-OXOCAL] Microsoft Corporation, "Appointment and Meeting Object Protocol Specification", April 2008.

[MS-OXORMDR] Microsoft Corporation, "Reminder Settings Protocol Specification", April 2008.

[MS-OXPROPS] Microsoft Corporation, "Exchange Server Protocols Master Property List", April 2008.

[MS-OXWSADISC] Microsoft Corporation, "Autodiscover Publishing and Lookup SOAP-Based Web Service Protocol Specification", July 2009.

[MS-OXWSCDATA] Microsoft Corporation, "Common Web Service Data Types", July 2009.

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

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

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

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

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

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

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

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

1.2.2 Informative References

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

1.3 Overview

The Availability Web Service protocol enables the retrieval of up-to-date **free/busy** information and **meeting suggestions** for a set of **mailboxes**. Typically, this set of mailboxes represents a meeting's attendees and resources.

1.4 Relationship to Other Protocols

Clients can contact the Availability Web Service protocol by using SOAP over **HTTP** [RFC2616] and SOAP over **HTTPS** [RFC2818], as show in the following figures.
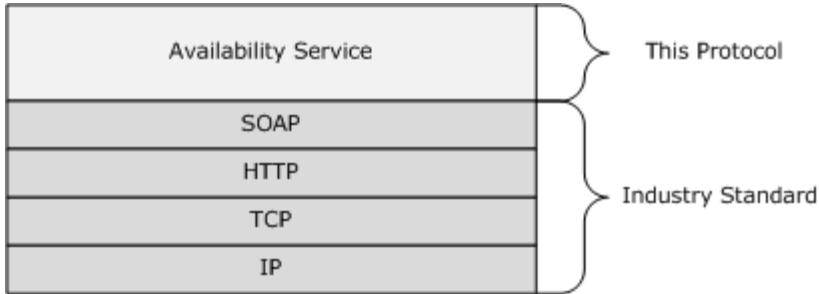
Figure 1: SOAP over HTTP
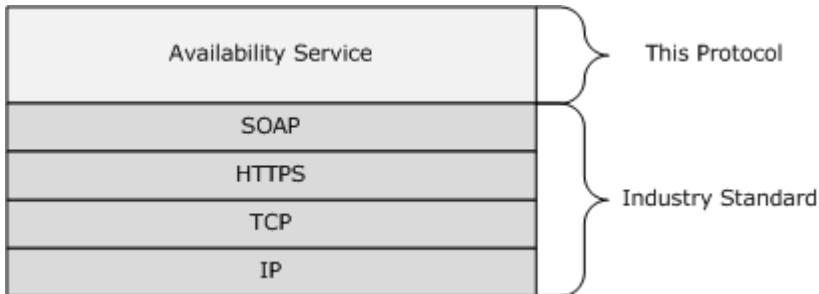
Figure 2: SOAP over HTTPS

1.5   Prerequisites/Preconditions

The URL of the Availability Web Service protocol can be retrieved by using the Autodiscover Publishing and Lookup SOAP-Based Web Service protocol [MS-OXWSADISC].<1>

1.6   Applicability Statement

None.

1.7   Versioning and Capability Negotiation

This document covers versioning issues in the following areas:

- **Supported Transports:** This protocol uses SOAP 1.1.

- **Protocol Versions:** This protocol specifies only one **WSDL** portType version.

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

- **Localization:** This protocol includes text strings in various messages. Localization considerations for such strings are specified in sections 2.2 and 3.1.4.

- **Capability Negotiation:** None.

1.8   Vendor-Extensible Fields

None.

1.9   Standards Assignments

None.

2 Messages

2.1 Transport

Protocol servers MUST support SOAP over HTTP. Protocol servers SHOULD additionally support SOAP over HTTPS for securing communications with clients.

Protocol messages MUST be formatted as specified in [SOAP1.1] section 4.

2.1.1 X-ClientStatistics Header

The X-ClientStatistics header can be sent by the client to the server to report free/busy request statistics to the server.<2>The following table lists the fields that are included in the X-ClientStatistics header.

Field name	Data format	Meaning
MessageID	GUID	A unique identifier for a free/busy data request.
RequstTime	ISO8601 date format	The **UTC** time when the request was sent.
ResponseTime	milliseconds	The round-trip response time for the request.
ResponseSize	KB	The size of the data received.
HTTPResponseCode	HTTP response code	The HTTP response that is returned by the server.
ErrorCode	Error code	When the HTTP response is 200 (HTTP STATUS OK), additional errors can be reported for individual users.
Overflow	Number of additional errors that occurred.	The number of additional errors that occurred, but the details of which are not included in the report.

Multiple reports included in the same X-ClientStatistics header MUST be separated by semicolons.

2.2 Common Message Syntax

The Availability Web Service protocol request header SHOULD<3> contain a **MessageID** header, as specified in [SOAP1.1].

The following sections specify the syntax that is specific to the Availability Web Service protocol.

2.2.1 Namespaces

See [XMLNS] for the namespaces specification.

Prefix	Namespace URI	Reference
soap	http://schemas.xmlsoap.org/wsdl/soap/	[SOAP1.1]
tns	http://schemas.microsoft.com/exchange/services/2006/messages	
xs	http://www.w3.org/2001/XMLSchema	[XMLSCHEMA1]
targetNamespace	http://schemas.microsoft.com/exchange/services/2006/messages	

Prefix	Namespace URI	Reference
wsdl	http://schemas.xmlsoap.org/wsdl/	[WSDL]
t	http://schemas.microsoft.com/exchange/services/2006/types	
m	http://schemas.microsoft.com/exchange/services/2006/messages	

2.2.2 Messages

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

2.2.3 Elements

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

2.2.4 Complex Types

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

2.2.5 Simple Types

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

2.2.6 Attributes

This specification does not define any common XML attribute definitions.

2.2.7 Groups

This specification does not define any common XML group definitions.

2.2.8 Attribute Groups

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

3   Protocol Details

This protocol specifies a way of getting Calendar data for a set of mailboxes (can be users, rooms, or resources) from a server.

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

3.1   Server Details

3.1.1   Abstract Data Model

The Availability service is a stateless protocol.

3.1.2   Timers

None.

3.1.3   Initialization

None.

3.1.4   Message Processing Events and Sequencing Rules

This protocol includes only one operation, **GetUserAvailability**, which is stateless and does not have sequencing rules.

Operation	Description
GetUserAvailability (section 3.1.4.1)	The **GetUserAvailability** operation provides up-to-date availability information for a set of users.

3.1.4.1   GetUserAvailability

The **GetUserAvailability** operation provides current user availability information at a specified level of detail.<4>

```
<wsdl:operation name="GetUserAvailability">
    <wsdl:input message="tns:GetUserAvailabilitySoapIn" />
    <wsdl:output message="tns:GetUserAvailabilitySoapOut" />
</wsdl:operation>
```

Request

Message Format	Description
tns:GetUserAvailabilitySoapIn	Specifies the **SOAP message** that requests the user availability information.

Response

Message Format	Description
tns:GetUserAvailabilitySoapOut	Specifies the SOAP message that is returned by the server in response.

3.1.4.1.1 Messages

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

Message	Description
tns:GetUserAvailabilitySoapIn	Specifies the SOAP message that requests the user availability information.
tns:GetUserAvailabilitySoapOut	Specifies the SOAP message that is returned by the server in response.

3.1.4.1.1.1 GetUserAvailabilitySoapIn Message

The **GetUserAvailabilitySoapIn** WSDL message contains one part, as described in the following table.

Parameter	Element/Type	Description
GetUserAvailabilityRequest	**GetUserAvailabilitySoapIn**	Contains the information that is required to query for availability.

3.1.4.1.1.2 GetUserAvailabilitySoapOut Message

The **GetUserAvailabilitySoapOut** WSDL message contains two parts, as described in the following table.

Parameter	Element/Type	Description
GetUserAvailabilityResult	t:GetUserAvailabilityResponse	Response that contains the requested availability information.
ServerVersion	t:ServerVersionInfo	Used for diagnostic purposes.

3.1.4.1.2 Elements

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

Element	Description
t:FreeBusyViewOptions	Specifies the type of free/busy information that is returned in the response.
t:GetUserAvailabilityRequest	Specifies the root element in a **GetUserAvailability** operation request.

Element	Description
t:GetUserAvailabilityResponse	Specifies the root element in the response from a **GetUserAvailability** operation request.
t:SuggestionsViewOptions	Contains the options for obtaining meeting suggestion information.
t:TimeZone	Specifies time-zone related information.

3.1.4.1.2.1   FreeBusyViewOptions Element

The <FreeBusyViewOptions> element specifies the type of free/busy information that is returned in the response.

```
<xs:element name="FreeBusyViewOptions"
  type="t:FreeBusyViewOptionsType"
 />
```

3.1.4.1.2.2   GetUserAvailabilityRequest Element

The <GetUserAvailabilityRequest> element specifies the root element in a **GetUserAvailability** request.

```
<xs:element name="GetUserAvailabilityRequest"
  type="m:GetUserAvailabilityRequestType"
 />
```

3.1.4.1.2.3   m:GetUserAvailabilityResponse Element

The <GetUserAvailabilityResponse> element specifies the root element in a **GetUserAvailability** operation response.

```
<xs:element name="GetUserAvailabilityResponse"
  type="m:GetUserAvailabilityResponseType"
 />
```

3.1.4.1.2.4   SuggestionsViewOptions Element

The <SuggestionsViewOptions> element contains the options for obtaining meeting suggestion information.

```
<xs:element name="SuggestionsViewOptions"
  type="t:SuggestionsViewOptionsType"
 />
```

3.1.4.1.2.5 TimeZone Element

The <TimeZone> element specifies time zone–related information.

```
<xs:element name="TimeZone"
  type="t:SerializableTimeZone"
 />
```

3.1.4.1.3 Complex Types

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

Complex Type	Description
t:ArrayOfAttendeeConflictData	Specifies an array of conflict data for queried attendees while retrieving suggested meeting times.
t:ArrayOfCalendarEvent	Specifies an array of calendar events for the attendee.
m:ArrayOfFreeBusyResponse	Contains the requested users' availability information.
t:ArrayOfMailboxData	Contains a list of mailboxes to query for availability information.
t:ArrayOfSuggestion	Specifies an array of meeting suggestions.
t:ArrayOfSuggestionDayResult	Specifies an array of meeting suggestions organized by date.
t:ArrayOfWorkingPeriod	Specifies the working period information for a mailbox user.
t:AttendeeConflictData	Specifies the abstract base type used for conflict data.
t:CalendarEvent	Represents an item on the calendar.
t:CalendarEventDetails	Specifies additional information about a calendar event.
m:FreeBusyResponseType	Specifies the returned response from the Availability service.
t:FreeBusyView	Specifies the free/busy information that is returned in the response.
t:FreeBusyViewOptions	Indicates the data to be returned in the response.
m:GetUserAvailabilityRequestType	Specifies the parameters that are used to obtain user availability information.
m:GetUserAvailabilityResponseType	Specifies the information that is returned in a response.
t:GroupAttendeeConflictData	Specifies aggregate conflict information.
t:IndividualAttendeeConflictData	Specifies a user's or contact's free/busy status.
t:MailboxData	Specifies details about an attendee.
t:SerializableTimeZone	Contains elements that identify time zone information.
t:SerializableTimeZoneTime	Specifies the start and end dates of daylight savings time.

Complex Type	Description
t:Suggestion	Specifies a single meeting suggestion.
t:SuggestionDayResult	Specifies a single day that contains suggested meeting times.
m:SuggestionsResponseType	Specifies the response that is returned with meeting suggestions.
t:SuggestionsViewOptionsType	Specifies the options for obtaining meeting suggestion information.
t:TooBigGroupAttendeeConflictData	Specifies an attendee that was resolved as a **distribution list**, but the list was too large to expand.
t:UnknownAttendeeConflictData	Specifies an attendee that cannot be found or used.
t:WorkingHours	Specifies the time zone settings and working hours for a mailbox user.
t:WorkingPeriod	Contains the work days and hours of the mailbox user.

