

## [MS-WMS]:

# Work Management Service Web Service Protocol

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# Table of Contents

|             |  |           |
|-------------|--|-----------|
| <b>1</b>    | <b>Introduction .....</b>  | <b>7</b>  |
| 1.1         | Glossary .....   | 7         |
| 1.2         | References .....   | 8         |
| 1.2.1       | Normative References .....   | 8         |
| 1.2.2       | Informative References .....   | 9         |
| 1.3         | Overview .....   | 9         |
| 1.4         | Relationship to Other Protocols .....                                  | 9         |
| 1.5         | Prerequisites/Preconditions .....                                      | 9         |
| 1.6         | Applicability Statement .....  | 9         |
| 1.7         | Versioning and Capability Negotiation .....                            | 10        |
| 1.8         | Vendor-Extensible Fields .....   | 10        |
| 1.9         | Standards Assignments.....   | 10        |
| <b>2</b>    | <b>Messages.....</b>   | <b>11</b> |
| 2.1         | Transport .....  | 11        |
| 2.2         | Common Message Syntax .....  | 11        |
| 2.2.1       | Namespaces .....   | 11        |
| 2.2.2       | Messages.....  | 12        |
| 2.2.3       | Elements .....   | 12        |
| 2.2.4       | Complex Types.....   | 12        |
| 2.2.5       | Simple Types .....   | 12        |
| 2.2.5.1     | char .....   | 12        |
| 2.2.5.2     | duration.....  | 12        |
| 2.2.5.3     | guid .....   | 13        |
| 2.2.6       | Attributes .....   | 13        |
| 2.2.7       | Groups .....   | 13        |
| 2.2.8       | Attribute Groups.....  | 13        |
| 2.2.9       | Common Data Structures .....   | 13        |
| <b>3</b>    | <b>Protocol Details.....</b>   | <b>14</b> |
| 3.1         | Server Details.....  | 14        |
| 3.1.1       | Abstract Data Model.....   | 14        |
| 3.1.2       | Timers .....   | 14        |
| 3.1.3       | Initialization.....  | 14        |
| 3.1.4       | Message Processing Events and Sequencing Rules .....                   | 14        |
| 3.1.4.1     | BeginCacheRefresh .....  | 15        |
| 3.1.4.1.1   | Messages .....   | 15        |
| 3.1.4.1.1.1 | IWorkManagementServiceApplication_BeginCacheRefresh_InputMessage ..... | 15        |
| 3.1.4.1.1.2 | IWorkManagementServiceApplication_BeginCacheRefresh_OutputMessage..... | 16        |
| 3.1.4.1.2   | Elements.....  | 16        |
| 3.1.4.1.2.1 | BeginCacheRefresh .....  | 16        |
| 3.1.4.1.2.2 | BeginCacheRefreshResponse .....  | 16        |
| 3.1.4.1.3   | Complex Types .....  | 16        |
| 3.1.4.1.3.1 | CreateRefreshJobResult .....   | 17        |
| 3.1.4.1.4   | Simple Types .....   | 17        |
| 3.1.4.1.5   | Attributes .....   | 17        |
| 3.1.4.1.6   | Groups.....  | 17        |
| 3.1.4.1.7   | Attribute Groups.....  | 17        |
| 3.1.4.2     | BeginExchangeSync .....  | 17        |
| 3.1.4.2.1   | Messages .....   | 18        |

|             |  |    |
|-------------|--|----|
| 3.1.4.2.1.1 | IWorkManagementServiceApplication_BeginExchangeSync_InputMessage .....           | 18 |
| 3.1.4.2.1.2 | IWorkManagementServiceApplication_BeginExchangeSync_OutputMessage .....          | 18 |
| 3.1.4.2.2   | Elements .....   | 18 |
| 3.1.4.2.2.1 | BeginExchangeSync .....  | 19 |
| 3.1.4.2.2.2 | BeginExchangeSyncResponse .....  | 19 |
| 3.1.4.2.3   | Complex Types .....  | 19 |
| 3.1.4.2.4   | Simple Types .....   | 19 |
| 3.1.4.2.5   | Attributes .....   | 19 |
| 3.1.4.2.6   | Groups .....   | 19 |
| 3.1.4.2.7   | Attribute Groups .....   | 19 |
| 3.1.4.3     | BeginCreateTaskPropagation .....   | 20 |
| 3.1.4.3.1   | Messages .....   | 20 |
| 3.1.4.3.1.1 | IWorkManagementServiceApplication_BeginCreateTaskPropagation_InputMessage .....  | 20 |
| 3.1.4.3.1.2 | IWorkManagementServiceApplication_BeginCreateTaskPropagation_OutputMessage ..... | 20 |
| 3.1.4.3.2   | Elements .....   | 21 |
| 3.1.4.3.2.1 | BeginCreateTaskPropagation .....   | 21 |
| 3.1.4.3.2.2 | BeginCreateTaskPropagationResponse .....   | 21 |
| 3.1.4.3.3   | Complex Types .....  | 21 |
| 3.1.4.3.4   | Simple Types .....   | 21 |
| 3.1.4.3.5   | Attributes .....   | 21 |
| 3.1.4.3.6   | Groups .....   | 21 |
| 3.1.4.3.7   | Attribute Groups .....   | 22 |
| 3.1.4.4     | BeginDeleteTaskPropagation .....   | 22 |
| 3.1.4.4.1   | Messages .....   | 22 |
| 3.1.4.4.1.1 | IWorkManagementServiceApplication_BeginDeleteTaskPropagation_InputMessage .....  | 22 |
| 3.1.4.4.1.2 | IWorkManagementServiceApplication_BeginDeleteTaskPropagation_OutputMessage ..... | 22 |
| 3.1.4.4.2   | Elements .....   | 23 |
| 3.1.4.4.2.1 | BeginDeleteTaskPropagation .....   | 23 |
| 3.1.4.4.2.2 | BeginDeleteTaskPropagationResponse .....   | 23 |
| 3.1.4.4.3   | Complex Types .....  | 23 |
| 3.1.4.4.4   | Simple Types .....   | 23 |
| 3.1.4.4.5   | Attributes .....   | 23 |
| 3.1.4.4.6   | Groups .....   | 24 |
| 3.1.4.4.7   | Attribute Groups .....   | 24 |
| 3.1.4.5     | BeginUpdateTaskPropagation .....   | 24 |
| 3.1.4.5.1   | Messages .....   | 24 |
| 3.1.4.5.1.1 | IWorkManagementServiceApplication_BeginUpdateTaskPropagation_InputMessage .....  | 24 |
| 3.1.4.5.1.2 | IWorkManagementServiceApplication_BeginUpdateTaskPropagation_OutputMessage ..... | 25 |
| 3.1.4.5.2   | Elements .....   | 25 |
| 3.1.4.5.2.1 | BeginUpdateTaskPropagation .....   | 25 |
| 3.1.4.5.2.2 | BeginUpdateTaskPropagationResponse .....   | 25 |
| 3.1.4.5.3   | Complex Types .....  | 25 |

|             |  |    |
|-------------|--|----|
| 3.1.4.5.4   | Simple Types .....   | 26 |
| 3.1.4.5.5   | Attributes .....   | 26 |
| 3.1.4.5.6   | Groups .....   | 26 |
| 3.1.4.5.7   | Attribute Groups.....  | 26 |
| 3.1.4.6     | GetExchangeSyncInfo .....  | 26 |
| 3.1.4.6.1   | Messages .....   | 26 |
| 3.1.4.6.1.1 | IWorkManagementServiceApplication_GetExchangeSyncInfo_InputMessage .....   | 26 |
| 3.1.4.6.1.2 | IWorkManagementServiceApplication_GetExchangeSyncInfo_OutputMessage .....  | 27 |
| 3.1.4.6.2   | Elements .....   | 27 |
| 3.1.4.6.2.1 | GetExchangeSyncInfo .....  | 27 |
| 3.1.4.6.2.2 | GetExchangeSyncInfoResponse .....  | 27 |
| 3.1.4.6.3   | Complex Types .....  | 28 |
| 3.1.4.6.3.1 | ExchangeUserSyncState .....  | 28 |
| 3.1.4.6.4   | Simple Types .....   | 28 |
| 3.1.4.6.4.1 | ExchangeSyncResult .....   | 28 |
| 3.1.4.6.5   | Attributes .....   | 29 |
| 3.1.4.6.6   | Groups .....   | 29 |
| 3.1.4.6.7   | Attribute Groups.....  | 29 |
| 3.1.4.7     | OptIntoExchangeSync .....  | 29 |
| 3.1.4.7.1   | Messages .....   | 29 |
| 3.1.4.7.1.1 | IWorkManagementServiceApplication_OptIntoExchangeSync_InputMessage .....   | 30 |
| 3.1.4.7.1.2 | IWorkManagementServiceApplication_OptIntoExchangeSync_OutputMessage .....  | 30 |
| 3.1.4.7.2   | Elements .....   | 30 |
| 3.1.4.7.2.1 | OptIntoExchangeSync .....  | 30 |
| 3.1.4.7.2.2 | OptIntoExchangeSyncResponse .....  | 31 |
| 3.1.4.7.3   | Complex Types .....  | 31 |
| 3.1.4.7.4   | Simple Types .....   | 31 |
| 3.1.4.7.4.1 | ExchangeOptInResult .....  | 31 |
| 3.1.4.7.5   | Attributes .....   | 32 |
| 3.1.4.7.6   | Groups .....   | 32 |
| 3.1.4.7.7   | Attribute Groups.....  | 32 |
| 3.1.4.8     | OptOutOfExchangeSync .....   | 32 |
| 3.1.4.8.1   | Messages .....   | 33 |
| 3.1.4.8.1.1 | IWorkManagementServiceApplication_OptOutOfExchangeSync_InputMessage .....  | 33 |
| 3.1.4.8.1.2 | IWorkManagementServiceApplication_OptOutOfExchangeSync_OutputMessage ..... | 33 |
| 3.1.4.8.2   | Elements .....   | 33 |
| 3.1.4.8.2.1 | OptOutOfExchangeSync .....   | 34 |
| 3.1.4.8.2.2 | OptOutOfExchangeSyncResponse .....   | 34 |
| 3.1.4.8.3   | Complex Types .....  | 34 |
| 3.1.4.8.4   | Simple Types .....   | 34 |
| 3.1.4.8.5   | Attributes .....   | 34 |
| 3.1.4.8.6   | Groups .....   | 34 |
| 3.1.4.8.7   | Attribute Groups.....  | 34 |
| 3.1.4.9     | BeginRelocateTaskPropagation .....   | 34 |
| 3.1.4.9.1   | Messages .....   | 35 |