3.1.4.1.3.1   t:ArrayOfAttendeeConflictData Complex Type

The **ArrayOfAttendeeConflictData** complex type specifies an array of conflict data for queried attendees while retrieving suggested meeting times.

```
<xs:complexType name="ArrayOfAttendeeConflictData">
  <xs:choice
    maxOccurs="unbounded"
    minOccurs="0"
  >
    <xs:element name="UnknownAttendeeConflictData"
      type="t:UnknownAttendeeConflictData"
      maxOccurs="1"
      minOccurs="1"
      nillable="true"
     />
    <xs:element name="IndividualAttendeeConflictData"
      type="t:IndividualAttendeeConflictData"
      maxOccurs="1"
      minOccurs="1"
      nillable="true"
     />
    <xs:element name="TooBigGroupAttendeeConflictData"
      type="t:TooBigGroupAttendeeConflictData"
     />
    <xs:element name="GroupAttendeeConflictData"
      type="t:GroupAttendeeConflictData"
      maxOccurs="1"
      minOccurs="1"
      nillable="true"
     />
  </xs:choice>
</xs:complexType>
```

Child Elements

Element	Type	Description
UnknownAttendeeConflictData	**t:UnknownAttendeeConflictData**	Represents an attendee that is not recognized (not a user, distribution list, or contact). Can be present, but the value can be null. When a meeting request contains an invalid e-mail address, an <UnknownAttendeeConflictData> element MUST be present with the value null when more than one user is requested.
IndividualAttendeeConflictData	**t:IndividualAttendeeConflictData**	Specifies the attendee's free/busy status for a window of time that occurs at the same time as the suggested meeting time. Can be present, but the value can be null.
TooBigGroupAttendeeConflictData	**t:TooBigGroupAttendeeConflictData**	Represents an attendee that is a distribution list that is too large to expand. Can be present, but the value can be null. Default maximum group size = 100.
GroupAttendeeConflictData	**t:GroupAttendeeConflictData**	Contains the conflict information about the number of attendees that are available, the number of attendees that have conflicts, and the number of attendees that do not have free/busy information in a distribution list. Can be present, but the value can be null.

3.1.4.1.3.2   t:ArrayOfCalendarEvent Complex Type

The **ArrayOfCalendarEvent** complex type specifies an array of calendar events for the attendee.

```
<xs:complexType>
  <xs:sequence>
    <xs:element name="CalendarEvent"
      type="t:CalendarEvent"
      maxOccurs="unbounded"
      minOccurs="0"
    />
  </xs:sequence>
</xs:complexType>
```

Child Elements

Element	Type	Description
CalendarEvent	**t:CalendarEvent**	Represents a unique calendar time occurance. Can be present.

3.1.4.1.3.3   m:ArrayOfFreeBusyResponse Complex Type

The **ArrayOfFreeBusyResponse** complex type contains the requested users' availability information. The order of the individual elements of this array MUST match the order of the users in the <GetUserAvailabilityRequest> element (section 3.1.4.1.2.2).

```
<xs:complexType name="ArrayOfFreeBusyResponse">
  <xs:sequence>
    <xs:element name="FreeBusyResponse"
      type="m:FreeBusyResponseType"
      maxOccurs="unbounded"
      minOccurs="0"
     />
  </xs:sequence>
</xs:complexType>
```

Child Elements

Element	Type	Description
FreeBusyResponse	m:FreeBusyResponseType	Contains the free/busy information for a single mailbox user and the response status.

3.1.4.1.3.4   t:ArrayOfMailboxData Complex Type

The **ArrayOfMailboxData** complex type contains a list of mailboxes to query for availability information.

```
<xs:complexType name="ArrayOfMailboxData">
  <xs:sequence>
    <xs:element name="MailboxData"
      type="t:MailboxData"
      maxOccurs="unbounded"
      minOccurs="0"
      nillable="true"
     />
  </xs:sequence>
</xs:complexType>
```

Child Elements

Element	Type	Description
MailboxData	t:MailboxData	Represents a mailbox. While the **maxOccurs** attribute is unbounded, the

Element	Type	Description
		GetUserAvailability operation (section 3.1.4.1) restricts the total number of <MailboxData> elements to 100 entries by default.
		Can be present, but the value can be null.

3.1.4.1.3.5   t:ArrayOfSuggestion Complex Type

The **ArrayOfSuggestion** complex type specifies an array of meeting suggestions in an Availability response.

```
<xs:complexType name="ArrayOfSuggestion">
  <xs:sequence>
    <xs:element name="Suggestion"
      type="t:Suggestion"
      maxOccurs="unbounded"
      minOccurs="0"
      nillable="true"
    />
  </xs:sequence>
</xs:complexType>
```

Child Elements

Element	Type	Description
Suggestion	**t:Suggestion**	Represents a meeting suggestion. While the **maxOccurs** attribute is unbounded, the **GetUserAvailability** operation restricts the total number of **Suggestion** elements to 100 entries by default.
		Can be present, but the value can be null.

3.1.4.1.3.6   t:ArrayOfSuggestionDayResult Complex Type

The **ArrayOfSuggestionDayResult** complex type specifies an array of meeting suggestions organized by date.

```
<xs:complexType name="ArrayOfSuggestionDayResult">
  <xs:sequence>
    <xs:element name="SuggestionDayResult"
      type="t:SuggestionDayResult"
    />
  </xs:sequence>
</xs:complexType>
```

Child Elements

Element	Type	Description
SuggestionDayResult	t:SuggestionDayResult	Contains zero or more **SuggestionDayResult** entities.
		Can be present.

3.1.4.1.3.7   t:ArrayOfWorkingPeriod Complex Type

The **ArrayOfWorkingPeriod** type specifies the working period information for the mailbox user.

```
<xs:complexType name="ArrayOfWorkingPeriod">
  <xs:sequence>
    <xs:element name="WorkingPeriod"
      type="t:WorkingPeriod"
      maxOccurs="unbounded"
      minOccurs="0"
     />
  </xs:sequence>
</xs:complexType>
```

Child Elements

Element	Type	Description
WorkingPeriod	t:WorkingPeriod	Contains the workweek days and hours of the mailbox user.

3.1.4.1.3.8   t:AttendeeConflictData Complex Type

The **AttendeeConflictData** complex type specifies the abstract base type that is used for the **UnknownAttendeeConflictData**,   **TooBigGroupAttendeeConflictData**, **IndividualAttendeeConflictData**, and **GroupAttendeeConflictData** complex types.

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

3.1.4.1.3.9   t:CalendarEvent Complex Type

The **CalendarEvent** complex type represents an item in the Calendar.

```
<xs:complexType name="CalendarEvent">
  <xs:sequence>
    <xs:element name="StartTime"
      type="xs:dateTime"
      maxOccurs="1"
      minOccurs="1"
     />
    <xs:element name="EndTime"
      type="xs:dateTime"
      maxOccurs="1"
      minOccurs="1"
     />
    <xs:element name="BusyType"
      type="t:LegacyFreeBusyType"
      maxOccurs="1"
      minOccurs="1"
     />
    <xs:element name="CalendarEventDetails"
```

```
        type="t:CalendarEventDetails"
        maxOccurs="1"
        minOccurs="0"
       />
    </xs:sequence>
  </xs:complexType>
```

Child Elements

Element	Type	Description
StartTime	xs:dateTime	Represents the start of a Calendar event. MUST be present.
EndTime	xs:dateTime	Represents the end of a Calendar event. MUST be present.
BusyType	t:LegacyFreeBusyType	Represents the free/busy status set for the Calendar event. MUST be present.
CalendarEventDetails	t:CalendarEventDetails	Provides additional information for a Calendar event. Can be present. The level of detail provided by this element depends on the permissions granted to the requester. This element MUST be included when the <FreeBusyViewType> element is set to **FreeBusy**, **FreeBusyMerged**, **Detailed**, or **DetailedMerged**. If no calendar items are present in the requested time window, this element can be empty.

3.1.4.1.3.10   t:CalendarEventDetails Complex Type

The **CalendarEventDetails** complex type specifies additional information about a Calendar event.

```
<xs:complexType name="CalendarEventDetails">
  <xs:sequence>
    <xs:element name="ID"
      type="xs:string"
      minOccurs="0"
      maxOccurs="1"
     />
    <xs:element name="Subject"
      type="xs:string"
      minOccurs="0"
      maxOccurs="1"
     />
    <xs:element name="Location"
      type="xs:string"
      minOccurs="0"
      maxOccurs="1"
     />
    <xs:element name="IsMeeting"
      type="xs:boolean"
```

```
      maxOccurs="1"
       minOccurs="1"
    />
    <xs:element name="IsRecurring"
      type="xs:boolean"
      maxOccurs="1"
       minOccurs="1"
     />
    <xs:element name="IsException"
      type="xs:boolean"
      maxOccurs="1"
       minOccurs="1"
     />
    <xs:element name="IsReminderSet"
       type="xs:boolean"
      maxOccurs="1"
       minOccurs="1"
     />
    <xs:element name="IsPrivate"
       type="xs:boolean"
      maxOccurs="1"
       minOccurs="1"
     />
  </xs:sequence>
 </xs:complexType>
```

Child Elements

Element	Type	Description
ID	xs:string	Represents the **entry ID** of the Calendar item. Can be present.
Subject	xs:string	Represents the subject of the Calendar item. Can be present.
Location	xs:string	Represents the location field of the Calendar item. Can be present.
IsMeeting	xs:boolean	Indicates whether the Calendar event is a meeting or an appointment. MUST be present and can only occur once.
IsRecurring	xs:boolean	Indicates whether the Calendar event is an instance of a recurring Calendar item or a single Calendar item. MUST be present, and can only occur once.
IsException	xs:boolean	Indicates whether an instance of a recurring Calendar item is changed from the master Calendar. MUST be present, and can only occur once.
IsReminderSet	xs:boolean	Indicates whether a reminder has been set for the Calendar event. MUST be present, and can only occur once.
IsPrivate	xs:boolean	Indicates whether the Calendar item is private.

Element	Type	Description
		MUST be present, and can only occur once.

Restrictions:

1. All the child elements are listed in the sequence in which they occur.

2. If the <IsPrivate> element is set to **TRUE**, the required elements MUST be returned and the optional elements MUST NOT be returned.

The following table maps the information in the **CalendarEvent** complex type to properties on a Calendar item, as specified in [MS-OXOCAL].

Element	Property	Flags used
<ID>	PidTagEntryId ([MS-OXPROPS] section 2.761)	N/A
<Subject>	PidTagSubject ([MS-OXPROPS] section 2.1155)	N/A
<Location>	PidLidLocation ([MS-OXOCAL] section 2.2.1.4)	N/A
<IsMeeting>	PidLidAppointmentStateFlags ([MS-OXOCAL] section 2.2.1.10)	Flag used is **asfMeeting**.
<IsRecurring>	PidLidRecurring ([MS-OXOCAL] section 2.2.1.12)	N/A
<IsException>	PidLidIsException ([MS-OXOCAL] section 2.2.1.35)	N/A
<IsReminderSet>	PidLidReminderSet ([MS-OXORMDR] section 2.2.1.1)	N/A
<IsPrivate>	PidTagSensitivity ([MS-OXPROPS] section 2.1125)	If the PidTagSensitivity property is set to **SENSITIVITY_PRIVATE**, the <IsPrivate> element returns **TRUE**.

3.1.4.1.3.11   m:FreeBusyResponseType Complex Type

The **FreeBusyResponseType** complex type specifies the returned response from the service.

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

Child Elements

Element	Type	Description
ResponseMessage	**m:ResponseMessageType**	Specifies descriptive information about the response status. Can be present
FreeBusyView	**t:FreeBusyView**	Specifies availability information for a specific user. Can be present.

3.1.4.1.3.12   t:FreeBusyView Complex Type

The **FreeBusyView** complex type specifies the free/busy information that is returned in the response.

```
<xs:complexType name="FreeBusyView">
  <xs:sequence>
    <xs:element name="FreeBusyViewType"
      type="t:FreeBusyViewType"
      maxOccurs="1"
      minOccurs="1"
     />
    <xs:element name="MergedFreeBusy"
      type="xs:string"
      maxOccurs="1"
      minOccurs="0"
     />
    <xs:element name="CalendarEventArray"
      type="t:ArrayOfCalendarEvent"
      maxOccurs="1"
      minOccurs="0"
     />
    <xs:element name="WorkingHours"
      type="t:WorkingHours"
      maxOccurs="1"
      minOccurs="0"
     />
  </xs:sequence>
</xs:complexType>
```

Child Elements

Element	Type	Description
FreeBusyViewType	t:FreeBusyViewType	Represents the type of the free/busy information that is returned in the response. MUST be present.
MergedFreeBusy	xs:string	Represents the **Merged Free/Busy** information. Can be present but MUST be present if one of the

Element	Type	Description
		following was requested in the <RequestedView> element of the request: ▪ MergedOnly ▪ FreeBusyMerged ▪ DetailedMerged
CalendarEventArray	t:ArrayOfCalendarEvent	Contains the array of calendar appointments in the mailbox. Can be present, but MUST be present if the following was requested in the <RequestedView> element of the request: ▪ FreeBusy ▪ FreeBusyMerged ▪ Detailed ▪ DetailedMerged
WorkingHours	t:WorkingHours	Represents the time zone settings and **working hours** for the requested mailbox user. Can be present.

3.1.4.1.3.13   t:FreeBusyViewOptionsType Complex Type

The **FreeBusyViewOptionsType** complex type indicates what data is to be returned in the response.

```
<xs:complexType name="FreeBusyViewOptionsType">
  <xs:sequence>
    <xs:element name="TimeWindow"
      type="t:Duration"
      maxOccurs="1"
      minOccurs="1"
     />
    <xs:element name="MergedFreeBusyIntervalInMinutes"
      type="xs:int"
      maxOccurs="1"
      minOccurs="0"
     />
    <xs:element name="RequestedView"
      type="t:FreeBusyViewType"
      maxOccurs="1"
      minOccurs="0"
     />
  </xs:sequence>
</xs:complexType>
```

Child Elements

Element	Type	Description
TimeWindow	t:Duration	Represents the time span for the queried user's availability. MUST occur once. Maximum time period is 62 days<5>.
MergedFreeBusyIntervalInMinutes	xs:int	Represents the time difference between two successive slots in the Merged Free/Busy view. Can be present. Minimum value = 5, Maximum value = 1440 (represents a day). Default is 30.
RequestedView	t:FreeBusyViewType	Defines the type of Calendar information that a client requests. MUST be a string with one of the following values: ▪ **MergedOnly** ▪ **FreeBusy** ▪ **FreeBusyMerged** ▪ **Detailed** ▪ **DetailedMerged** MUST NOT be a string with a value of None.

3.1.4.1.3.14   m:GetUserAvailabilityRequestType Complex Type

The **GetUserAvailabilityRequestType** complex type specifies the arguments that are used to obtain user availability information.

```
<xs:complexType name="GetUserAvailabilityRequestType">
  <xs:complexContent
    mixed="false"
  >
    <xs:extension
      base="m:BaseRequestType"
    >
      <xs:sequence>
        <xs:element
          ref="t:TimeZone"
         />
        <xs:element name="MailboxDataArray"
          type="t:ArrayOfMailboxData"
         />
        <xs:element
          maxOccurs="1"
          minOccurs="0"
          ref="t:FreeBusyViewOptions"
         />
        <xs:element
```

```
         maxOccurs="1"
         minOccurs="0"
         ref="t:SuggestionsViewOptions"
         />
      </xs:sequence>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>
```

Child Elements

Element	Type	Description
t:TimeZone	**t:TimeZone**	Contains elements that identify time zone information. This element also contains information about the transition between standard time and daylight saving time. All times that are returned in the **GetUserAvailability** operation response will be in this time zone. MUST be present.
MailboxDataArray	**t:ArrayOfMailboxData**	Contains a list of mailboxes to query for availability information. MUST be present.
t:FreeBusyViewOptions	**t:FreeBusyViewOptions**	Specifies the type of free/busy information that is returned in the response. Can be present.
t:SuggestionsViewOptions	t:SuggestionsViewOptions	Contains the options that obtain meeting suggestion information. Can be present.

3.1.4.1.3.15   m:GetUserAvailabilityResponseType Complex Type

The **GetUserAvailabilityResponseType** complex type specifies which information is returned in a **GetUserAvailability** operation response.

```
<xs:complexType name="GetUserAvailabilityResponseType">
  <xs:sequence>
    <xs:element name="FreeBusyResponseArray"
      type="m:ArrayOfFreeBusyResponse"
      maxOccurs="1"
      minOccurs="0"
     />
    <xs:element name="SuggestionResponse"
      type="m:SuggestionsResponseType"
      maxOccurs="1"
      minOccurs="0"
     />
  </xs:sequence>
</xs:complexType>
```

Child Elements

Element	Type	Description
FreeBusyResponseArray	m:ArrayOfFreeBusyResponse	Contains the requested user's availability information and the response status. Can be present. MUST be present if the <FreeBusyViewOptions> element is present in the request.
SuggestionResponse	m:SuggestionsResponseType	Contains the suggested data for requested meeting suggestions. Can be present. MUST be present if the <SuggestionsViewOptions> element is present in the request.

3.1.4.1.3.16   t:GroupAttendeeConflictData Complex Type

The **GroupAttendeeConflictData** complex type specifies aggregate conflict information about the number of users who are available, the number of users who have conflicts, and the number of users who do not have availability information in a distribution list for a suggested meeting time.

```
<xs:complexType name="GroupAttendeeConflictData">
  <xs:complexContent
    mixed="false"
  >
    <xs:extension
      base="t:AttendeeConflictData"
    >
      <xs:sequence>
        <xs:element name="NumberOfMembers"
          type="xs:int"
          maxOccurs="1"
          minOccurs="1"
         />
        <xs:element name="NumberOfMembersAvailable"
          type="xs:int"
          maxOccurs="1"
          minOccurs="1"
         />
        <xs:element name="NumberOfMembersWithConflict"
          type="xs:int"
          maxOccurs="1"
          minOccurs="1"
         />
        <xs:element name="NumberOfMembersWithNoData"
          type="xs:int"
          maxOccurs="1"
          minOccurs="1"
        />
      </xs:sequence>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>
```

Child Elements

Element	Type	Description
NumberOfMembers	xs:int	Represents the number of attendees in the distribution list. If the number of members in the distribution list exceeds 100, the <GroupAttendeeConflictData> element will only return information for the first 100 members. The value of the <NumberOfMembersAvailable>, <NumberOfMembersWithConflict>, and <NumberOfMembersWithNoData> elements MUST equal the value of this element. MUST be present. The **xs:int** type is specified in [XMLSCHEMA2].
NumberOfMembersAvailable	xs:int	Represents the number of attendees who are available. Can be present. The maximum value is 100.
NumberOfMembersWithConflict	xs:int	Represents the number of attendees who have conflicts. Can be present. The maximum value is 100.
NumberOfMembersWithNoData	xs:int	Represents the number of attendees for which data could not be retrieved. Can be present. The maximum value is 100.

3.1.4.1.3.17   t:IndividualAttendeeConflictData Complex Type

The **IndividualAttendeeConflictData** complex type specifies a user's or contact's free/busy status for a time window that occurs at the same time as the suggested meeting time that is identified in the <Suggestion> element.

```
<xs:complexType name="IndividualAttendeeConflictData">
  <xs:complexContent
    mixed="false"
  >
    <xs:extension
      base="t:AttendeeConflictData"
    >
      <xs:sequence>
        <xs:element name="BusyType"
          type="t:LegacyFreeBusyType"
          maxOccurs="1"
          minOccurs="1"
         />
      </xs:sequence>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>
```

Child Elements

Element	Type	Description
BusyType	**t:LegacyFreeBusyType**	Represents the free/busy status of an attendee for a suggested meeting time. The **LegacyFreeBusyType** simple type is specified in [MS-OXWSCDATA] section 2.2.2.15.

3.1.4.1.3.18   t:MailboxData Complex Type

The **MailboxData** complex type specifies details about an attendee.

```
<xs:complexType name="MailxboxData">
  <xs:sequence>
    <xs:element name="Email"
      type="t:EmailAddress"
      maxOccurs="1"
      minOccurs="1"
     />
    <xs:element name="AttendeeType"
      type="t:MeetingAttendeeType"
      maxOccurs="1"
      minOccurs="1"
     />
    <xs:element name="ExcludeConflicts"
      type="xs:boolean"
      maxOccurs="1"
      minOccurs="0"
     />
  </xs:sequence>
</xs:complexType>
```

Child Elements

Element	Type	Description
Email	t:EmailAddress	Represents an attendee. MUST be present.
AttendeeType	t:MeetingAttendeeType	Represents the type of attendee identified in the <Email> element. This element is used in requests for meeting suggestions. MUST be present.
ExcludeConflicts	xs:boolean	Specifies whether to return suggested times for Calendar times that conflict among the attendees. This is used to calculate meeting suggestions. Can be present.

3.1.4.1.3.19   t:SerializableTimeZone Complex Type

The **SerializableTimeZone** complex type contains elements that identify time zone information. This element also contains information about the transition between standard time and daylight saving time. The <TimeZone> element in the **GetUserAvailabilityRequest** WSDL message represents the time zone in which the **DateTime** values in the request are specified. The **DateTime**

values that are returned by the Availability service are also in this time zone. The exception is that working hours in an Availability response are returned in the time zone of the attendee.

```
<xs:complexType name="SerializableTimeZone">
  <xs:sequence>
    <xs:element name="Bias"
      type="xs:int"
      maxOccurs="1"
      minOccurs="1"
     />
    <xs:element name="StandardTime"
      type="t:SerializableTimeZoneTime"
      maxOccurs="1"
      minOccurs="1"
     />
    <xs:element name="DaylightTime"
      type="t:SerializableTimeZoneTime"
      maxOccurs="1"
      minOccurs="1"
     />
  </xs:sequence>
</xs:complexType>
```

Child Elements

Element	Type	Description
Bias	xs:int	Represents the offset from UTCfor standard and daylight savings time. This value is in minutes. Values can range from -144 to 144. MUST be present, and can occur only once.
StandardTime	t:SerializableTimeZoneTime	Represents an offset from the time relative to UTC that is represented by the <Bias> element. This element also contains information about the transition to standard time from daylight saving time in regions where daylight saving time is observed. MUST be present.
DaylightTime	t:SerializableTimeZoneTime	Represents an offset from the time relative to UTC that is represented by the <Bias> element in regions where daylight saving time is observed. This element also contains information about when the transition to daylight saving time from standard time occurs. MUST be present.