|             |  |           |
|-------------|--|-----------|
| 3.1.4.9.1.1 | IWorkManagementServiceApplication_BeginRelocateTaskPropagation_InputMessage.....   | 35        |
| 3.1.4.9.1.2 | IWorkManagementServiceApplication_BeginRelocateTaskPropagation_OutputMessage.....  | 35        |
| 3.1.4.9.2   | Elements .....   | 35        |
| 3.1.4.9.2.1 | BeginRelocateTaskPropagation .....   | 36        |
| 3.1.4.9.2.2 | BeginRelocateTaskPropagationResponse .....   | 36        |
| 3.1.4.9.3   | Complex Types .....  | 36        |
| 3.1.4.9.4   | Simple Types .....   | 36        |
| 3.1.4.9.5   | Attributes .....   | 36        |
| 3.1.4.9.6   | Groups.....  | 36        |
| 3.1.4.9.7   | Attribute Groups.....  | 36        |
| 3.1.5       | Timer Events.....  | 37        |
| 3.1.6       | Other Local Events.....  | 37        |
| <b>4</b>    | <b>Protocol Examples .....</b>   | <b>38</b> |
| <b>5</b>    | <b>Security .....</b>  | <b>49</b> |
| 5.1         | Security Considerations for Implementers .....   | 49        |
| 5.2         | Index of Security Parameters .....   | 49        |
| <b>6</b>    | <b>Appendix A: Full WSDL .....</b>   | <b>50</b> |
| <b>7</b>    | <b>Appendix B: Full XML Schema.....</b>  | <b>54</b> |
| 7.1         | <a href="http://schemas.datacontract.org/2004/07/Microsoft.Office.Server.WorkManagement">http://schemas.datacontract.org/2004/07/Microsoft.Office.Server.WorkManagement</a> Schema ..... | 54        |
| 7.2         | <a href="http://schemas.microsoft.com/2003/10/Serialization/">http://schemas.microsoft.com/2003/10/Serialization/</a> Schema .....   | 55        |
| 7.3         | <a href="http://tempuri.org/">http://tempuri.org/</a> Schema .....   | 55        |
| <b>8</b>    | <b>Appendix C: Product Behavior .....</b>  | <b>58</b> |
| <b>9</b>    | <b>Change Tracking.....</b>  | <b>59</b> |
| <b>10</b>   | <b>Index.....</b>  | <b>60</b> |

# 1 Introduction

The Work Management Service Web Service Protocol provides a way for a protocol client to trigger task aggregation and synchronization operations for a user.

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

## 1.1 Glossary

This document uses the following terms:

**application server:** A computer that provides infrastructure and services for applications that are hosted on a server farm.

**back-end database server:** A server that hosts data, configuration settings, and stored procedures that are associated with one or more applications.

**personal site:** A type of SharePoint site that is used by an individual user for personal productivity. The site appears to the user as My Site.

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

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

**SOAP fault:** A container for error and status information within a SOAP message. See [\[SOAP1.2-1/2007\]](#) section 5.4 for more information.

**task:** An object (1) that represents an assignment to be completed.

**Unicode:** A character encoding standard developed by the Unicode Consortium that represents almost all of the written languages of the world. The **Unicode** standard [\[UNICODE5.0.0/2007\]](#) provides three forms (UTF-8, UTF-16, and UTF-32) and seven schemes (UTF-8, UTF-16, UTF-16 BE, UTF-16 LE, UTF-32, UTF-32 LE, and UTF-32 BE).

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

**user profile:** A collection of properties that pertain to a specific person or entity within a portal site.

**User Profile Service:** A data source that stores, provides, and applies information about users.

**Web Services Description Language (WSDL):** An XML format for describing network services as a set of endpoints that operate on messages that contain either document-oriented or procedure-oriented information. The operations and messages are described abstractly and are bound to a concrete network protocol and message format in order to define an endpoint. Related concrete endpoints are combined into abstract endpoints, which describe a network service. WSDL is extensible, which allows the description of endpoints and their messages regardless of the message formats or network protocols that are used.

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

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

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

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

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

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

## 1.2 References

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

### 1.2.1 Normative References

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

[MS-SPSTWS] Microsoft Corporation, "[SharePoint Security Token Service Web Service Protocol](#)".

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

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

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[SOAP1.2/1] Gudgin, M., Hadley, M., Mendelsohn, N., Moreau, J., and Nielsen, H.F., "SOAP Version 1.2 Part 1: Messaging Framework", W3C Recommendation, June 2003, <http://www.w3.org/TR/2003/REC-soap12-part1-20030624>

[WSA1.0] World Wide Web Consortium, "Web Services Addressing 1.0 - WSDL Binding", W3C Candidate Recommendation, May 2006, <http://www.w3.org/TR/2006/CR-ws-addr-wsdl-20060529/>

[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., et al., Eds., "Namespaces in XML 1.0 (Third Edition)", W3C Recommendation, December 2009, <http://www.w3.org/TR/2009/REC-xml-names-20091208/>

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



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

## 1.2.2 Informative References

[MS-USPSWS] Microsoft Corporation, "[User Profile Service Web Service Protocol](#)".

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

[SOAP1.2/2] Gudgin, M., Hadley, M., Mendelsohn, N., Moreau, J., and Nielsen, H.F., "SOAP Version 1.2 Part 2: Adjuncts", W3C Recommendation, June 2003, <http://www.w3.org/TR/2003/REC-soap12-part2-20030624>

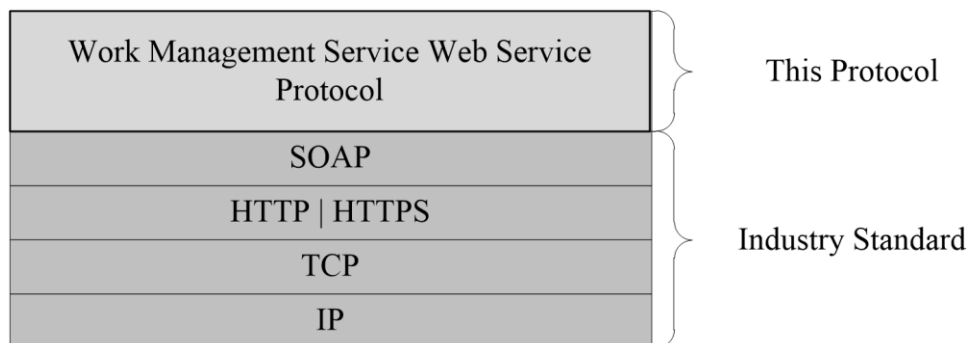
## 1.3 Overview

This protocol allows protocol clients to refresh a user's **task** information through a middle-tier **application server**. The protocol client sends a request for a user to the protocol server, and the server responds with an acknowledgement of the request and refreshes the task information asynchronously.

## 1.4 Relationship to Other Protocols

This protocol uses the **SOAP** message protocol for formatting request and response messages, as described in [\[SOAP1.1\]](#), [\[SOAP1.2/1\]](#) and [\[SOAP1.2/2\]](#). It transmits those messages by using **HTTP**, as described in [\[RFC2616\]](#), or **HTTPS**, as described in [\[RFC2818\]](#).

The following diagram shows the underlying messaging and transport stack used by the protocol:



**Figure 1: This protocol in relation to other protocols**

This protocol also calls APIs that use the User Profile Service Web Service protocol described in [\[MS-USPSWS\]](#) to get the location of a **personal site** associated with a **user profile**.

## 1.5 Prerequisites/Preconditions

This protocol operates against a personal site that is identified by a **URL** that is known by a user profile service implementing the User Profile Service Web Service protocol, as defined by [\[MS-USPSWS\]](#). The protocol client needs sufficient privileges to access the site and its data stored on the **back-end database server** corresponding to the site.

This protocol assumes that authentication has been performed by the underlying protocols.

## **1.6 Applicability Statement**

This protocol is designed to run operations on behalf of a single user per invocation and store results for that user in a storage location associated with that user's user profile.

## **1.7 Versioning and 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, HTTPS, or TCP.

All protocol messages MUST be transported by using HTTP or TCP bindings at the transport level.

Protocol messages MUST be formatted as specified in either [\[SOAP1.1\]](#) section 4 or [\[SOAP1.2/1\]](#) section 5. Protocol server faults MUST be returned by using HTTP status codes, as specified in [\[RFC2616\]](#) section 10, or **SOAP faults**, as specified in [\[SOAP1.1\]](#) section 4.4 or [\[SOAP1.2/1\]](#) section 5.4.

If the HTTPS transport is used, a server certificate MUST be deployed.

This protocol SHOULD transmit an additional SOAP header, the **ServiceContext** header, as specified in [\[MS-SPSTWS\]](#).

This protocol does not define any means for activating a protocol server or protocol client. The protocol server MUST be configured and begin listening in an implementation-specific way. In addition, the protocol client MUST be capable of handling the format and transport that is used by the server, for example, the SOAP format over an HTTP transport.

### 2.2 Common Message Syntax

This section contains common definitions that are used by this protocol. The syntax of the definitions uses the **XML schema** syntax in [\[XMLSCHEMA1\]](#) and [\[XMLSCHEMA2\]](#), and Web Services Description Language, as defined in [\[WSDL\]](#).

#### 2.2.1 Namespaces

This specification defines and references various **XML namespaces** using the mechanisms specified in [\[XMLNS\]](#). Although this specification associates a specific **XML namespace prefix** for each XML namespace that is used, the choice of any particular XML namespace prefix is implementation-specific and not significant for interoperability.

| Prefix | Namespace URI   | Reference  |
|--------|---|--|
| soap   | <a href="http://schemas.xmlsoap.org/wsdl/soap/">http://schemas.xmlsoap.org/wsdl/soap/</a>   | <a href="#">[SOAP1.1]</a>                                    |
| tns    | <a href="http://tempuri.org/">http://tempuri.org/</a>   |  |
| tns1   | <a href="http://schemas.datacontract.org/2004/07/Microsoft.Office.Server.WorkManagement">http://schemas.datacontract.org/2004/07/Microsoft.Office.Server.WorkManagement</a> |  |
| tns2   | <a href="http://schemas.microsoft.com/2003/10/Serialization/">http://schemas.microsoft.com/2003/10/Serialization/</a>   |  |
| tns3   | <a href="http://tempuri.org/Imports">http://tempuri.org/Imports</a>   |  |
| wsaw   | <a href="http://www.w3.org/2006/05/addressing/wsdl">http://www.w3.org/2006/05/addressing/wsdl</a>   | Web Service Addressing<br><a href="#">[WSA1.0]</a>           |
| wsdl   | <a href="http://schemas.xmlsoap.org/wsdl/">http://schemas.xmlsoap.org/wsdl/</a>   | <a href="#">[WSDL]</a>                                       |
| xs     | <a href="http://www.w3.org/2001/XMLSchema">http://www.w3.org/2001/XMLSchema</a>   | <a href="#">[XMLSCHEMA1]</a><br><a href="#">[XMLSCHEMA2]</a> |

## 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

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

| Simple type     | Description   |
|-----------------|---|
| <b>char</b>     | A <b>char</b> simple type that represents a <b>Unicode</b> character. This type is not used by this protocol. |
| <b>duration</b> | A time interval with its period in days, hours, minutes, and seconds. This type is not used by this protocol. |
| <b>guid</b>     | A unique identifier. This type is not used by this protocol.  |

### 2.2.5.1 char

**Namespace:** <http://schemas.microsoft.com/2003/10/Serialization/>

A **char** simple type that represents a Unicode character. This type is not used by this protocol.

```
<xs:simpleType name="char" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:restriction base="xs:int"/>
</xs:simpleType>
```

### 2.2.5.2 duration

**Namespace:** <http://schemas.microsoft.com/2003/10/Serialization/>

A time interval with its period in days, hours, minutes, and seconds. This type is not used by this protocol.

```
<xs:simpleType name="duration" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:restriction base="xs:duration">
    <xs:pattern value="\-?P(\d*D)?(T(\d*H)?(\d*M)?(\d*(\.\d*)?S)?)?"/>
    <xs:minInclusive value="-P10675199DT2H48M5.4775808S"/>
    <xs:maxInclusive value="P10675199DT2H48M5.4775807S"/>
  </xs:restriction>
</xs:simpleType>
```

### 2.2.5.3 guid

**Namespace:** http://schemas.microsoft.com/2003/10/Serialization/

A unique identifier. This type is not used by this protocol.

```
<xs:simpleType name="guid" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:restriction base="xs:string">
    <xs:pattern value="\da-fA-F}{8}-[\da-fA-F]{4}-[\da-fA-F]{4}-[\da-fA-F]{4}-[\da-fA-F]{12}"/>
  </xs:restriction>
</xs:simpleType>
```

### 2.2.6 Attributes

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

### 2.2.7 Groups

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

### 2.2.8 Attribute Groups

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

### 2.2.9 Common Data Structures

None.

## 3 Protocol Details

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

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

This protocol is based on stateless interaction between the protocol client and protocol server. The protocol client **MUST** be authenticated with the credentials of the user that the service will aggregate and refresh tasks for.

#### 3.1.1 Abstract Data Model

This protocol allows a protocol client to call the application server tier to trigger a refresh of a user's task cache. When called, the protocol server will aggregate tasks from systems defined in its configuration and write them into a storage location, such as a list in the content back-end database server. The protocol server returns a result indicating whether a new aggregation job was created along with an id for the job if one exists.

This protocol also allows a protocol client to call the application server tier to trigger a synchronization of tasks between an external location such as a mailbox and the back-end database server.

#### 3.1.2 Timers

None.

#### 3.1.3 Initialization

A User Profile Service Application implementing the User Profile Service Web Service protocol, as defined by [\[MS-USPSWS\]](#) **MUST** be available before this protocol can be used.

#### 3.1.4 Message Processing Events and Sequencing Rules

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

| Operation                         | Description  |
|-----------------------------------|--|
| <b>BeginCacheRefresh</b>          | Triggers the server to create a job to aggregate tasks on behalf of the calling user and writes results to a storage location. |
| <b>BeginCreateTaskPropagation</b> | Triggers the server to create a task (3) in the external synchronization server.   |
| <b>BeginDeleteTaskPropagation</b> | Triggers the server to delete a task in an external task (3) server.   |
| <b>BeginExchangeSync</b>          | Starts a server synchronization for the current user.  |

| Operation                           | Description  |
|-------------------------------------|--|
| <b>BeginRelocateTaskPropagation</b> | Triggers the server to move a task in an external task server to a target location on that server. |
| <b>BeginUpdateTaskPropagation</b>   | Triggers the server to update a task in an external task server.                                   |
| <b>GetExchangeSyncInfo</b>          | Returns information about an external server synchronization for a user.                           |
| <b>OptIntoExchangeSync</b>          | Triggers the server to turn on synchronization with a task server for a user.                      |
| <b>OptOutOfExchangeSync</b>         | Turns off task synchronization with a task server for a user.                                      |

### 3.1.4.1 BeginCacheRefresh

Triggers the server to create a job to aggregate tasks on behalf of the calling user and writes results to a storage location.

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

```
<wsdl:operation name="BeginCacheRefresh" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input
    wsaw:Action="http://tempuri.org/IWorkManagementServiceApplication/BeginCacheRefresh"
    message="tns:IWorkManagementServiceApplication_BeginCacheRefresh_InputMessage"
    xmlns:wsaw="http://www.w3.org/2006/05/addressing/wsdl"/>
  <wsdl:output
    wsaw:Action="http://tempuri.org/IWorkManagementServiceApplication/BeginCacheRefreshResponse"
    message="tns:IWorkManagementServiceApplication_BeginCacheRefresh_OutputMessage"
    xmlns:wsaw="http://www.w3.org/2006/05/addressing/wsdl"/>
</wsdl:operation>
```

The method returns confirmation of whether an aggregation job was created.

#### 3.1.4.1.1 Messages

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

| Message  | Description  |
|--|--|
| <b>IWorkManagementServiceApplication_BeginCacheRefresh_InputMessage</b>  | The request WSDL message for the <b>BeginCacheRefresh</b> WSDL operation.  |
| <b>IWorkManagementServiceApplication_BeginCacheRefresh_OutputMessage</b> | The response WSDL message for the <b>BeginCacheRefresh</b> WSDL operation. |

##### 3.1.4.1.1.1 IWorkManagementServiceApplication\_BeginCacheRefresh\_InputMessage

The request WSDL message for the **BeginCacheRefresh** WSDL operation.

The **SOAP action** value is:

```
http://tempuri.org/IWorkManagementServiceApplication/BeginCacheRefresh
```

The **SOAP body** contains the **BeginCacheRefresh** element.

### 3.1.4.1.1.2 IWorkManagementServiceApplication\_BeginCacheRefresh\_OutputMessage

The response WSDL message for the **BeginCacheRefresh** WSDL operation.

The SOAP body contains the **BeginCacheRefreshResponse** element.

#### 3.1.4.1.2 Elements

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

| Element                          | Description  |
|----------------------------------|--|
| <b>BeginCacheRefresh</b>         | The input data for the <b>BeginCacheRefresh</b> WSDL operation.  |
| <b>BeginCacheRefreshResponse</b> | The result data for the <b>BeginCacheRefresh</b> WSDL operation. |

#### 3.1.4.1.2.1 BeginCacheRefresh

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

```
<xs:element name="BeginCacheRefresh" xmlns:xs="http://www.w3.org/2001/XMLSchema">  
  <xs:complexType>  
    <xs:sequence/>  
  </xs:complexType>  
</xs:element>
```

#### 3.1.4.1.2.2 BeginCacheRefreshResponse

The **BeginCacheRefreshResponse** element specifies the result data for the **BeginCacheRefresh** WSDL operation.

```
<xs:element name="BeginCacheRefreshResponse" xmlns:xs="http://www.w3.org/2001/XMLSchema">  
  <xs:complexType>  
    <xs:sequence>  
      <xs:element  
        xmlns:tns1="http://schemas.datacontract.org/2004/07/Microsoft.Office.Server.WorkManagement"  
        minOccurs="0" name="BeginCacheRefreshResult" nillable="true"  
        type="tns1:CreateRefreshJobResult"/>  
    </xs:sequence>  
  </xs:complexType>  
</xs:element>
```

**BeginCacheRefreshResult:** Returns the CreateRefreshJobResult that indicates the result of the aggregation refresh request.

#### 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   |
|-------------------------------|---|
| <b>CreateRefreshJobResult</b> | Information about the task aggregation job that was created as a result of the refresh request. |

### 3.1.4.1.3.1 CreateRefreshJobResult

**Namespace:** http://schemas.datacontract.org/2004/07/Microsoft.Office.Server.WorkManagement

Information resulting from a request to create an aggregation refresh job.

```
<xs:complexType name="CreateRefreshJobResult" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="0" name="CreatedJob" type="xs:boolean"/>
    <xs:element minOccurs="0" name="CurrentJobId" nillable="true" type="xs:int"/>
    <xs:element minOccurs="0" name="CurrentJobIdClient" type="xs:int"/>
    <xs:element minOccurs="0" name="EncounteredError" type="xs:boolean"/>
  </xs:sequence>
</xs:complexType>
```

**CreatedJob:** The result of creating a new refresh job, which MUST return true if the job was successfully created and false if the job was not. A job will not be created if there is already a job running for that user or an error occurs while creating the job.

**CurrentJobId:** The integer identifier of the job that is currently running on behalf of the user. This MAY be the job created as a result of the request, or a job that is still in progress. MUST return NULL if creation of the job failed.

**CurrentJobIdClient:** Same as **CurrentJobId**, except that it MUST return **WmaClientConstants.NoValue** if the creation of the job failed instead of NULL.

**EncounteredError:** MUST return true if there was an error while creating the job and false otherwise.

### 3.1.4.1.4 Simple Types

None.

### 3.1.4.1.5 Attributes

None.

### 3.1.4.1.6 Groups

None.

### 3.1.4.1.7 Attribute Groups

None.

### 3.1.4.2 BeginExchangeSync

Starts a server synchronization for the current user.

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

```
<wsdl:operation name="BeginExchangeSync" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input
    wsaw:Action="http://tempuri.org/IWorkManagementServiceApplication/BeginExchangeSync"
    message="tns:IWorkManagementServiceApplication_BeginExchangeSync_InputMessage"
    xmlns:wsaw="http://www.w3.org/2006/05/addressing/wsdl"/>
  <wsdl:output
    wsaw:Action="http://tempuri.org/IWorkManagementServiceApplication/BeginExchangeSyncResponse"
    message="tns:IWorkManagementServiceApplication_BeginExchangeSync_OutputMessage"
    xmlns:wsaw="http://www.w3.org/2006/05/addressing/wsdl"/>
</wsdl:operation>
```

This operation returns whether the synchronization process successfully started.