3.1.4.1.3.20   t:SerializableTimeZoneTime Complex Type

The **SerializableTimeZoneTime** complex type specifies a time and a time zone for a meeting suggestion.

```
<xs:complexType name="SerializableTimeZoneTime">
  <xs:sequence>
    <xs:element name="Bias"
      type="xs:int"
```

```
        maxOccurs="1"
        minOccurs="1"
     />
    <xs:element name="Time"
       type="xs:string"
       maxOccurs="1"
       minOccurs="1"
     />
    <xs:element name="DayOrder"
       type="xs:short"
       maxOccurs="1"
       minOccurs="1"
     />
    <xs:element name="Month"
       type="xs:short"
       maxOccurs="1"
       minOccurs="1"
     />
    <xs:element name="DayOfWeek"
       type="t:DayOfWeekType"
       maxOccurs="1"
       minOccurs="1"
     />
    <xs:element name="Year"
       type="xs:string"
       maxOccurs="1"
       minOccurs="1"
     />
   </xs:sequence>
 </xs:complexType>
```

Child Elements

Element	Type	Description
Bias	xs:int	Represents the offset from UTC for standard and daylight savings time. This value is in minutes. Values can range from -144 to 144. MUST be present, and can only occur once. The **xs:int** type is specified in [XMLSCHEMA2].
Time	xs:string	Represents the transition of the time of day to and from standard time and daylight saving time. MUST be present, and can only occur once. Format: *hh:mm:ss* *hh*: hours ranging from 0 to 23. *mm*: minutes ranging from 0 to 59. *ss*: seconds ranging from 0 to 59. The **xs:string** type is specified in [XMLSCHEMA2].
DayOrder	xs:short	For relative time zones, represents the nth occurrence of the day that is specified in the <DayOfWeek> element that represents the date of transition from and to standard time and daylight saving time.

Element	Type	Description
		For dynamic time zones, this represents the actual day of the month.
		MUST be present and can only occur once.
		Valid values are between 1-5 or 1-31.
		For time zones that do not have transitions, 0 (zero) SHOULD be used.
		The **xs:short** type is specified in [XMLSCHEMA2].
Month	xs:short	Represents the transition month of the year to and from standard time and daylight saving time.
		MUST be present.
		Valid values for time zones that have transitions: 1-12, where 1 represents January and 12 represents December.
		For time zones that do not have transitions, 0 (zero) SHOULD be used.
DayOfWeek	t:DayOfWeekType	Represents the day of the week when the transition to and from standard time and daylight saving time occurs.
		MUST be present, and can only occur once.
Year	xs:string	Defines a time zone that changes, depending on the year.
		Can be present.
		Minimum: 1601
		Maximum: 4500

When the <Year> value is present in the element (for dynamic time zones), the <DayOrder> MUST be between 1 and 31. When the <Year> value is not present (for relative time zones), the <DayOrder> MUST be between 1 and 5, where 1 represents the Sunday of the first week of the month and 5 represents the Sunday of the last week of the month.

3.1.4.1.3.21   t:Suggestion Complex Type

The **Suggestion** complex type specifies a single meeting suggestion in an Availability Web Service protocol response.

```
<xs:complexType name="Suggestion">
  <xs:sequence>
    <xs:element name="MeetingTime"
      type="xs:dateTime"
      maxOccurs="1"
      minOccurs="1"
     />
    <xs:element name="IsWorkTime"
      type="xs:boolean"
      maxOccurs="1"
      minOccurs="1"
     />
    <xs:element name="SuggestionQuality"
      type="t:SuggestionQuality"
      maxOccurs="1"
      minOccurs="1"
     />
    <xs:element name="AttendeeConflictDataArray"
      type="t:ArrayOfAttendeeConflictData"
```

```
        maxOccurs="1"
        minOccurs="0"
      />
    </xs:sequence>
  </xs:complexType>
```

Child Elements

Element	Type	Description
MeetingTime	xs:dateTime	Represents a suggested meeting time. MUST be present. The **xs:dateTime** type is specified in [XMLSCHEMA2].
IsWorkTime	xs:boolean	Represents whether the suggested meeting time occurs during the scheduled working hours of the organizer. MUST be present. The **xs:boolean** type is specified in [XMLSCHEMA2].
SuggestionQuality	t:SuggestionQuality	Represents the quality of the suggested meeting time. SHOULD<6> be present.
AttendeeConflictDataArray	t:ArrayOfAttendeeConflictData	Contains an array of conflicts between attendees and the suggested meeting time. Can be present.

3.1.4.1.3.22   t:SuggestionDayResult Complex Type

The **SuggestionDayResult** complex type specifies a single day that contains suggested meeting times in an Availability Web Service protocol response.

```
<xs:complexType name="SuggestionDayResult">
  <xs:sequence>
    <xs:element name="Date"
      type="xs:dateTime"
      maxOccurs="1"
      minOccurs="1"
    />
    <xs:element name="DayQuality"
      type="t:SuggestionQuality"
      maxOccurs="1"
      minOccurs="1"
    />
    <xs:element name="SuggestionArray"
      type="t:ArrayOfSuggestion"
      maxOccurs="1"
      minOccurs="0"
    />
  </xs:sequence>
</xs:complexType>
```

Child Elements

Element	Type	Description
Date	xs:dateTime	Specifies the date that contains the suggested meeting times. MUST be present. The **xs:dateTime** type is specified in [XMLSCHEMA2].
DayQuality	t:SuggestionQuality	Specifies the quality of the best suggestion for the day. MUST be present.
SuggestionArray	t:ArrayOfSuggestion	Contains an array of meeting suggestions. SHOULD be present.<7>

3.1.4.1.3.23   m:SuggestionsResponseType Complex Type

The **SuggestionsResponseType** complex type specifies the response that is returned from the service for meeting suggestions.

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

Child Elements

Element	Type	Description
ResponseMessage	m:ResponseMessageType	Provides descriptive information about the response status. Can be present.
SuggestionDayResultArray	t:ArrayOfSuggestionDayResult	Contains an array of meeting suggestions organized by date. Can be present.

3.1.4.1.3.24   t:SuggestionsViewOptionsType Complex Type

The **SuggestionsViewOptionsType** complex type specifies the options for obtaining meeting suggestion information.

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```xml
<xs:complexType name="SuggestionsViewOptionsType">
  <xs:sequence>
    <xs:element name="GoodThreshold"
      type="xs:int"
      maxOccurs="1"
      minOccurs="0"
     />
    <xs:element name="MaximumResultsByDay"
      type="xs:int"
      maxOccurs="1"
      minOccurs="0"
     />
    <xs:element name="MaximumNonWorkHourResultsByDay"
      type="xs:int"
      maxOccurs="1"
      minOccurs="0"
     />
    <xs:element name="MeetingDurationInMinutes"
      type="xs:int"
      maxOccurs="1"
      minOccurs="0"
     />
    <xs:element name="MinimumSuggestionQuality"
      type="t:SuggestionQuality"
      maxOccurs="1"
      minOccurs="0"
     />
    <xs:element name="DetailedSuggestionsWindow"
      type="t:Duration"
      maxOccurs="1"
      minOccurs="0"
     />
    <xs:element name="CurrentMeetingTime"
      type="xs:dateTime"
      maxOccurs="1"
      minOccurs="0"
     />
    <xs:element name="GlobalObjectId"
      type="xs:string"
      maxOccurs="1"
      minOccurs="0"
     />
  </xs:sequence>
</xs:complexType>
```

Child Elements

Element	Type	Description
GoodThreshold	xs:int	Determines whether the suggestion is considered Good or Fair. The suggested meeting time is considered Excellent if there are no conflicts. The suggested meeting time is considered Poor if the percentage of conflicts is greater than 50 percent. The suggested meeting time is considered Good if the percentage of

Element	Type	Description
		conflicts is less than the **GoodThreshold**. The suggested meeting time is considered Fair if the percentage of conflicts is greater than the **GoodThreshold**, but less than or equal to 50 percent. Can be present. If present, the value MUST be an integer >= 1 and <= 49. The default is 25.
MaximumResultsByDay	xs:int	Specifies the number of suggested meeting times per day that are returned in the response. Can be present. If present, MUST be an int >=1 and <= 48 Default is 10.
MaximumNonWorkHourResultsByDay	xs:int	Specifies the number of suggested results for meeting times outside the regular working hours of the organizer per day. Can be present; if present, MUST be an int >= 0 and <= 48. Default is 0 (zero).
MeetingDurationInMinutes	xs:int	Specifies the length in minutes of the meeting to be suggested. Can be present. If present, MUST be an int >= 1 and <= 1440. Default is 30.
MinimumSuggestionQuality	t:SuggestionQuality	Specifies the minimum quality of meeting suggestions that are to be returned in the response. Can be present. Default is **Fair**.
DetailedSuggestionsWindow	t:Duration	Specifies the time span that is queried for detailed information about suggested meeting times. MUST be present. **StartTime** and **EndTime** fields have dates only and no time information present in the **DateTime**.
CurrentMeetingTime	xs:dateTime	Represents the start time of a meeting that you want to update with the suggested meeting time results. Can be present.
GlobalObjectId	xs:string	Represents the global object ID (PidLidGlobalObjectId) [MS-OXOCAL] of the Calendar item that is to be ignored while calculating suggestions.

Element	Type	Description
		Can be present.

3.1.4.1.3.25   t:TooBigGroupAttendeeConflictData Complex Type

The **TooBigGroupAttendeeConflictData** complex type specifies an attendee that was resolved as a distribution list, but the distribution list was too large to expand.

```
<xs:complexType name="TooBigGroupAttendeeConflictData">
  <xs:complexContent
    mixed="false"
  >
    <xs:extension
      base="t:AttendeeConflictData"
    />
  </xs:complexContent>
</xs:complexType>
```

The **TooBigGroupAttendeeConflictData** complex type extends the **AttendeeConflictData** complex type (section 3.1.4.1.3.8).

3.1.4.1.3.26   t:UnknownAttendeeConflictData Complex Type

The **UnknownAttendeeConflictData** complex type specifies that an attendee cannot be found in the directory, or that the attendee is not a user, distribution list, or contact to be used in a suggested meeting time response.

```
<xs:complexType name="UnknownAttendeeConflictData">
  <xs:complexContent
    mixed="false"
  >
    <xs:extension
      base="t:AttendeeConflictData"
    />
  </xs:complexContent>
</xs:complexType>
```

The **UnknownAttendeeConflictData** complex type extends the **AttendeeConflictData** complex type (section 3.1.4.1.3.8).

3.1.4.1.3.27   t:WorkingHours Complex Type

The **WorkingHours** complex type specifies the time zone settings and working hours for the requested mailbox user.

```
<xs:complexType name="WorkingHours">
  <xs:sequence>
    <xs:element name="TimeZone"
      type="t:SerializableTimeZone"
      maxOccurs="1"
      minOccurs="1"
```

```
          />
      <xs:element name="WorkingPeriodArray"
        type="t:ArrayOfWorkingPeriod"
        maxOccurs="1"
        minOccurs="1"
        />
    </xs:sequence>
  </xs:complexType>
```

Child Elements

Element	Type	Description
TimeZone	t:SerializableTimeZone	Contains information that identifies the time zone information. MUST be present.
WorkingPeriodArray	t:ArrayOfWorkingPeriod	Contains working period information for the mailbox user. MUST be present.

3.1.4.1.3.28   t:WorkingPeriod Complex Type

The **WorkingPeriod** complex type contains the work week days and hours of the mailbox user.

```
  <xs:complexType name="WorkingPeriod">
    <xs:sequence>
      <xs:element name="DayOfWeek"
        type="t:DaysOfWeekType"
        maxOccurs="1"
        minOccurs="1"
       />
      <xs:element name="StartTimeInMinutes"
        type="xs:int"
        maxOccurs="1"
        minOccurs="1"
       />
      <xs:element name="EndTimeInMinutes"
        type="xs:int"
        maxOccurs="1"
        minOccurs="1"
       />
    </xs:sequence>
  </xs:complexType>
```

Child Elements

Element	Type	Description
DayOfWeek	t:DaysOfWeekType	Contains the list of working days that are scheduled for the mailbox user. MUST be present.
StartTimeInMinutes	xs:int	Represents the start of the working day for a mailbox user. Minutes are counted starting from 12 A.M. MUST be present.

Element	Type	Description
EndTimeInMinutes	xs:int	Represents the end of the working day for a mailbox user. Minutes are counted starting from 12 A.M. MUST be present.

3.1.4.1.4 Simple Types

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

Simple Type	Description
t:FreeBusyViewType	Identifies the type of free/busy view information in the request to or response from the Availability service.
t:MeetingAttendeeType	Designate an attendee's role in the meeting.
t:SuggestionQuality	Specifies the quality level of the suggested meeting time.

3.1.4.1.4.1 t:FreeBusyViewType Simple Type

The **FreeBusyViewType** simple type specifies the type of requested free/busy information that is returned in a response when it occurs as an instance in the context of a <RequestedView> element. This enumeration specifies the type of free/busy information that is actually returned in a response when it occurs as an instance in the context of a <FreeBusyView> element.