### 3.1.4.2.1 Messages

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

| Message  | Description  |
|--|--|
| <b>IWorkManagementServiceApplication_BeginExchangeSync_InputMessage</b>  | The request WSDL message for the <b>BeginExchangeSync</b> WSDL operation.  |
| <b>IWorkManagementServiceApplication_BeginExchangeSync_OutputMessage</b> | The response WSDL message for the <b>BeginExchangeSync</b> WSDL operation. |

#### 3.1.4.2.1.1 IWorkManagementServiceApplication\_BeginExchangeSync\_InputMessage

The request WSDL message for the **BeginExchangeSync** WSDL operation.

The SOAP action value is:

```
http://tempuri.org/IWorkManagementServiceApplication/BeginExchangeSync
```

The SOAP body contains the **BeginExchangeSync** element.

#### 3.1.4.2.1.2 IWorkManagementServiceApplication\_BeginExchangeSync\_OutputMessage

The response WSDL message for the **BeginExchangeSync** WSDL operation.

The SOAP body contains the **BeginExchangeSyncResponse** element.

### 3.1.4.2.2 Elements

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

| Element                          | Description  |
|----------------------------------|--|
| <b>BeginExchangeSync</b>         | The input data for the <b>BeginExchangeSync</b> WSDL operation.  |
| <b>BeginExchangeSyncResponse</b> | The result data for the <b>BeginExchangeSync</b> WSDL operation. |

### 3.1.4.2.2.1 BeginExchangeSync

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

```
<xs:element name="BeginExchangeSync" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence/>
  </xs:complexType>
</xs:element>
```

### 3.1.4.2.2.2 BeginExchangeSyncResponse

The **BeginExchangeSyncResponse** element specifies the result data for the **BeginExchangeSync** WSDL operation.

```
<xs:element name="BeginExchangeSyncResponse" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" name="BeginExchangeSyncResult" type="xs:boolean"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

**BeginExchangeSyncResult:** MUST return true if the synchronization job successfully started and false if not.

### 3.1.4.2.3 Complex Types

None.

### 3.1.4.2.4 Simple Types

None.

### 3.1.4.2.5 Attributes

None.

### 3.1.4.2.6 Groups

None.

### 3.1.4.2.7 Attribute Groups

None.

### 3.1.4.3 BeginCreateTaskPropagation

Triggers the server to create a task (3) in the external synchronization server.

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

```
<wsdl:operation name="BeginCreateTaskPropagation"
xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input
wsaw:Action="http://tempuri.org/IWorkManagementServiceApplication/BeginCreateTaskPropagation"
message="tns:IWorkManagementServiceApplication_BeginCreateTaskPropagation_InputMessage"
xmlns:wsaw="http://www.w3.org/2006/05/addressing/wsdl"/>
  <wsdl:output
wsaw:Action="http://tempuri.org/IWorkManagementServiceApplication/BeginCreateTaskPropagationR
esponse"
message="tns:IWorkManagementServiceApplication_BeginCreateTaskPropagation_OutputMessage"
xmlns:wsaw="http://www.w3.org/2006/05/addressing/wsdl"/>
</wsdl:operation>
```

The method returns acknowledgement that the request was received and will be processed.

#### 3.1.4.3.1 Messages

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

| Message   | Description   |
|---|---|
| <b>IWorkManagementServiceApplication_BeginCreateTaskPropagation_InputMessage</b>  | The request WSDL message for the <b>BeginCreateTaskPropagation</b> WSDL operation.  |
| <b>IWorkManagementServiceApplication_BeginCreateTaskPropagation_OutputMessage</b> | The response WSDL message for the <b>BeginCreateTaskPropagation</b> WSDL operation. |

##### 3.1.4.3.1.1 IWorkManagementServiceApplication\_BeginCreateTaskPropagation\_InputMessage

The request WSDL message for the **BeginCreateTaskPropagation** WSDL operation.

The SOAP action value is:

```
http://tempuri.org/IWorkManagementServiceApplication/BeginCreateTaskPropagation
```

The SOAP body contains the **BeginCreateTaskPropagation** element.

##### 3.1.4.3.1.2 IWorkManagementServiceApplication\_BeginCreateTaskPropagation\_OutputMessage

The response WSDL message for the **BeginCreateTaskPropagation** WSDL operation.

The SOAP body contains the **BeginCreateTaskPropagationResponse** element.

### 3.1.4.3.2 Elements

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

| Element                                   | Description   |
|---|---|
| <b>BeginCreateTaskPropagation</b>         | The input data for the <b>BeginCreateTaskPropagation</b> WSDL operation.  |
| <b>BeginCreateTaskPropagationResponse</b> | The result data for the <b>BeginCreateTaskPropagation</b> WSDL operation. |

#### 3.1.4.3.2.1 BeginCreateTaskPropagation

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

```
<xs:element name="BeginCreateTaskPropagation" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" name="taskId" type="xs:int"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

**taskId:** The integer identifier of the task to be created.

#### 3.1.4.3.2.2 BeginCreateTaskPropagationResponse

The **BeginCreateTaskPropagationResponse** element specifies the result data for the **BeginCreateTaskPropagation** WSDL operation.

```
<xs:element name="BeginCreateTaskPropagationResponse"
xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence/>
  </xs:complexType>
</xs:element>
```

#### 3.1.4.3.3 Complex Types

None.

#### 3.1.4.3.4 Simple Types

None.

#### 3.1.4.3.5 Attributes

None.

#### 3.1.4.3.6 Groups

None.

### 3.1.4.3.7 Attribute Groups

None.

### 3.1.4.4 BeginDeleteTaskPropagation

Triggers the server to delete a task in an external task (3) server.

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

```
<wsdl:operation name="BeginDeleteTaskPropagation"
  xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input
    wsaw:Action="http://tempuri.org/IWorkManagementServiceApplication/BeginDeleteTaskPropagation"
    message="tns:IWorkManagementServiceApplication BeginDeleteTaskPropagation InputMessage"
    xmlns:wsaw="http://www.w3.org/2006/05/addressing/wsdl"/>
  <wsdl:output
    wsaw:Action="http://tempuri.org/IWorkManagementServiceApplication/BeginDeleteTaskPropagationR
    esponse"
    message="tns:IWorkManagementServiceApplication BeginDeleteTaskPropagation OutputMessage"
    xmlns:wsaw="http://www.w3.org/2006/05/addressing/wsdl"/>
</wsdl:operation>
```

The method returns acknowledgement that the request was received and will be processed.

#### 3.1.4.4.1 Messages

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

| Message   | Description   |
|---|---|
| <b>IWorkManagementServiceApplication_BeginDeleteTaskPropagation_InputMessage</b>  | The request WSDL message for the <b>BeginDeleteTaskPropagation</b> WSDL operation.  |
| <b>IWorkManagementServiceApplication_BeginDeleteTaskPropagation_OutputMessage</b> | The response WSDL message for the <b>BeginDeleteTaskPropagation</b> WSDL operation. |

##### 3.1.4.4.1.1 IWorkManagementServiceApplication\_BeginDeleteTaskPropagation\_InputMessage

The request WSDL message for the **BeginDeleteTaskPropagation** WSDL operation.

The SOAP action value is:

```
http://tempuri.org/IWorkManagementServiceApplication/BeginDeleteTaskPropagation
```

The SOAP body contains the **BeginDeleteTaskPropagation** element.

##### 3.1.4.4.1.2 IWorkManagementServiceApplication\_BeginDeleteTaskPropagation\_OutputMessage

The response WSDL message for the **BeginDeleteTaskPropagation** WSDL operation.

The SOAP body contains the **BeginDeleteTaskPropagationResponse** element.

### 3.1.4.4.2 Elements

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

| Element                                   | Description   |
|---|---|
| <b>BeginDeleteTaskPropagation</b>         | The input data for the <b>BeginDeleteTaskPropagation</b> WSDL operation.  |
| <b>BeginDeleteTaskPropagationResponse</b> | The result data for the <b>BeginDeleteTaskPropagation</b> WSDL operation. |

#### 3.1.4.4.2.1 BeginDeleteTaskPropagation

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

```
<xs:element name="BeginDeleteTaskPropagation" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" name="taskId" type="xs:int"/>
      <xs:element minOccurs="0" name="mappedKey" nillable="true" type="xs:string"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

**taskId:** The integer identifier of the task to be deleted.

**mappedKey:** The unique identifier of the target location in the external server to delete the task from.

#### 3.1.4.4.2.2 BeginDeleteTaskPropagationResponse

The **BeginDeleteTaskPropagationResponse** element specifies the result data for the **BeginDeleteTaskPropagation** WSDL operation.

```
<xs:element name="BeginDeleteTaskPropagationResponse"
xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence/>
  </xs:complexType>
</xs:element>
```

#### 3.1.4.4.3 Complex Types

None.

#### 3.1.4.4.4 Simple Types

None.

#### 3.1.4.4.5 Attributes

None.

### 3.1.4.4.6 Groups

None.

### 3.1.4.4.7 Attribute Groups

None.

### 3.1.4.5 BeginUpdateTaskPropagation

Triggers the server to update a task in an external task server.

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

```
<wsdl:operation name="BeginUpdateTaskPropagation"
xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input
wsaw:Action="http://tempuri.org/IWorkManagementServiceApplication/BeginUpdateTaskPropagation"
message="tns:IWorkManagementServiceApplication_BeginUpdateTaskPropagation_InputMessage"
xmlns:wsaw="http://www.w3.org/2006/05/addressing/wsdl"/>
  <wsdl:output
wsaw:Action="http://tempuri.org/IWorkManagementServiceApplication/BeginUpdateTaskPropagationR
esponse"
message="tns:IWorkManagementServiceApplication_BeginUpdateTaskPropagation_OutputMessage"
xmlns:wsaw="http://www.w3.org/2006/05/addressing/wsdl"/>
</wsdl:operation>
```

The method returns acknowledgement that the request was received and will be processed.

#### 3.1.4.5.1 Messages

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

| Message  | Description  |
|--|--|
| <b>IWorkManagementServiceApplication_BeginUpdateTaskPropagation_Inp<br/>utMessage</b>  | The request WSDL message for the <b>BeginUpdateTaskPropaga<br/>tion</b> WSDL operation.  |
| <b>IWorkManagementServiceApplication_BeginUpdateTaskPropagation_Out<br/>putMessage</b> | The response WSDL message for the <b>BeginUpdateTaskPropaga<br/>tion</b> WSDL operation. |

#### 3.1.4.5.1.1 IWorkManagementServiceApplication\_BeginUpdateTaskPropagation\_In putMessage

The request WSDL message for the **BeginUpdateTaskPropagation** WSDL operation.

The SOAP action value is:



<http://tempuri.org/IWorkManagementServiceApplication/BeginUpdateTaskPropagation>

The SOAP body contains the **BeginUpdateTaskPropagation** element.

### 3.1.4.5.1.2 IWorkManagementServiceApplication\_BeginUpdateTaskPropagation\_OutputMessage

The response WSDL message for the **BeginUpdateTaskPropagation** WSDL operation.

The SOAP body contains the **BeginUpdateTaskPropagationResponse** element.

### 3.1.4.5.2 Elements

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

| Element                                   | Description   |
|---|---|
| <b>BeginUpdateTaskPropagation</b>         | The input data for the <b>BeginUpdateTaskPropagation</b> WSDL operation.  |
| <b>BeginUpdateTaskPropagationResponse</b> | The result data for the <b>BeginUpdateTaskPropagation</b> WSDL operation. |

#### 3.1.4.5.2.1 BeginUpdateTaskPropagation

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

```
<xs:element name="BeginUpdateTaskPropagation" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" name="taskId" type="xs:int"/>
      <xs:element minOccurs="0" name="lastModified" type="xs:dateTime"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

**taskId:** The integer identifier of the task that needs to be updated.

**lastModified:** The datetime when the task that needs to be updated was last updated.

#### 3.1.4.5.2.2 BeginUpdateTaskPropagationResponse

The **BeginUpdateTaskPropagationResponse** element specifies the result data for the **BeginUpdateTaskPropagation** WSDL operation.

```
<xs:element name="BeginUpdateTaskPropagationResponse"
xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence/>
  </xs:complexType>
</xs:element>
```

### 3.1.4.5.3 Complex Types

None.

#### 3.1.4.5.4 Simple Types

None.

#### 3.1.4.5.5 Attributes

None.

#### 3.1.4.5.6 Groups

None.

#### 3.1.4.5.7 Attribute Groups

None.

#### 3.1.4.6 GetExchangeSyncInfo

Returns information about an external server synchronization for a user.

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

```
<wsdl:operation name="GetExchangeSyncInfo" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input
    wsaw:Action="http://tempuri.org/IWorkManagementServiceApplication/GetExchangeSyncInfo"
    message="tns:IWorkManagementServiceApplication_GetExchangeSyncInfo_InputMessage"
    xmlns:wsaw="http://www.w3.org/2006/05/addressing/wsdl"/>
  <wsdl:output
    wsaw:Action="http://tempuri.org/IWorkManagementServiceApplication/GetExchangeSyncInfoResponse"
    message="tns:IWorkManagementServiceApplication_GetExchangeSyncInfo_OutputMessage"
    xmlns:wsaw="http://www.w3.org/2006/05/addressing/wsdl"/>
</wsdl:operation>
```

Returns the ExchangeSyncInfoResult that indicates the user's external server synchronization status.

#### 3.1.4.6.1 Messages

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

| Message  | Description  |
|--|--|
| <b>IWorkManagementServiceApplication_GetExchangeSyncInfo_InputMessage</b>  | The request WSDL message for the <b>GetExchangeSyncInfo</b> WSDL operation.  |
| <b>IWorkManagementServiceApplication_GetExchangeSyncInfo_OutputMessage</b> | The response WSDL message for the <b>GetExchangeSyncInfo</b> WSDL operation. |

#### 3.1.4.6.1.1 IWorkManagementServiceApplication\_GetExchangeSyncInfo\_InputMessage

The request WSDL message for the **GetExchangeSyncInfo** WSDL operation.

The SOAP action value is:

```
http://tempuri.org/IWorkManagementServiceApplication/GetExchangeSyncInfo
```

The SOAP body contains the **GetExchangeSyncInfo** element.

### 3.1.4.6.1.2 IWorkManagementServiceApplication\_GetExchangeSyncInfo\_OutputMessage

The response WSDL message for the **GetExchangeSyncInfo** WSDL operation.

The SOAP body contains the **GetExchangeSyncInfoResponse** element.

### 3.1.4.6.2 Elements

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

| Element                            | Description  |
|------------------------------------|--|
| <b>GetExchangeSyncInfo</b>         | The input data for the <b>GetExchangeSyncInfo</b> WSDL operation.  |
| <b>GetExchangeSyncInfoResponse</b> | The result data for the <b>GetExchangeSyncInfo</b> WSDL operation. |

#### 3.1.4.6.2.1 GetExchangeSyncInfo

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

```
<xs:element name="GetExchangeSyncInfo" xmlns:xs="http://www.w3.org/2001/XMLSchema">  
  <xs:complexType>  
    <xs:sequence/>  
  </xs:complexType>  
</xs:element>
```

#### 3.1.4.6.2.2 GetExchangeSyncInfoResponse

The **GetExchangeSyncInfoResponse** element specifies the result data for the **GetExchangeSyncInfo** WSDL operation.

```
<xs:element name="GetExchangeSyncInfoResponse" xmlns:xs="http://www.w3.org/2001/XMLSchema">  
  <xs:complexType>  
    <xs:sequence>  
      <xs:element  
xmlns:tns1="http://schemas.datacontract.org/2004/07/Microsoft.Office.Server.WorkManagement"  
minOccurs="0" name="GetExchangeSyncInfoResult" nillable="true"  
type="tns1:ExchangeUserSyncState"/>  
    </xs:sequence>  
  </xs:complexType>  
</xs:element>
```

**GetExchangeSyncInfoResult:** The ExchangeSyncInfoResult that indicates the user's external server synchronization status.

### 3.1.4.6.3 Complex Types

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

| Complex type                 | Description  |
|------------------------------|--|
| <b>ExchangeUserSyncState</b> | Information about the external server synchronization status for a user. |

#### 3.1.4.6.3.1 ExchangeUserSyncState

**Namespace:** http://schemas.datacontract.org/2004/07/Microsoft.Office.Server.WorkManagement

Represents status for external task (3) server synchronization operations for a user, including whether or not the user is set up to synchronize with the server, the time that the last synchronization completed, and results of the last synchronization.

```
<xs:complexType name="ExchangeUserSyncState" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="0" name="IsOptedIn" type="xs:boolean"/>
    <xs:element minOccurs="0" name="LastEndTime" nillable="true" type="xs:dateTime"/>
    <xs:element minOccurs="0" name="LastSyncResult" type="tns1:ExchangeSyncResult"/>
  </xs:sequence>
</xs:complexType>
```

**IsOptedIn:** Specifies whether synchronization is enabled for a user or not. MUST be true if tasks for the user will be synchronized and false otherwise.

**LastEndTime:** When the last synchronization operation completed

**LastSyncResult:** The outcome of the last synchronization operation for the user

#### 3.1.4.6.4 Simple Types

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

| Simple type               | Description  |
|---------------------------|--|
| <b>ExchangeSyncResult</b> | Information about a task server synchronization operation. |

#### 3.1.4.6.4.1 ExchangeSyncResult

**Namespace:** http://schemas.datacontract.org/2004/07/Microsoft.Office.Server.WorkManagement

Results about a task server synchronization operation.

```
<xs:simpleType name="ExchangeSyncResult" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:restriction base="xs:string">
    <xs:enumeration value="NoValue"/>
    <xs:enumeration value="Success"/>
    <xs:enumeration value="UnknownError"/>
    <xs:enumeration value="CouldNotConnectToExchange"/>
    <xs:enumeration value="CouldNotGetUserCredentials"/>
    <xs:enumeration value="CouldNotKickoffJob"/>
  </xs:restriction>
</xs:simpleType>
```

```

    <xs:enumeration value="SyncWithErrors"/>
  </xs:restriction>
</xs:simpleType>

```

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

| Value                      | Meaning  |
|----------------------------|--|
| NoValue                    | No value.  |
| Success                    | The operation succeeded.   |
| UnknownError               | There was an unknown error during the synchronization.                             |
| CouldNotConnectToExchange  | The operation could not connect with the external task server.                     |
| CouldNotGetUserCredentials | The operation could not get credentials for the user it was trying to synchronize. |
| CouldNotKickoffJob         | The synchronization operation could not be started.                                |
| SyncWithErrors             | The synchronization finished but with errors.                                      |

### 3.1.4.6.5 Attributes

None.

### 3.1.4.6.6 Groups

None.

### 3.1.4.6.7 Attribute Groups

None.

### 3.1.4.7 OptIntoExchangeSync

Triggers the server to turn on synchronization with a task server for a user.

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

```

<wsdl:operation name="OptIntoExchangeSync" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input
    wsaw:Action="http://tempuri.org/IWorkManagementServiceApplication/OptIntoExchangeSync"
    message="tns:IWorkManagementServiceApplication_OptIntoExchangeSync_InputMessage"
    xmlns:wsaw="http://www.w3.org/2006/05/addressing/wsdl"/>
  <wsdl:output
    wsaw:Action="http://tempuri.org/IWorkManagementServiceApplication/OptIntoExchangeSyncResponse"
    message="tns:IWorkManagementServiceApplication_OptIntoExchangeSync_OutputMessage"
    xmlns:wsaw="http://www.w3.org/2006/05/addressing/wsdl"/>
</wsdl:operation>

```

Returns the **OptIntoExchangeSyncResult** that indicates the result of the operation to turn on synchronization.

### 3.1.4.7.1 Messages

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

| Message  | Description  |
|--|--|
| <b>IWorkManagementServiceApplication_OptIntoExchangeSync_InputMessage</b>  | The request WSDL message for the <b>OptIntoExchangeSync</b> WSDL operation.  |
| <b>IWorkManagementServiceApplication_OptIntoExchangeSync_OutputMessage</b> | The response WSDL message for the <b>OptIntoExchangeSync</b> WSDL operation. |

### 3.1.4.7.1.1 IWorkManagementServiceApplication\_OptIntoExchangeSync\_InputMessage

The request WSDL message for the **OptIntoExchangeSync** WSDL operation.

The SOAP action value is:

```
http://tempuri.org/IWorkManagementServiceApplication/OptIntoExchangeSync
```

The SOAP body contains the **OptIntoExchangeSync** element.

### 3.1.4.7.1.2 IWorkManagementServiceApplication\_OptIntoExchangeSync\_OutputMessage

The response WSDL message for the **OptIntoExchangeSync** WSDL operation.

The SOAP body contains the **OptIntoExchangeSyncResponse** element.