```
<xs:simpleType name="FreeBusyViewType">
  <xs:restriction
    base="xs:string"
  >
    <xs:enumeration
      value="None"
     />
    <xs:enumeration
      value="MergedOnly"
     />
    <xs:enumeration
      value="FreeBusy"
     />
    <xs:enumeration
      value="FreeBusyMerged"
     />
    <xs:enumeration
      value="Detailed"
     />
    <xs:enumeration
      value="DetailedMerged"
     />
  </xs:restriction>
</xs:simpleType>
```

Enumeration

The following values are defined by the **FreeBusyViewType** simple type:

Value	Description
None	Specifies that no free/busy information is returned. This value is not valid for requests. This value is valid for responses.
MergedOnly	Specifies that Merged Free/Busy is requested or returned.
FreeBusy	Specifies that the response contains status information: Free, Busy, Tentative, and **OOF**. This also includes the start/end times of the appointments.
FreeBusyMerged	Specifies that the response contains all the properties in free/busy with Merged Free/Busy information.
Detailed	Specifies that the response contains status information: Free, Busy, Tentative, and OOF; the start/end times of the appointments; and various properties of the appointment such as subject, location, and importance. This requested view will return the maximum amount of information for which the requesting user is privileged.
DetailedMerged	Specifies that the response contains all the properties in Detailed with Merged Free/Busy information. This requested view will return the maximum amount of information for which the requesting user is privileged along with Merged Free/Busy information.

Merged Free/Busy is a string representation of the **Calendar folder** for the requested duration. The **MergedFreeBusyInterval** value that is specified in the request is used to break up the requested duration into separate blocks, the size for which is equal to the **MergedFreeBusyInterval** value. The blocks contain a number that represents the free/busy status of the calendar.

Number	Free/busy status
0	Free
1	Tentative
2	Busy
3	OOF
4	No data (indicates that the requester does not have permissions to view free/busy data)

If the block has overlapping appointments, the following precedence order is used (from high to low): OOF, Busy, Tentative, Free.

The mailbox owner can grant users specific free/busy view permissions. This can be done by setting the free/busy permissions on the Calendar folder, as specified in [MS-OXOCAL].<8>

3.1.4.1.4.2 t:MeetingAttendeeType Simple Type

The **MeetingAttendeeType** enumeration provides the <AttendeeType> element values that designate a meeting attendee's role in the **MailboxData** complex type.

```
<xs:simpleType name="MeetingAttendeeType">
  <xs:restriction
    base="xs:string"
  >
    <xs:enumeration
      value="Organizer"
```

```
         />
      <xs:enumeration
        value="Required"
        />
      <xs:enumeration
        value="Optional"
        />
      <xs:enumeration
        value="Room"
        />
      <xs:enumeration
        value="Resource"
        />
    </xs:restriction>
  </xs:simpleType>
```

Enumeration

The following values are defined by the **MeetingAttendeeType** simple type:

Value	Description
Organizer	Attendee is the organizer of the meeting.
Required	Required attendee of the meeting.
Optional	Optional attendee of the meeting.
Room	A room resource that is used for the meeting.
Resource	A resource such as a TV or project or that is scheduled for use in the meeting.

3.1.4.1.4.3 t:SuggestionQuality Simple Type

The **SuggestionQuality** type specifies the quality level of the suggestion time.

```
  <xs:simpleType>
    <xs:restriction
      base="xs:string"
    >
      <xs:enumeration
        value="Excellent"
        />
      <xs:enumeration
        value="Good"
        />
      <xs:enumeration
        value="Fair"
        />
      <xs:enumeration
        value="Poor"
        />
    </xs:restriction>
  </xs:simpleType>
```

Enumeration

The following values are defined by the simple type:

Value	Description
Excellent	Request: Caller wants suggestions for times where there are no conflicts.
	Response: Indicates that 0 percent of the attendees have a conflict for the suggested meeting time.
Good	Request: Caller wants suggestions for times where the percentage of conflicts is equal to or less than the **GoodThreshold** value.
	Response: Indicates that the suggested meeting time has a conflict percentage that is equal to or lower than the **GoodThreshold** value.
Fair	Request: Percentage of conflicts is between **GoodThreshold** and 50 percent.
Poor	Percentage of conflicts is greater than or equal to 50 percent.

3.1.5 Timer Events

None.

3.1.6 Other Local Events

None.

4   Protocol Examples

4.1   GetUserAvailability Request

The following example shows how to get detailed availability information for two users in the Pacific Time zone. One user has been given free/busy permissions, and the other user's mailbox is on a computer that does not use the Availability service to provide free/busy information.

Working hours for both users are Monday – Friday, 0800 to 1700.

```
POST /ews/exchange.asmx HTTP/1.1
X-Nego-Capability: Negotiate, Kerberos, NTLM
X-ClientStatistics: MessageId=[unique message identifier],RequestTime=2009-12-
08T00:09:00Z,ResponseTime=179,ResponseSize=13,HttpResponseCode=200
Depth: 0
Content-Type: text/xml; charset=utf-8
User-Agent: [user agent string]
Host: [DNS name]
Content-Length: 1608
Connection: Keep-Alive
Cache-Control: no-cache
Pragma: no-cache
Authorization: Negotiate [Certificate thumbprint]
Depth: 0
Content-Type: text/xml; charset=utf-8

<?xml version="1.0" encoding="utf-8"?>
<soap:Envelope xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:xsd="http://www.w3.org/2001/XMLSchema"
xmlns:soap="http://schemas.xmlsoap.org/soap/envelope/">
  <soap:Header>
    <wsa:MessageID xmlns:wsa="http://www.w3.org/2005/08/addressing/">
      [unique message identifier]
    </wsa:MessageID>
  </soap:Header>
  <soap:Body>
    <GetUserAvailabilityRequest
xmlns="http://schemas.microsoft.com/exchange/services/2006/messages">
      <TimeZone xmlns="http://schemas.microsoft.com/exchange/services/2006/types">
        <Bias>480</Bias>
        <StandardTime>
          <Bias>0</Bias>
          <Time>02:00:00</Time>
          <DayOrder>5</DayOrder>
          <Month>10</Month>
          <DayOfWeek>Sunday</DayOfWeek>
        </StandardTime>
        <DaylightTime>
          <Bias>-60</Bias>
          <Time>02:00:00</Time>
          <DayOrder>1</DayOrder>
          <Month>4</Month>
          <DayOfWeek>Sunday</DayOfWeek>
        </DaylightTime>
      </TimeZone>
      <MailboxDataArray>
        <MailboxData xmlns="http://schemas.microsoft.com/exchange/services/2006/types">
          <Email>
```

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```
            <Name></Name>
            <Address>user1@example.com</Address>
            <RoutingType>SMTP</RoutingType>
          </Email>
          <AttendeeType>Required</AttendeeType>
          <ExcludeConflicts>false</ExcludeConflicts>
        </MailboxData>
        <MailboxData xmlns="http://schemas.microsoft.com/exchange/services/2006/types">
          <Email>
            <Name></Name>
            <Address>user2@example.com</Address>
            <RoutingType>SMTP</RoutingType>
          </Email>
          <AttendeeType>Required</AttendeeType>
          <ExcludeConflicts>false</ExcludeConflicts>
        </MailboxData>
      </MailboxDataArray>
      <FreeBusyViewOptions xmlns="http://schemas.microsoft.com/exchange/services/2006/types">
        <TimeWindow>
          <StartTime>2008-01-20T00:00:00</StartTime>
          <EndTime>2008-01-21T00:00:00</EndTime>
        </TimeWindow>
        <MergedFreeBusyIntervalInMinutes>30</MergedFreeBusyIntervalInMinutes>
        <RequestedView>Detailed</RequestedView>
      </FreeBusyViewOptions>
    </GetUserAvailabilityRequest>
  </soap:Body>
</soap:Envelope>
```

4.2 GetUserAvailability Response

The following is an example of a successful response from the Availability Web service.

```
<?xml version="1.0" encoding="utf-8" ?>
<soap:Envelope xmlns:soap="http://schemas.xmlsoap.org/soap/envelope/"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:xsd="http://www.w3.org/2001/XMLSchema">
  <soap:Header>
    <t:ServerVersionInfo MajorVersion="8" MinorVersion="1" MajorBuildNumber="240"
MinorBuildNumber="5" xmlns:t="http://schemas.microsoft.com/exchange/services/2006/types" />
  </soap:Header>
  <soap:Body>
    <GetUserAvailabilityResponse
xmlns="http://schemas.microsoft.com/exchange/services/2006/messages">
      <FreeBusyResponseArray>
        <FreeBusyResponse>
          <ResponseMessage ResponseClass="Success">
            <ResponseCode>NoError</ResponseCode>
          </ResponseMessage>
          <FreeBusyView>
            <FreeBusyViewType
xmlns="http://schemas.microsoft.com/exchange/services/2006/types">FreeBusy</FreeBusyViewType>
            <CalendarEventArray
xmlns="http://schemas.microsoft.com/exchange/services/2006/types">
              <CalendarEvent>
                <StartTime>2008-01-21T11:30:00</StartTime>
                <EndTime>2008-01-21T14:00:00</EndTime>
                <BusyType>Tentative</BusyType>
```

```xml
          </CalendarEvent>
          <CalendarEvent>
            <StartTime>2008-01-21T13:00:00</StartTime>
            <EndTime>2008-01-21T14:00:00</EndTime>
            <BusyType>Tentative</BusyType>
          </CalendarEvent>
        </CalendarEventArray>
        <WorkingHours xmlns="http://schemas.microsoft.com/exchange/services/2006/types">
          <TimeZone>
            <Bias>480</Bias>
            <StandardTime>
              <Bias>0</Bias>
              <Time>02:00:00</Time>
              <DayOrder>1</DayOrder>
              <Month>11</Month>
              <DayOfWeek>Sunday</DayOfWeek>
            </StandardTime>
            <DaylightTime>
              <Bias>-60</Bias>
              <Time>02:00:00</Time>
              <DayOrder>2</DayOrder>
              <Month>3</Month>
              <DayOfWeek>Sunday</DayOfWeek>
            </DaylightTime>
          </TimeZone>
          <WorkingPeriodArray>
            <WorkingPeriod>
              <DayOfWeek>Monday Tuesday Wednesday Thursday Friday</DayOfWeek>
              <StartTimeInMinutes>480</StartTimeInMinutes>
              <EndTimeInMinutes>1020</EndTimeInMinutes>
            </WorkingPeriod>
          </WorkingPeriodArray>
        </WorkingHours>
      </FreeBusyView>
    </FreeBusyResponse>
    <FreeBusyResponse>
      <ResponseMessage ResponseClass="Success">
        <ResponseCode>NoError</ResponseCode>
      </ResponseMessage>
      <FreeBusyView>
        <FreeBusyViewType
 xmlns="http://schemas.microsoft.com/exchange/services/2006/types">Detailed</FreeBusyViewType>
        <CalendarEventArray
 xmlns="http://schemas.microsoft.com/exchange/services/2006/types">
          <CalendarEvent>
            <StartTime>2008-01-21T08:00:00</StartTime>
            <EndTime>2008-01-21T09:00:00</EndTime>
            <BusyType>Tentative</BusyType>
            <CalendarEventDetails>
<ID>00000000CEB2AC9CFA28D311AECE0008C707F197070019398D273324D3118A2B0008C7E9A5690000000A24590
000603ECC64E5A9D843AFA932BEBCE2DE3D0002B8745C820000</ID>
              <Subject>Meeting1</Subject>
              <Location>Location1</Location>
              <IsMeeting>true</IsMeeting>
              <IsRecurring>false</IsRecurring>
              <IsException>false</IsException>
              <IsReminderSet>false</IsReminderSet>
              <IsPrivate>false</IsPrivate>
```

```
            </CalendarEventDetails>
          </CalendarEvent>
          <CalendarEvent>
            <StartTime>2008-01-21T13:00:00</StartTime>
            <EndTime>2008-01-21T14:00:00</EndTime>
            <BusyType>Busy</BusyType>
            <CalendarEventDetails>

<ID>00000000CEB2AC9CFA28D311AECE0008C707F197070019398D273324D3118A2B0008C7E9A5690000000A24590
000EF70892B18E20546A69506A5B037FFF60034E85A28180000</ID>
              <Subject>Meeting2</Subject>
              <Location>Location2</Location>
              <IsMeeting>true</IsMeeting>
              <IsRecurring>false</IsRecurring>
              <IsException>false</IsException>
              <IsReminderSet>false</IsReminderSet>
              <IsPrivate>false</IsPrivate>
            </CalendarEventDetails>
          </CalendarEvent>
          <CalendarEvent>
            <StartTime>2008-01-21T14:30:00</StartTime>
            <EndTime>2008-01-21T15:00:00</EndTime>
            <BusyType>Busy</BusyType>
            <CalendarEventDetails>

<ID>00000000CEB2AC9CFA28D311AECE0008C707F197070019398D273324D3118A2B0008C7E9A5690000000A24590
0005B0217B934765A46963D785DF0840DDC00B35D7DF3C80000</ID>
              <Subject>Meeting3</Subject>
              <Location>my office</Location>
              <IsMeeting>true</IsMeeting>
              <IsRecurring>true</IsRecurring>
              <IsException>false</IsException>
              <IsReminderSet>true</IsReminderSet>
              <IsPrivate>false</IsPrivate>
            </CalendarEventDetails>
          </CalendarEvent>
        </CalendarEventArray>
        <WorkingHours xmlns="http://schemas.microsoft.com/exchange/services/2006/types">
          <TimeZone>
            <Bias>480</Bias>
            <StandardTime>
              <Bias>0</Bias>
              <Time>02:00:00</Time>
              <DayOrder>1</DayOrder>
              <Month>11</Month>
              <DayOfWeek>Sunday</DayOfWeek>
            </StandardTime>
            <DaylightTime>
              <Bias>-60</Bias>
              <Time>02:00:00</Time>
              <DayOrder>2</DayOrder>
              <Month>3</Month>
              <DayOfWeek>Sunday</DayOfWeek>
            </DaylightTime>
          </TimeZone>
          <WorkingPeriodArray>
            <WorkingPeriod>
              <DayOfWeek>Monday Tuesday Wednesday Thursday Friday</DayOfWeek>
              <StartTimeInMinutes>480</StartTimeInMinutes>
```

```
              <EndTimeInMinutes>1020</EndTimeInMinutes>
            </WorkingPeriod>
          </WorkingPeriodArray>
        </WorkingHours>
      </FreeBusyView>
    </FreeBusyResponse>
  </FreeBusyResponseArray>
  </GetUserAvailabilityResponse>
  </soap:Body>
</soap:Envelope>
```