### 3.1.4.7.2 Elements

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

| Element                            | Description  |
|------------------------------------|--|
| <b>OptIntoExchangeSync</b>         | The input data for the <b>OptIntoExchangeSync</b> WSDL operation.  |
| <b>OptIntoExchangeSyncResponse</b> | The result data for the <b>OptIntoExchangeSync</b> WSDL operation. |

#### 3.1.4.7.2.1 OptIntoExchangeSync

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

```
<xs:element name="OptIntoExchangeSync" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence/>
  </xs:complexType>
</xs:element>
```

### 3.1.4.7.2.2 OptIntoExchangeSyncResponse

The **OptIntoExchangeSyncResponse** element specifies the result data for the **OptIntoExchangeSync** WSDL operation.

```
<xs:element name="OptIntoExchangeSyncResponse" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element
        xmlns:tns1="http://schemas.datacontract.org/2004/07/Microsoft.Office.Server.WorkManagement"
        minOccurs="0" name="OptIntoExchangeSyncResult" type="tns1:ExchangeOptInResult"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

**OptIntoExchangeSyncResult:** The ExchangeOptInResult that indicates the result of the operation to turn on synchronization.

### 3.1.4.7.3 Complex Types

None.

### 3.1.4.7.4 Simple Types

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

| Simple type                | Description   |
|----------------------------|---|
| <b>ExchangeOptInResult</b> | Information about whether or not the user was successfully set up to synchronize tasks. |

#### 3.1.4.7.4.1 ExchangeOptInResult

**Namespace:** http://schemas.datacontract.org/2004/07/Microsoft.Office.Server.WorkManagement

Information about whether or not the user was successfully set up to synchronize tasks.

```
<xs:simpleType name="ExchangeOptInResult" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:restriction base="xs:string">
    <xs:enumeration value="NoValue"/>
    <xs:enumeration value="Success"/>
    <xs:enumeration value="UnknownError"/>
    <xs:enumeration value="CouldNotConnectToExchange"/>
    <xs:enumeration value="CouldNotFindOrCreateMySite"/>
    <xs:enumeration value="UserAlreadyOptedIn"/>
    <xs:enumeration value="UserExchangeOperationPending"/>
    <xs:enumeration value="UnsupportedExchangeVersion"/>
    <xs:enumeration value="MissingEmailAddress"/>
    <xs:enumeration value="ExchangeWebServiceClientMissing"/>
    <xs:enumeration value="UnsupportedSharePointConfiguration"/>
    <xs:enumeration value="InvalidOrUnauthorizedUser"/>
    <xs:enumeration value="CouldNotActivateExchangeSyncFeatureOnSiteSubscription"/>
  </xs:restriction>
</xs:simpleType>
```

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

| Value   | Meaning   |
|---|---|
| NoValue   | No value.   |
| Success   | The operation succeeded.  |
| UnknownError  | There was an unknown error when enabling synchronization.   |
| CouldNotConnectToExchange                             | The operation could not connect with the external task server.  |
| CouldNotFindOrCreateMySite                            | The synchronization operation could not find or create the user's personal site (2) in which to store synchronization data. |
| UserAlreadyOptedIn                                    | The user was already set up to synchronize tasks.   |
| UserExchangeOperationPending                          | The operation to enable synchronization is already in process.  |
| UnsupportedExchangeVersion                            | The task server is not compatible with the synchronization operation.   |
| MissingEmailAddress                                   | The user's email address could not be found in the <b>User Profile Service</b> .  |
| ExchangeWebServiceClientMissing                       | The component required to connect to the external task server is not available.   |
| UnsupportedSharePointConfiguration                    | The local server is not configured correctly for synchronization with an external task server.                              |
| InvalidOrUnauthorizedUser                             | The user specified is not valid or unauthorized on the external task server.  |
| CouldNotActivateExchangeSyncFeatureOnSiteSubscription | The synchronization operation could not be activated on the local server.   |

### 3.1.4.7.5 Attributes

None.

### 3.1.4.7.6 Groups

None.

### 3.1.4.7.7 Attribute Groups

None.

### 3.1.4.8 OptOutOfExchangeSync

Turns off task synchronization with a task server for a user.

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

```
<wsdl:operation name="OptOutOfExchangeSync" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
```



```

<wsdl:input
wsaw:Action="http://tempuri.org/IWorkManagementServiceApplication/OptOutOfExchangeSync"
message="tns:IWorkManagementServiceApplication_OptOutOfExchangeSync_InputMessage"
xmlns:wsaw="http://www.w3.org/2006/05/addressing/wsdl"/>
<wsdl:output
wsaw:Action="http://tempuri.org/IWorkManagementServiceApplication/OptOutOfExchangeSyncResponse"
message="tns:IWorkManagementServiceApplication_OptOutOfExchangeSync_OutputMessage"
xmlns:wsaw="http://www.w3.org/2006/05/addressing/wsdl"/>
</wsdl:operation>

```

Returns true if the operation to turn off synchronization was successful and false otherwise.

### 3.1.4.8.1 Messages

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

| Message   | Description   |
|---|---|
| <b>IWorkManagementServiceApplication_OptOutOfExchangeSync_InputMessage</b>  | The request WSDL message for the <b>OptOutOfExchangeSync</b> WSDL operation.  |
| <b>IWorkManagementServiceApplication_OptOutOfExchangeSync_OutputMessage</b> | The response WSDL message for the <b>OptOutOfExchangeSync</b> WSDL operation. |

#### 3.1.4.8.1.1 IWorkManagementServiceApplication\_OptOutOfExchangeSync\_InputMessage

The request WSDL message for the **OptOutOfExchangeSync** WSDL operation.

The SOAP action value is:

```
http://tempuri.org/IWorkManagementServiceApplication/OptOutOfExchangeSync
```

The SOAP body contains the **OptOutOfExchangeSync** element.

#### 3.1.4.8.1.2 IWorkManagementServiceApplication\_OptOutOfExchangeSync\_OutputMessage

The response WSDL message for the **OptOutOfExchangeSync** WSDL operation.

The SOAP body contains the **OptOutOfExchangeSyncResponse** element.

### 3.1.4.8.2 Elements

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

| Element                     | Description  |
|-----------------------------|--|
| <b>OptOutOfExchangeSync</b> | The input data for the <b>OptOutOfExchangeSync</b> WSDL operation. |

| Element                             | Description   |
|-------------------------------------|---|
| <b>OptOutOfExchangeSyncResponse</b> | The result data for the <b>OptOutOfExchangeSync</b> WSDL operation. |

### 3.1.4.8.2.1 OptOutOfExchangeSync

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

```
<xs:element name="OptOutOfExchangeSync" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence/>
  </xs:complexType>
</xs:element>
```

### 3.1.4.8.2.2 OptOutOfExchangeSyncResponse

The **OptOutOfExchangeSyncResponse** element specifies the result data for the **OptOutOfExchangeSync** WSDL operation.

```
<xs:element name="OptOutOfExchangeSyncResponse" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" name="OptOutOfExchangeSyncResult" type="xs:boolean"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

**OptOutOfExchangeSyncResult:** The result of the operation to turn off synchronization.. MUST return true if successful and false otherwise.

### 3.1.4.8.3 Complex Types

None.

### 3.1.4.8.4 Simple Types

None.

### 3.1.4.8.5 Attributes

None.

### 3.1.4.8.6 Groups

None.

### 3.1.4.8.7 Attribute Groups

None.

### 3.1.4.9 BeginRelocateTaskPropagation

Triggers the server to move a task in an external task server to a target location on that server.

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

```
<wsdl:operation name="BeginRelocateTaskPropagation"
xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input
wsaw:Action="http://tempuri.org/IWorkManagementServiceApplication/BeginRelocateTaskPropagation"
message="tns:IWorkManagementServiceApplication_BeginRelocateTaskPropagation_InputMessage"
xmlns:wsaw="http://www.w3.org/2006/05/addressing/wsdl"/>
  <wsdl:output
wsaw:Action="http://tempuri.org/IWorkManagementServiceApplication/BeginRelocateTaskPropagationResponse"
message="tns:IWorkManagementServiceApplication_BeginRelocateTaskPropagation_OutputMessage"
xmlns:wsaw="http://www.w3.org/2006/05/addressing/wsdl"/>
</wsdl:operation>
```

The method returns confirmation that the request was received and will be processed.

### 3.1.4.9.1 Messages

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

| Message   | Description   |
|---|---|
| <b>IWorkManagementServiceApplication_BeginRelocateTaskPropagation_InputMessage</b>  | The request WSDL message for the <b>BeginRelocateTaskPropagation</b> WSDL operation.  |
| <b>IWorkManagementServiceApplication_BeginRelocateTaskPropagation_OutputMessage</b> | The response WSDL message for the <b>BeginRelocateTaskPropagation</b> WSDL operation. |

#### 3.1.4.9.1.1 IWorkManagementServiceApplication\_BeginRelocateTaskPropagation\_InputMessage

The request WSDL message for the **BeginRelocateTaskPropagation** WSDL operation.

The SOAP action value is:

```
http://tempuri.org/IWorkManagementServiceApplication/BeginRelocateTaskPropagation
```

The SOAP body contains the **BeginRelocateTaskPropagation** element.

#### 3.1.4.9.1.2 IWorkManagementServiceApplication\_BeginRelocateTaskPropagation\_OutputMessage

The response WSDL message for the **BeginRelocateTaskPropagation** WSDL operation.

The SOAP body contains the **BeginRelocateTaskPropagationResponse** element.

### 3.1.4.9.2 Elements

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

| Element                                     | Description   |
|---|---|
| <b>BeginRelocateTaskPropagation</b>         | The input data for the <b>BeginRelocateTaskPropagation</b> WSDL operation.  |
| <b>BeginRelocateTaskPropagationResponse</b> | The result data for the <b>BeginRelocateTaskPropagation</b> WSDL operation. |

### 3.1.4.9.2.1 BeginRelocateTaskPropagation

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

```
<xs:element name="BeginRelocateTaskPropagation" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" name="taskId" type="xs:int"/>
      <xs:element minOccurs="0" name="mappedKey" nillable="true" type="xs:string"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

**taskId:** The integer identifier of the task to be moved.

**mappedKey:** The unique identifier of the target location in the external server to move the task to.

### 3.1.4.9.2.2 BeginRelocateTaskPropagationResponse

The **BeginRelocateTaskPropagationResponse** element specifies the result data for the **BeginRelocateTaskPropagation** WSDL operation.