4.3 Merged Free/Busy String

The following example shows how the **MergedFreeBusy** string is created by the server for a specified set of free/busy view options. The following is an example of the <FreeBusyViewOptions> element of a **GetUserAvailability** operation request.

```
<FreeBusyViewOptions xmlns="http://schemas.microsoft.com/exchange/services/2006/types">
  <TimeWindow>
    <StartTime>2008-01-30T00:00:00</StartTime>
    <EndTime>2008-01-31T00:00:00</EndTime>
  </TimeWindow>
  <MergedFreeBusyIntervalInMinutes>60</MergedFreeBusyIntervalInMinutes>
  <RequestedView>FreeBusy</RequestedView>
</FreeBusyViewOptions>
```

The following is the **CalendarEventArray** that is returned in the response.

```
<CalendarEventArray xmlns="http://schemas.microsoft.com/exchange/services/2006/types">
  <CalendarEvent>
    <StartTime>2008-01-30T12:00:00</StartTime>
    <EndTime>2008-01-30T14:00:00</EndTime>
    <BusyType>OOF</BusyType>
  </CalendarEvent>
  <CalendarEvent>
    <StartTime>2008-01-30T13:30:00</StartTime>
    <EndTime>2008-01-30T14:30:00</EndTime>
    <BusyType>Busy</BusyType>
  </CalendarEvent></CalendarEventArray>
```

The corresponding **MergedFreeBusy** string will be the following: 000000000000332000000000

Between 1:30 and 2:00 P.M., the mailbox has two overlapping appointments, one marked OOF and the other marked Busy. The Merged Free/Busy string for that slot has to be marked OOF. The No data value (4) is not returned in the Merged Free/Busy string.

For a description of how the **MergedFreeBusy** string is constructed by the server, see section 3.1.4.1.4.1.

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4.4 Unsuccessful Response

4.4.1 SOAP Exception

The following is an example of a SOAP exception that is thrown when the **MailboxData** array is empty.

```
<?xml version="1.0" encoding="utf-8" ?>
<soap:Envelope xmlns:soap="http://schemas.xmlsoap.org/soap/envelope/"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:xsd="http://www.w3.org/2001/XMLSchema">
  <soap:Header>
    <t:ServerVersionInfo MajorVersion="8" MinorVersion="1" MajorBuildNumber="240"
MinorBuildNumber="5" xmlns:t="http://schemas.microsoft.com/exchange/services/2006/types" />
  </soap:Header>
  <soap:Body>
    <soap:Fault>
      <faultcode>soap:Client</faultcode>

<faultstring>Microsoft.Exchange.InfoWorker.Common.Availability.IdentityArrayEmptyException:
The MailboxData array is empty. ---> The MailboxData array is empty.</faultstring>
      <faultactor>https://server/ews/exchange.asmx</faultactor>
      <detail>
        <ErrorCode
xmlns="http://schemas.microsoft.com/exchange/services/2006/messages">5001</ErrorCode>
      </detail>
    </soap:Fault>
  </soap:Body>
</soap:Envelope>
```

4.4.2 GetUserAvailability Error response

The following is an example where a mailbox in the **MailboxData** array cannot be found in the directory service.

```
<?xml version="1.0" encoding="utf-8" ?>
<soap:Envelope xmlns:soap="http://schemas.xmlsoap.org/soap/envelope/"
xmlns:xsi="http://www.w3.org/2001/XMLSchemainstance"
xmlns:xsd="http://www.w3.org/2001/XMLSchema">
  <soap:Header>
    <t:ServerVersionInfo MajorVersion="8" MinorVersion="1" MajorBuildNumber="240"
MinorBuildNumber="5" xmlns:t="http://schemas.microsoft.com/exchange/services/2006/types" />
  </soap:Header>
  <soap:Body>
    <GetUserAvailabilityResponse
xmlns="http://schemas.microsoft.com/exchange/services/2006/messages">
      <FreeBusyResponseArray>
        <FreeBusyResponse>
          <ResponseMessage ResponseClass="Error">
            <MessageText>
              Unable to resolve email address <>SMTP:nouser@example.com to an Active
Directory object.
            </MessageText>
            <ResponseCode>ErrorMailRecipientNotFound</ResponseCode>
            <DescriptiveLinkKey>0</DescriptiveLinkKey>
            <MessageXml>
```

```
                <ExceptionType
xmlns="http://schemas.microsoft.com/exchange/services/2006/errors">Microsoft.Exchange.InfoWor
ker.Common.Availability.MailRecipientNotFoundException</ExceptionType>
                <ExceptionCode
xmlns="http://schemas.microsoft.com/exchange/services/2006/errors">5009</ExceptionCode>
            </MessageXml>
          </ResponseMessage>
          <FreeBusyView>
            <FreeBusyViewType
xmlns="http://schemas.microsoft.com/exchange/services/2006/types">None</FreeBusyViewType>
          </FreeBusyView>
        </FreeBusyResponse>
      </FreeBusyResponseArray>
    </GetUserAvailabilityResponse>
  </soap:Body>
</soap:Envelope>
```

5   Security

5.1   Security Considerations for Implementers

None.

5.2   Index of Security Parameters

None.

6   Appendix A: Full WSDL

The following table lists the **XML** files that are required to implement the functionality that is specified in this document. The contents of each file are included in this section.

Section	File name	Description
WSDL	MS-OXWAVLS.wsdl	Contains the WSDL for the implementation of this protocol.
Types Schema	MS-OXWAVLS-types.xsd	Contains the XML schema type definitions that are used in this protocol.
Messages Schema	MS-OXWAVLS-messages.xsd	Contains the XML schema message definitions that are used in this protocol.

These files need to be placed in a common **folder** for the WSDL to validate and operate. Also, any schema files that are included in or imported into the MS-OXWAVLS-types.xsd or MS-OXWAVLS-messages.xsd schemas need to be placed in the common folder with the files.

6.1   WSDL

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

```
<?xml version="1.0" encoding="utf-8"?>
<wsdl:definitions xmlns:soap="http://schemas.xmlsoap.org/wsdl/soap/"
xmlns:tns="http://schemas.microsoft.com/exchange/services/2006/messages"
targetNamespace="http://schemas.microsoft.com/exchange/services/2006/messages"
xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/"
xmlns:t="http://schemas.microsoft.com/exchange/services/2006/types">
    <wsdl:types>
        <xs:schema id="messages" elementFormDefault="qualified" version="Exchange2010"
            xmlns:t="http://schemas.microsoft.com/exchange/services/2006/types"
            xmlns:xs="http://www.w3.org/2001/XMLSchema"
            targetNamespace="http://schemas.microsoft.com/exchange/services/2006/messages">
            <xs:include schemaLocation="MS-OXWAVLS-messages.xsd"/>
        </xs:schema>
    </wsdl:types>
    <wsdl:message name="GetUserAvailabilitySoapIn">
        <wsdl:part name="GetUserAvailabilityRequest"
element="tns:GetUserAvailabilityRequest"/>
    </wsdl:message>
    <wsdl:message name="GetUserAvailabilitySoapOut">
        <wsdl:part name="GetUserAvailabilityResult"
element="tns:GetUserAvailabilityResponse"/>
        <wsdl:part name="ServerVersion" element="t:ServerVersionInfo"/>
    </wsdl:message>
    <wsdl:portType name="ExchangeServicePortType">
        <wsdl:operation name="GetUserAvailability">
            <wsdl:input message="tns:GetUserAvailabilitySoapIn"/>
            <wsdl:output message="tns:GetUserAvailabilitySoapOut"/>
        </wsdl:operation>
    </wsdl:portType>
    <wsdl:binding name="ExchangeServiceBinding" type="tns:ExchangeServicePortType">
        <wsdl:documentation>
            <wsi:Claim conformsTo="http://ws-i.org/profiles/basic/1.0"
                xmlns:wsi="http://ws-i.org/schemas/conformanceClaim/"/>
        </wsdl:documentation>
```

```
        <soap:binding transport="http://schemas.xmlsoap.org/soap/http" style="document"/>
        <wsdl:operation name="GetUserAvailability">
            <soap:operation soapAction="http://schemas.microsoft.com/exchange/
                services/2006/messages/GetUserAvailability"/>
            <wsdl:input>
                <soap:body parts="GetUserAvailabilityRequest" use="literal"/>
            </wsdl:input>
            <wsdl:output>
                <soap:body parts="GetUserAvailabilityResult" use="literal"/>
                <soap:header message="tns:GetUserAvailabilitySoapOut"
                    part="ServerVersion" use="literal"/>
            </wsdl:output>
        </wsdl:operation>
    </wsdl:binding>
</wsdl:definitions>
```

6.2   Types Schema

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

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

File name	Defining specification
MS-OXWSCDATA-types.xsd	[MS-OXWSCDATA] section 6.3

```
<?xml version="1.0" encoding="utf-8"?>
<xs:schema xmlns:t="http://schemas.microsoft.com/exchange/services/2006/types"
xmlns:xs="http://www.w3.org/2001/XMLSchema"
targetNamespace="http://schemas.microsoft.com/exchange/services/2006/types"
elementFormDefault="qualified" version="Exchange2010" id="types">
  <xs:import namespace="http://www.w3.org/XML/1998/namespace"/>
  <xs:include schemaLocation="MS-OXWSCDATA-types.xsd"/>
  <xs:simpleType name="MeetingAttendeeType">
    <xs:restriction base="xs:string">
      <xs:enumeration value="Organizer"/>
      <xs:enumeration value="Required"/>
      <xs:enumeration value="Optional"/>
      <xs:enumeration value="Room"/>
      <xs:enumeration value="Resource"/>
    </xs:restriction>
  </xs:simpleType>
  <xs:complexType name="CalendarEventDetails">
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="ID" type="xs:string"/>
      <xs:element minOccurs="0" maxOccurs="1" name="Subject" type="xs:string"/>
      <xs:element minOccurs="0" maxOccurs="1" name="Location" type="xs:string"/>
      <xs:element minOccurs="1" maxOccurs="1" name="IsMeeting" type="xs:boolean"/>
      <xs:element minOccurs="1" maxOccurs="1" name="IsRecurring" type="xs:boolean"/>
      <xs:element minOccurs="1" maxOccurs="1" name="IsException" type="xs:boolean"/>
      <xs:element minOccurs="1" maxOccurs="1" name="IsReminderSet" type="xs:boolean"/>
      <xs:element minOccurs="1" maxOccurs="1" name="IsPrivate" type="xs:boolean"/>
    </xs:sequence>
  </xs:complexType>
```

```xml
<xs:complexType name="CalendarEvent">
  <xs:sequence>
    <xs:element minOccurs="1" maxOccurs="1" name="StartTime" type="xs:dateTime"/>
    <xs:element minOccurs="1" maxOccurs="1" name="EndTime" type="xs:dateTime"/>
    <xs:element minOccurs="1" maxOccurs="1" name="BusyType" type="t:LegacyFreeBusyType"/>
    <xs:element minOccurs="0" maxOccurs="1" name="CalendarEventDetails"
type="t:CalendarEventDetails"/>
  </xs:sequence>
</xs:complexType>
<xs:complexType name="ArrayOfCalendarEvent">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="unbounded" name="CalendarEvent"
type="t:CalendarEvent"/>
  </xs:sequence>
</xs:complexType>
<xs:simpleType name="FreeBusyViewType">
  <xs:list>
    <xs:simpleType>
      <xs:restriction base="xs:string">
        <xs:enumeration value="None"/>
        <xs:enumeration value="MergedOnly"/>
        <xs:enumeration value="FreeBusy"/>
        <xs:enumeration value="FreeBusyMerged"/>
        <xs:enumeration value="Detailed"/>
        <xs:enumeration value="DetailedMerged"/>
      </xs:restriction>
    </xs:simpleType>
  </xs:list>
</xs:simpleType>
<xs:complexType name="FreeBusyViewOptionsType">
  <xs:sequence>
    <xs:element minOccurs="1" maxOccurs="1" name="TimeWindow" type="t:Duration"/>
    <xs:element minOccurs="0" maxOccurs="1" name="MergedFreeBusyIntervalInMinutes"
type="xs:int"/>
    <xs:element minOccurs="0" maxOccurs="1" name="RequestedView"
type="t:FreeBusyViewType"/>
  </xs:sequence>
</xs:complexType>
<xs:element name="FreeBusyViewOptions" type="t:FreeBusyViewOptionsType"/>
<xs:complexType name="WorkingPeriod">
  <xs:sequence>
    <xs:element minOccurs="1" maxOccurs="1" name="DayOfWeek" type="t:DaysOfWeekType"/>
    <xs:element minOccurs="1" maxOccurs="1" name="StartTimeInMinutes" type="xs:int"/>
    <xs:element minOccurs="1" maxOccurs="1" name="EndTimeInMinutes" type="xs:int"/>
  </xs:sequence>
</xs:complexType>
<xs:complexType name="ArrayOfWorkingPeriod">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="unbounded" name="WorkingPeriod"
type="t:WorkingPeriod"/>
  </xs:sequence>
</xs:complexType>
<xs:complexType name="SerializableTimeZoneTime">
  <xs:sequence>
    <xs:element minOccurs="1" maxOccurs="1" name="Bias" type="xs:int"/>
    <xs:element minOccurs="1" maxOccurs="1" name="Time" type="xs:string"/>
    <xs:element minOccurs="1" maxOccurs="1" name="DayOrder" type="xs:short"/>
    <xs:element minOccurs="1" maxOccurs="1" name="Month" type="xs:short"/>
    <xs:element minOccurs="1" maxOccurs="1" name="DayOfWeek" type="t:DayOfWeekType"/>
```

```xml
      <xs:element minOccurs="0" maxOccurs="1" name="Year" type="xs:string"/>
    </xs:sequence>
  </xs:complexType>
  <xs:complexType name="SerializableTimeZone">
    <xs:sequence>
      <xs:element minOccurs="1" maxOccurs="1" name="Bias" type="xs:int"/>
      <xs:element minOccurs="1" maxOccurs="1" name="StandardTime"
 type="t:SerializableTimeZoneTime"/>
      <xs:element minOccurs="1" maxOccurs="1" name="DaylightTime"
 type="t:SerializableTimeZoneTime"/>
    </xs:sequence>
  </xs:complexType>
  <xs:element name="TimeZone" type="t:SerializableTimeZone"/>
  <xs:complexType name="WorkingHours">
    <xs:sequence>
      <xs:element minOccurs="1" maxOccurs="1" name="TimeZone" type="t:SerializableTimeZone"/>
      <xs:element minOccurs="1" maxOccurs="1" name="WorkingPeriodArray"
 type="t:ArrayOfWorkingPeriod"/>
    </xs:sequence>
  </xs:complexType>
  <xs:complexType name="FreeBusyView">
    <xs:sequence>
      <xs:element minOccurs="1" maxOccurs="1" name="FreeBusyViewType"
 type="t:FreeBusyViewType"/>
      <xs:element minOccurs="0" maxOccurs="1" name="MergedFreeBusy" type="xs:string"/>
      <xs:element minOccurs="0" maxOccurs="1" name="CalendarEventArray"
 type="t:ArrayOfCalendarEvent"/>
      <xs:element minOccurs="0" maxOccurs="1" name="WorkingHours" type="t:WorkingHours"/>
    </xs:sequence>
  </xs:complexType>
  <xs:complexType name="MailboxData">
    <xs:sequence>
      <xs:element minOccurs="1" maxOccurs="1" name="Email" type="t:EmailAddress"/>
      <xs:element minOccurs="1" maxOccurs="1" name="AttendeeType"
 type="t:MeetingAttendeeType"/>
      <xs:element minOccurs="0" maxOccurs="1" name="ExcludeConflicts" type="xs:boolean"/>
    </xs:sequence>
  </xs:complexType>
  <xs:complexType name="ArrayOfMailboxData">
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="unbounded" name="MailboxData" nillable="true"
 type="t:MailboxData"/>
    </xs:sequence>
  </xs:complexType>
  <xs:simpleType name="SuggestionQuality">
    <xs:restriction base="xs:string">
      <xs:enumeration value="Excellent"/>
      <xs:enumeration value="Good"/>
      <xs:enumeration value="Fair"/>
      <xs:enumeration value="Poor"/>
    </xs:restriction>
  </xs:simpleType>
  <xs:complexType name="SuggestionsViewOptionsType">
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="GoodThreshold" type="xs:int"/>
      <xs:element minOccurs="0" maxOccurs="1" name="MaximumResultsByDay" type="xs:int"/>
      <xs:element minOccurs="0" maxOccurs="1" name="MaximumNonWorkHourResultsByDay"
 type="xs:int"/>
      <xs:element minOccurs="0" maxOccurs="1" name="MeetingDurationInMinutes" type="xs:int"/>
```

```xml
      <xs:element minOccurs="0" maxOccurs="1" name="MinimumSuggestionQuality"
type="t:SuggestionQuality"/>
      <xs:element minOccurs="1" maxOccurs="1" name="DetailedSuggestionsWindow"
type="t:Duration"/>
      <xs:element minOccurs="0" maxOccurs="1" name="CurrentMeetingTime" type="xs:dateTime"/>
      <xs:element minOccurs="0" maxOccurs="1" name="GlobalObjectId" type="xs:string"/>
    </xs:sequence>
  </xs:complexType>
  <xs:element name="SuggestionsViewOptions" type="t:SuggestionsViewOptionsType"/>
  <xs:complexType name="ArrayOfAttendeeConflictData">
    <xs:choice minOccurs="0" maxOccurs="unbounded">
      <xs:element minOccurs="1" maxOccurs="1" name="UnknownAttendeeConflictData"
nillable="true" type="t:UnknownAttendeeConflictData"/>
      <xs:element minOccurs="1" maxOccurs="1" name="IndividualAttendeeConflictData"
nillable="true" type="t:IndividualAttendeeConflictData"/>
      <xs:element minOccurs="1" maxOccurs="1" name="TooBigGroupAttendeeConflictData"
nillable="true" type="t:TooBigGroupAttendeeConflictData"/>
      <xs:element minOccurs="1" maxOccurs="1" name="GroupAttendeeConflictData"
nillable="true" type="t:GroupAttendeeConflictData"/>
    </xs:choice>
  </xs:complexType>
  <xs:complexType name="AttendeeConflictData" abstract="true"/>
  <xs:complexType name="UnknownAttendeeConflictData">
    <xs:complexContent mixed="false">
      <xs:extension base="t:AttendeeConflictData"/>
    </xs:complexContent>
  </xs:complexType>
  <xs:complexType name="TooBigGroupAttendeeConflictData">
    <xs:complexContent mixed="false">
      <xs:extension base="t:AttendeeConflictData"/>
    </xs:complexContent>
  </xs:complexType>
  <xs:complexType name="IndividualAttendeeConflictData">
    <xs:complexContent mixed="false">
      <xs:extension base="t:AttendeeConflictData">
        <xs:sequence>
          <xs:element minOccurs="1" maxOccurs="1" name="BusyType"
type="t:LegacyFreeBusyType"/>
        </xs:sequence>
      </xs:extension>
    </xs:complexContent>
  </xs:complexType>
  <xs:complexType name="GroupAttendeeConflictData">
    <xs:complexContent mixed="false">
      <xs:extension base="t:AttendeeConflictData">
        <xs:sequence>
          <xs:element minOccurs="1" maxOccurs="1" name="NumberOfMembers" type="xs:int"/>
          <xs:element minOccurs="1" maxOccurs="1" name="NumberOfMembersAvailable"
type="xs:int"/>
          <xs:element minOccurs="1" maxOccurs="1" name="NumberOfMembersWithConflict"
type="xs:int"/>
          <xs:element minOccurs="1" maxOccurs="1" name="NumberOfMembersWithNoData"
type="xs:int"/>
        </xs:sequence>
      </xs:extension>
    </xs:complexContent>
  </xs:complexType>
  <xs:complexType name="Suggestion">
    <xs:sequence>
      <xs:element minOccurs="1" maxOccurs="1" name="MeetingTime" type="xs:dateTime"/>
```

```
          <xs:element minOccurs="1" maxOccurs="1" name="IsWorkTime" type="xs:boolean"/>
          <xs:element minOccurs="1" maxOccurs="1" name="SuggestionQuality"
type="t:SuggestionQuality"/>
          <xs:element minOccurs="0" maxOccurs="1" name="AttendeeConflictDataArray"
type="t:ArrayOfAttendeeConflictData"/>
        </xs:sequence>
      </xs:complexType>
      <xs:complexType name="ArrayOfSuggestion">
        <xs:sequence>
          <xs:element minOccurs="0" maxOccurs="unbounded" name="Suggestion" type="t:Suggestion"/>
        </xs:sequence>
      </xs:complexType>
      <xs:complexType name="SuggestionDayResult">
        <xs:sequence>
          <xs:element minOccurs="1" maxOccurs="1" name="Date" type="xs:dateTime"/>
          <xs:element minOccurs="1" maxOccurs="1" name="DayQuality" type="t:SuggestionQuality"/>
          <xs:element minOccurs="0" maxOccurs="1" name="SuggestionArray"
type="t:ArrayOfSuggestion"/>
        </xs:sequence>
      </xs:complexType>
      <xs:complexType name="ArrayOfSuggestionDayResult">
        <xs:sequence>
          <xs:element minOccurs="0" maxOccurs="unbounded" name="SuggestionDayResult"
type="t:SuggestionDayResult"/>
        </xs:sequence>
      </xs:complexType>
</xs:schema>
```