```
<xs:element name="BeginRelocateTaskPropagationResponse"
xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence/>
  </xs:complexType>
</xs:element>
```

### 3.1.4.9.3 Complex Types

None.

### 3.1.4.9.4 Simple Types

None.

### 3.1.4.9.5 Attributes

None.

### 3.1.4.9.6 Groups

None.

### 3.1.4.9.7 Attribute Groups

None.

### **3.1.5 Timer Events**

None.

### **3.1.6 Other Local Events**

None

## 4 Protocol Examples

In this scenario, the protocol client calls **BeginCacheRefresh** to request a task aggregation job on behalf of a user:

```
<s:Envelope xmlns:s="http://www.w3.org/2003/05/soap-envelope"
xmlns:a="http://www.w3.org/2005/08/addressing" xmlns:u="Security">
  <s:Header>
    <a:Action
s:mustUnderstand="1">http://tempuri.org/IWorkManagementServiceApplication/BeginCacheRefresh</
a:Action>
    <a:MessageID>urn:uuid:d9b6e13c-d6e6-46e1-a4e8-8e88006d273e</a:MessageID>
    <a:SequenceAcknowledgement>
      <a:ReplyTo>http://www.w3.org/2005/08/addressing/anonymous</a:ReplyTo>
    </a:SequenceAcknowledgement>
    <ServiceContext xmlns="http://schemas.microsoft.com/sharepoint/servicecontext"
xmlns:i="http://www.w3.org/2001/XMLSchema-instance">
      <correlationId>666b6e9b-7569-3030-1abf-a25007b984f2</correlationId>
      <devdashboardIsEnabled>>false</devdashboardIsEnabled>
      <language>en-US</language>
      <region>en-US</region>
      <scopeId>99445843689490</scopeId>
      <siteSubscriptionId>00000000-0000-0000-0000-000000000000</siteSubscriptionId>
      <ulstraceOverrideLevel>10</ulstraceOverrideLevel>
    </ServiceContext>
    <a:To s:mustUnderstand="1"
u:Id="_1">http://serverurl:32843/44058d0990524belb0f66a890da50007/WorkManagementService.svc</
a:To>
    <o:Timestamp s:mustUnderstand="1" xmlns:o="http://www.w3.org/2001/04/xmlenc#">
      <u:Created u:Id="_0">
        <u:Expires>2011-11-24T07:45:46.175Z</u:Expires>
        <u:Length>2011-11-24T07:50:46.175Z</u:Length>
      </u:Created>
      <saml:Assertion MajorVersion="1" MinorVersion="1" AssertionID="9b6296d4-3f78-4887-8a99-
73355d77ed4b" Issuer="SharePoint" IssueInstant="2011-11-24T07:21:27.120Z"
xmlns:saml="urn:oasis:names:tc:SAML:1.0:assertion">
        <saml:Conditions NotBefore="2011-11-24T07:21:27.089Z" NotOnOrAfter="2011-11-
24T17:21:27.089Z">
          <saml:AudienceRestrictionCondition>
            <saml:Audience>urn:schemas-microsoft-com:sharepoint:service</saml:Audience>
          </saml:AudienceRestrictionCondition>
        </saml:Conditions>
        <saml:AttributeStatement>
          <saml:Subject>
            <saml:NameIdentifier>username</saml:NameIdentifier>
            <saml:SubjectConfirmation>
              <saml:ConfirmationMethod>urn:oasis:names:tc:SAML:1.0:cm:holder-of-
key</saml:ConfirmationMethod>
              <KeyInfo xmlns="http://www.w3.org/2000/09/xmldsig#">
                <KeyValue>
                  <RSAKeyValue>
                    <Modulus>xTLtoGopRTYng4kkTo+AGsU9AYYqsoJ3TsiUdALBVW9C7hNQBgxOloCVV2H23ckHi1970VEyOmYAIIVxtMFL
jQb9TtDckncZdrN8CuL/Pc5LlKhH9zuFIjdbJiLqnYQBAYxHyLphEcW6MSRaTX62EoGk/pxPzZAhUocVOzv7aU=</Mod
ulus>
                    <Exponent>AQAB</Exponent>
                  </RSAKeyValue>
                </KeyValue>
              </KeyInfo>
            </saml:SubjectConfirmation>
          </saml:Subject>
          <saml:Attribute AttributeName="primarysid"
AttributeNamespace="http://schemas.microsoft.com/ws/2008/06/identity/claims"
a:OriginalIssuer="Windows" xmlns:a="http://schemas.xmlsoap.org/ws/2009/09/identity/claims">
            <saml:AttributeValue>S-1-5-21-2127521184-1604012920-1887927527-
526964</saml:AttributeValue>
          </saml:Attribute>
        </saml:AttributeStatement>
      </saml:Assertion>
    </a:To>
  </s:Header>
  <s:Body>
    <a:BeginCacheRefresh/>
  </s:Body>
</s:Envelope>
```

```

    <saml:Attribute AttributeName="primarygroupsid"
AttributeNamespace="http://schemas.microsoft.com/ws/2008/06/identity/claims"
a:OriginalIssuer="Windows" xmlns:a="http://schemas.xmlsoap.org/ws/2009/09/identity/claims">
    <saml:AttributeValue>S-1-5-21-2127521184-1604012920-1887927527-
513</saml:AttributeValue>
    </saml:Attribute>
    <saml:Attribute AttributeName="upn"
AttributeNamespace="http://schemas.xmlsoap.org/ws/2005/05/identity/claims"
a:OriginalIssuer="Windows" xmlns:a="http://schemas.xmlsoap.org/ws/2009/09/identity/claims">
    <saml:AttributeValue>username@contoso.com</saml:AttributeValue>
    </saml:Attribute>
    <saml:Attribute AttributeName="userlogonname"
AttributeNamespace="http://schemas.microsoft.com/sharepoint/2009/08/claims"
a:OriginalIssuer="Windows" xmlns:a="http://schemas.xmlsoap.org/ws/2009/09/identity/claims">
    <saml:AttributeValue>Username</saml:AttributeValue>
    </saml:Attribute>
    <saml:Attribute AttributeName="userid"
AttributeNamespace="http://schemas.microsoft.com/sharepoint/2009/08/claims"
a:OriginalIssuer="SecurityTokenService"
xmlns:a="http://schemas.xmlsoap.org/ws/2009/09/identity/claims">
    <saml:AttributeValue>0#.w|username</saml:AttributeValue>
    </saml:Attribute>
    <saml:Attribute AttributeName="name"
AttributeNamespace="http://schemas.xmlsoap.org/ws/2005/05/identity/claims"
a:OriginalIssuer="SecurityTokenService"
xmlns:a="http://schemas.xmlsoap.org/ws/2009/09/identity/claims">
    <saml:AttributeValue>0#.w|username</saml:AttributeValue>
    </saml:Attribute>
    <saml:Attribute AttributeName="identityprovider"
AttributeNamespace="http://schemas.microsoft.com/sharepoint/2009/08/claims"
a:OriginalIssuer="SecurityTokenService"
xmlns:a="http://schemas.xmlsoap.org/ws/2009/09/identity/claims">
    <saml:AttributeValue>windows</saml:AttributeValue>
    </saml:Attribute>
    <saml:Attribute AttributeName="isauthenticated"
AttributeNamespace="http://sharepoint.microsoft.com/claims/2009/08"
a:OriginalIssuer="SecurityTokenService"
xmlns:a="http://schemas.xmlsoap.org/ws/2009/09/identity/claims">
    <saml:AttributeValue>True</saml:AttributeValue>
    </saml:Attribute>
    <saml:Attribute AttributeName="farmid"
AttributeNamespace="http://schemas.microsoft.com/sharepoint/2009/08/claims"
a:OriginalIssuer="ClaimProvider:System"
xmlns:a="http://schemas.xmlsoap.org/ws/2009/09/identity/claims">
    <saml:AttributeValue>95cc4a80-a978-4077-ae9-1103092e5303</saml:AttributeValue>
    </saml:Attribute>
    <saml:Attribute AttributeName="tokenreference"
AttributeNamespace="http://sharepoint.microsoft.com/claims/2009/08">
    <saml:AttributeValue>0|.w|s-1-5-21-2127521184-1604012920-1887927527-
526964,0#.w|username,129666288871048579,True,mosiwjgtmyOf4EPy284D/Jwtb4Zff6qhlMZhV+dsneECHLdv
9sWwc8pWIqm/lxfZPgcr6udlpRKezroqo017Nf+MzTSypfUe5ZwL6qhIuDmFE+LcjPVavwnVbE6ubBWPn9hM+Rv66vfCn
FNh/vM2tNQhv7hTqE29C3J6rNVBK1M4QFyCyZuH+GdED49S/55XDA5wmTSCgAz/t8swIM80vmHyMBtA4v0pKs2faXeN1F
NlnpDaQvNnNt0qYJv7Y0Nj3Ri8btJQ58BKX+HCzthZKqtQpBjoTH7XlLb1WsapLc6JdCo1Sghz8BQEK8U9QLx9vWVavMK
MfNywsyWtnSg3uw==,urn:schemas-microsoft-com:sharepoint:service</saml:AttributeValue>
    </saml:Attribute>
    <saml:Attribute AttributeName="SidCompressed"
AttributeNamespace="http://schemas.microsoft.com/sharepoint/2009/08/claims"
a:OriginalIssuer="Windows" xmlns:a="http://schemas.xmlsoap.org/ws/2009/09/identity/claims">
    <saml:AttributeValue>S-1-5-21-2127521184-1604012920-
1887927527;513;3235764;5631067;6527764;1495408;2041268;5958388;5001327;6527739;2898815;634623
;6527783;492976;6527730;5951129;6527781;6525568;3535576;7360148;5377546;6621241;3168605;30615
41;3794426;4600588;7781173;4466716;4933277;3168614;1421044;7681958;7347463;5782818;7781172;31
68604;8091924;8133536;1910859;326949;7781246;3535807;7864574;7149326;5005350;3533463;6088077;
7338907;8084865;2115484;1921745;6598066;7485662;2738467;7513462;6835656;7957251;3240403;31213
04;7492442;1821296;7693631;6094633;3535581;8139922;1924384;7311515;3244172;3244301;7781169;77
81163;4552137;3168601;3168602;6129242;6071320;8227456;5518445;6835659;7781164;5124256;5869759
;1929380;8004468;7856854;2927357;6634566;2889412;650728;7856812;7877130;175772;2361615;650727
;6527731;771043;7547205;7856860;7877049;6527765;4814166;6639913;1700934;6984515;2547081;77640
26;6527784;4666181;2361614;4662838;6527782;7205074;4662826;2015132;7856806;6634544;1230889;26

```