6.3   Messages Schema

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

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

File name	Defining specification
MS-OXWSCDATA-messages.xsd	[MS-OXWSCDATA] section 6.3

```
<?xml version="1.0" encoding="utf-8"?>
<xs:schema xmlns:m="http://schemas.microsoft.com/exchange/services/2006/messages"
xmlns:t="http://schemas.microsoft.com/exchange/services/2006/types"
xmlns:xs="http://www.w3.org/2001/XMLSchema"
targetNamespace="http://schemas.microsoft.com/exchange/services/2006/messages"
elementFormDefault="qualified" version="Exchange2010" id="messages">
  <xs:include schemaLocation="MS-OXWSCDATA-messages.xsd"/>
  <xs:import namespace="http://schemas.microsoft.com/exchange/services/2006/types"
schemaLocation="MS-OXWAVLS-types.xsd"/>
  <xs:complexType name="GetUserAvailabilityRequestType">
    <xs:complexContent mixed="false">
      <xs:extension base="m:BaseRequestType">
        <xs:sequence>
          <xs:element ref="t:TimeZone"/>
          <xs:element name="MailboxDataArray" type="t:ArrayOfMailboxData"/>
          <xs:element minOccurs="0" maxOccurs="1" ref="t:FreeBusyViewOptions"/>
```

```
          <xs:element minOccurs="0" maxOccurs="1" ref="t:SuggestionsViewOptions"/>
        </xs:sequence>
      </xs:extension>
    </xs:complexContent>
  </xs:complexType>
  <xs:element name="GetUserAvailabilityRequest" type="m:GetUserAvailabilityRequestType"/>
  <xs:complexType name="FreeBusyResponseType">
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="ResponseMessage"
type="m:ResponseMessageType"/>
      <xs:element minOccurs="0" maxOccurs="1" name="FreeBusyView" type="t:FreeBusyView"/>
    </xs:sequence>
  </xs:complexType>
  <xs:complexType name="ArrayOfFreeBusyResponse">
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="unbounded" name="FreeBusyResponse"
type="m:FreeBusyResponseType"/>
    </xs:sequence>
  </xs:complexType>
  <xs:complexType name="SuggestionsResponseType">
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="ResponseMessage"
type="m:ResponseMessageType"/>
      <xs:element minOccurs="0" maxOccurs="1" name="SuggestionDayResultArray"
type="t:ArrayOfSuggestionDayResult"/>
    </xs:sequence>
  </xs:complexType>
  <xs:complexType name="GetUserAvailabilityResponseType">
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="FreeBusyResponseArray"
type="m:ArrayOfFreeBusyResponse"/>
      <xs:element minOccurs="0" maxOccurs="1" name="SuggestionsResponse"
type="m:SuggestionsResponseType"/>
    </xs:sequence>
  </xs:complexType>
  <xs:element name="GetUserAvailabilityResponse" type="m:GetUserAvailabilityResponseType"/>
</xs:schema>
```

7 Appendix B: Product Behavior

The information in this specification is applicable to the following Microsoft products:

- Microsoft® Office Outlook® 2007

- Microsoft® Exchange Server 2007

- Microsoft® Outlook® 2010

- Microsoft® Exchange Server 2010

- Microsoft® Exchange Server 2010 Service Pack 1 (SP1)

Exceptions, if any, are noted below. If a service pack number appears with the product version, behavior changed in that service pack. The new behavior also applies to subsequent service packs of the product unless otherwise specified. 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 prescribed using the terms SHOULD or SHOULD NOT implies product behavior in accordance with the SHOULD or SHOULD NOT prescription. Unless otherwise specified, the term MAY implies that product does not follow the prescription.

<1> Section 1.5: Office Outlook 2007 and Outlook 2010 use Windows Integrated Authentication to request free/busy information from Exchange 2007 and Exchange 2010.

<2> Section 2.1.1: Office Outlook 2003 and Office Outlook 2007 do not send the X-ClientStatistics header. . Exchange 2003 and Exchange 2007 ignore the X-ClientStatistics header.

<3> Section 2.2: Office Outlook 2007 does not include the **MessageID** header in requests. Exchange 2007 ignores the **MessageID** header.

<4> Section 3.1.4.1: When a user creates a meeting request, adds attendees, and switches to the scheduling assistant to view the attendees' free/busy status, Office Outlook 2007 and Outlook 2010 issue a request to the Availability service.

<5> Section 3.1.4.1.3.13: For Exchange 2003, Exchange 2007, and Exchange 2010, the maximum time period is 42 days.

<6> Section 3.1.4.1.3.21: Exchange 2007 does not return the <SuggestionQuality> element in a <Suggestion> element when the value of the <SuggestionQuality> element is "Poor".

<7> Section 3.1.4.1.3.22: Exchange 2007 does not return the <SuggestionArray> element in a <SuggestionDayResult> element when the value of the <DayQuality> element is "Poor".

<8> Section 3.1.4.1.4.1: The Availability service in Exchange 2007 and Exchange 2010 supports this by doing an access check with the requester's credentials against the permissions that have been set on the mailbox owner's Calendar folder, as described in [MS-OXCPERM]. The permissions are used to specify an access level that determines the type of information that the requester can view. The following table shows how the access level that is returned from this check is treated.

RequestedView (from the GetUserAvailabilityRequest)	Allowed view based on Access level		
	Detailed	FreeBusy	No Access

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RequestedView (from the GetUserAvailabilityRequest)	Allowed view based on Access level		
None	-	-	-
MergedOnly	Merged	Merged	Error (InvalidAccessLevelException)
FreeBusy	FreeBusy	FreeBusy	Error (InvalidAccessLevelException)
FreeBusyMerged	FreeBusyMerged	FreeBusyMerged	Error (InvalidAccessLevelException)
Detailed	Detailed	FreeBusy	Error (InvalidAccessLevelException)
DetailedMerged	DetailedMerged	FreeBusyMerged	Error (InvalidAccessLevelException)

8   Change Tracking

This section identifies changes that were made to the [MS-OXWAVLS] protocol document between the May 2010 and August 2010 releases. Changes are classified as New, Major, Minor, Editorial, or No change.

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

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

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

- An extensive rewrite, addition, or deletion of major portions of content.

- The removal of a document from the documentation set.

- Changes made for template compliance.

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

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

The revision class **No change** means that no new technical or language changes were introduced. The technical content of the document is identical to the last released version, but minor editorial and formatting changes, as well as updates to the header and footer information, and to the revision summary, may have been made.

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

- New content added.

- Content updated.

- Content removed.

- New product behavior note added.

- Product behavior note updated.

- Product behavior note removed.

- New protocol syntax added.

- Protocol syntax updated.

- Protocol syntax removed.

- New content added due to protocol revision.

- Content updated due to protocol revision.

- Content removed due to protocol revision.

- New protocol syntax added due to protocol revision.

- Protocol syntax updated due to protocol revision.

- Protocol syntax removed due to protocol revision.

- New content added for template compliance.

- Content updated for template compliance.

- Content removed for template compliance.

- Obsolete document removed.

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

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

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

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

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

Section	Tracking number (if applicable) and description	Major change (Y or N)	Change type
1.1 Glossary	56615 Added the term "distribution list" to the list of terms that are defined in [MS-OXGLOS].	N	Content update.
1.1 Glossary	56462 Added the terms "Coordinated Universal Time (UTC)", "entry ID", and "Hypertext Transfer Protocol (HTTP)" to the list of terms that are defined in [MS-OXGLOS].	N	Content update.
1.2.1 Normative References	55751 Moved [MS-OXGLOS] from Normative References section to Informative References section.	N	Content update.
1.2.1 Normative References	56647 Removed [MS-OXOPFFB] from the list of references.	N	Content update.
1.2.1 Normative References	56462 Added reference information for [MS-OXORMDR].	N	Content update.
1.2.1 Normative References	Added reference information for [MS-OXWSCDATA] and [RFC2818]. Removed reference information for [XML10].	N	Content update.

Section	Tracking number (if applicable) and description	Major change (Y or N)	Change type
3.1.4.1.3.1 t:ArrayOfAttendeeConflictData Complex Type	56615 Updated the text to clarify when the <UnknownAttendeeConfliceData> element is returned.	N	Content update.
3.1.4.1.3.9 t:CalendarEvent Complex Type	56484 Added the name of the complex type to the syntax block.	N	Content update.
3.1.4.1.3.10 t:CalendarEventDetails Complex Type	56462 Clarified the property name that is used to set the <IsPrivate> element.	N	Content update.
3.1.4.1.3.10 t:CalendarEventDetails Complex Type	56461 Clarified the contents of the table that maps Calendar item entries to <CalendarEventDetail> element members.	N	Content update.
3.1.4.1.3.12 t:FreeBusyView Complex Type	56546 Removed duplicated content.	N	Content removed.
3.1.4.1.3.12 t:FreeBusyView Complex Type	56548 Changed the name of the <RequestView> element to <RequestedView>.	N	Content update.
3.1.4.1.3.13 t:FreeBusyViewOptionsType Complex Type	56050 Updated the maximum period for the <TimeWindow> element.	N	Product behavior note updated.
3.1.4.1.3.14 m:GetUserAvailabilityRequestType Complex Type	56484 Updated the syntax to include the name of the complex type.	N	Content update.
3.1.4.1.3.15 m:GetUserAvailabilityResponseType Complex Type	56484 Updated the syntax to include the name of the complex type.	N	Content update.
3.1.4.1.3.16 t:GroupAttendeeConflictData Complex Type	56484 Updated the syntax to include the name of the complex type.	N	Content update.
3.1.4.1.3.17 t:IndividualAttendeeConflictData Complex Type	56484 Updated the syntax to include the name of the complex type.	N	Content update.
3.1.4.1.3.20 t:SerializableTimeZoneTime Complex Type	Updated the description of the <SerializableTimeZoneTime> element.	N	Content update.
3.1.4.1.4.1 t:FreeBusyViewType Simple Type	56484 Updated the syntax to include the name of the simple type.	N	Content update.

Section	Tracking number (if applicable) and description	Major change (Y or N)	Change type
3.1.4.1.4.1 t:FreeBusyViewType Simple Type	56718 Clarified the descriptions of the enumeration values.	N	Content update.
3.1.4.1.4.1 t:FreeBusyViewType Simple Type	56647 Removed implementation-specific information.	N	Content update.
3.1.4.1.4.1 t:FreeBusyViewType Simple Type	56549 Clarified the meaning of the term "access level" in the behavior note.	N	Product behavior note updated.
7 Appendix B: Product Behavior	56663 Removed "Beta" from Exchange Server 2010 SP1 product name.	N	Content update.

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