```
71629;6260547;2289587;6634723;7856956;7672696;6253091;6916102;4923067;6639947;7842436;7547198
;4968904;6634530;7672705;3457292;6639831;1378086;4662824;5135771;4662842;7755302;6634516;1908
118;1908119;7856977;1230890;1378084;1472082;2400103;2542707;1908120;6001903;158181;4571792;20
62437;6015065;556526;771112;7672780;2289588;2529053;5107804;1390170;7877064;6984513;2361613;7
25547;6639879;1378088;6639888;7672699;5107803;6634527;754149;2671628;6634538;7856830;
1908117;1908121;2984327;7856938;6680169;6639833;571;6634536;3132840;6634505;6634528;7844666;7
764017;7316492;6634535;6527740;6869767;6634518;6634503;2361612;1378091;6634531|S-1-1;0|S-1-5-
21-1049126966-2357333717-3104358719;1012|S-1-5;11|S-1-5-21-2146773085-903363285-
719344707;1309616;1146011;1253526;1260212;1252077|S-1-5-21-1721254763-462695806-
1538882281;3217681;3207910|S-1-5-21-124525095-708259637-
1543119021;1115857;1115914;1115908;1165956;1115917;926551;926563;1115903|S-1-5-
64;10|</saml:AttributeValue>
</saml:Attribute>
<saml:Attribute AttributeName="actor"
AttributeNamespace="http://schemas.xmlsoap.org/ws/2009/09/identity/claims">
<saml:AttributeValue>&lt;Actor&gt;&lt;&lt;saml:Attribute AttributeName="nameidentifier"
AttributeNamespace="http://schemas.xmlsoap.org/ws/2005/05/identity/claims"
a:OriginalIssuer="SharePoint" xmlns:saml="urn:oasis:names:tc:SAML:1.0:assertion"
xmlns:a="http://schemas.xmlsoap.org/ws/2009/09/identity/claims"&gt;&lt;&lt;saml:AttributeValue&gt;
;username&lt;/saml:AttributeValue&gt;&lt;&lt;/saml:Attribute&gt;&lt;&lt;saml:Attribute
AttributeName="userlogonname"
AttributeNamespace="http://schemas.microsoft.com/sharepoint/2009/08/claims"
a:OriginalIssuer="Windows" xmlns:saml="urn:oasis:names:tc:SAML:1.0:assertion"
xmlns:a="http://schemas.xmlsoap.org/ws/2009/09/identity/claims"&gt;&lt;&lt;saml:AttributeValue&gt;
;Username&lt;/saml:AttributeValue&gt;&lt;&lt;/saml:Attribute&gt;&lt;&lt;saml:Attribute
AttributeName="userid"
AttributeNamespace="http://schemas.microsoft.com/sharepoint/2009/08/claims"
a:OriginalIssuer="SecurityTokenService" xmlns:saml="urn:oasis:names:tc:SAML:1.0:assertion"
xmlns:a="http://schemas.xmlsoap.org/ws/2009/09/identity/claims"&gt;&lt;&lt;saml:AttributeValue&gt;
;0#.w|username&lt;/saml:AttributeValue&gt;&lt;&lt;/saml:Attribute&gt;&lt;&lt;saml:Attribute
AttributeName="identityprovider"
AttributeNamespace="http://schemas.microsoft.com/sharepoint/2009/08/claims"
a:OriginalIssuer="SecurityTokenService" xmlns:saml="urn:oasis:names:tc:SAML:1.0:assertion"
xmlns:a="http://schemas.xmlsoap.org/ws/2009/09/identity/claims"&gt;&lt;&lt;saml:AttributeValue&gt;
;windows&lt;/saml:AttributeValue&gt;&lt;&lt;/saml:Attribute&gt;&lt;&lt;saml:Attribute
AttributeName="isauthenticated"
AttributeNamespace="http://sharepoint.microsoft.com/claims/2009/08"
a:OriginalIssuer="SecurityTokenService" xmlns:saml="urn:oasis:names:tc:SAML:1.0:assertion"
xmlns:a="http://schemas.xmlsoap.org/ws/2009/09/identity/claims"&gt;&lt;&lt;saml:AttributeValue&gt;
;True&lt;/saml:AttributeValue&gt;&lt;&lt;/saml:Attribute&gt;&lt;&lt;saml:Attribute
AttributeName="name"
AttributeNamespace="http://schemas.xmlsoap.org/ws/2005/05/identity/claims"
a:OriginalIssuer="SecurityTokenService" xmlns:saml="urn:oasis:names:tc:SAML:1.0:assertion"
xmlns:a="http://schemas.xmlsoap.org/ws/2009/09/identity/claims"&gt;&lt;&lt;saml:AttributeValue&gt;
;0#.w|username&lt;/saml:AttributeValue&gt;&lt;&lt;/saml:Attribute&gt;&lt;&lt;saml:Attribute
AttributeName="farmid"
AttributeNamespace="http://schemas.microsoft.com/sharepoint/2009/08/claims"
a:OriginalIssuer="ClaimProvider:System" xmlns:saml="urn:oasis:names:tc:SAML:1.0:assertion"
xmlns:a="http://schemas.xmlsoap.org/ws/2009/09/identity/claims"&gt;&lt;&lt;saml:AttributeValue&gt;
;95cc4a80-a978-4077-ae9-
1103092e5303&lt;/saml:AttributeValue&gt;&lt;&lt;/saml:Attribute&gt;&lt;&lt;/Actor&gt;</saml:Attribute
Value>
</saml:Attribute>
</saml:AttributeStatement>
<saml:AuthenticationStatement
AuthenticationMethod="urn:federation:authentication:windows" AuthenticationInstant="2011-11-
24T07:21:26.995Z">
<saml:Subject>
<saml:NameIdentifier>username</saml:NameIdentifier>
<saml:SubjectConfirmation>
<saml:ConfirmationMethod>urn:oasis:names:tc:SAML:1.0:cm:holder-of-
key</saml:ConfirmationMethod>
<KeyInfo xmlns="http://www.w3.org/2000/09/xmldsig#">
<KeyValue>
<RSAKeyValue>
<Modulus>xTLtoGopRTYng4kkTo+AGsU9AYYqsoJ3TsiUdALBVW9C7hNQBgxO1oCVV2H23ckHi1970VEyOmYAIIVxtMFL
jQb9TtDckncZDrN8CuL/Pc5LlKh9zuFIjdbJiLqnYQBAYxHyLphEcW6MSRaTX62EoGk/pxPzAhUocVOzvk7aU=</Mod
ulus>
<Exponent>AQAB</Exponent>
```



```
</RSAKeyValue>
</KeyValue>
</KeyInfo>
</saml:SubjectConfirmation>
</saml:Subject>
</saml:AuthenticationStatement>
<ds:Signature xmlns:ds="http://www.w3.org/2000/09/xmldsig#">
  <ds:SignedInfo>
    <ds:CanonicalizationMethod Algorithm="http://www.w3.org/2001/10/xml-exc-c14n#">
    </ds:CanonicalizationMethod>
    <ds:SignatureMethod Algorithm="http://www.w3.org/2001/04/xmldsig-more#rsa-sha256">
    </ds:SignatureMethod>
    <ds:Reference URI="#"_9b6296d4-3f78-4887-8a99-73355d77ed4b">
      <ds:Transforms>
        <ds:Transform Algorithm="http://www.w3.org/2000/09/xmldsig#enveloped-signature">
        </ds:Transform>
        <ds:Transform Algorithm="http://www.w3.org/2001/10/xml-exc-c14n#">
        </ds:Transform>
      </ds:Transforms>
      <ds:DigestMethod Algorithm="http://www.w3.org/2001/04/xmldsig-more#sha256">
      </ds:DigestMethod>
      <ds:DigestValue>p+PdaqS/EfOytid+2Tr5yH8xyIiklKktiaoN9FzIPA=</ds:DigestValue>
    </ds:Reference>
  </ds:SignedInfo>

  <ds:SignatureValue>g9VAK+5/ZGLOZk8rd5RUG99Q/g9Qnh+JTeHi3Dt9REyn6aLH7DJ2P2qRenrrMMPyQIqUIF/NfX
  pXfo8UqLXl+02HQZ188ZoCqXzQUj6iLeEWI2OVXlyFehdvtFG+3UsTKWdr3wVJ7CWh62u/SOXvPiM8GyXitGn5AE6bja
  82fnV+QNxrlYKMBmMMeMgBmIs9B87x4Ivq7ksetFstbiXO3mIZczlYsTTCLkeX2StxlhF+yb0EsdLJ6NcCxUJk0y6KzAtt
  f6TEfzmhSoqq2J82DaablbtY0z8HBTmr27rQ9mVU1SvYra9PoBswlS5Q8fD/GFgxtfvZ60UYXpBQ+ArQow==</ds:Sign
  atureValue>
  <KeyInfo xmlns="http://www.w3.org/2000/09/xmldsig#">
    <X509Data>

    <X509Certificate>MIERjCCAI6gAwIBAgIQM5u5YNJ2qZRK7/rf8N2SezANBqkqhkiG9w0BAQUFADBaMQswCQYDVQQG
    EwJVUzESMBAGAlUEChMjTWljcm9zb2Z0MRMwEQYDVQQLEwpTaGFyZVBvaW50MSIwIAYDVQQDExlTaGFyZVBvaW50IFJvb
    3QgQXV0aG9yaXR5MCAXDTEyMTEyMTEyMTEyMTEyMTEyMTEyMTEyMTEyMTEyMTEyMTEyMTEyMTEyMTEyMTEyMTEyMTEy
    MTEyMTEyMTEyMTEyMTEyMTEyMTEyMTEyMTEyMTEyMTEyMTEyMTEyMTEyMTEyMTEyMTEyMTEyMTEyMTEyMTEyMTEyM
    TlcnZpY2UwggEiMA0GCSqGSIb3DQEBAQUAA4IBDwAwggEKAoIBAQCzHm/BcOXm6TYMGMQYc+XPR/9YTGORXYi43SGOC9wR
    qzipS6r/AU+hidfFpUOS3bjER5wCcLiG39cok0lBmk5uYkNgQpEeEshgklbeyfsQfs4M5jbc0z5z+FmK4CqN1LebHDJgN
    6vcONnxBKmvROH4szZ45p2fbpLTueJvIeM4/89lTaIvByI7a6HU6pIw13jYTa9MdtVSgQj3ExiLw7k4hleC+0+CigrYnL
    iMQe30Urdl0CS7luwQsTJcrY0u5zwnFJL9A+PLUwg8HS2bsAUe50dvc1MIMS4ifaOkMDkdpQYqutjeZLyMJ0ty0dhlHUU
    Yl0lLUDtvR2YaykogoekPAGMBAAEWdQYJKoZIhvcNAQEFBQADggIBAJsGAE1PG3l4GeVA8miFe2mAc1SWjDM4xaA+azelZ
    FGzIT8h3KbR20lMqw8TvuSpTQiFAlaP0ldU3PoRQYwck60Q5Z3p1YZ7bL4K0kxvcPgbSsRoQ/R0odokNw3yE5yQUo2l
    YlX289hwsYoWrXGXyIBz8B82bZe3Ty1H5edu3SJSU9P2nCoC/8xDkhjQp0lrrwTOHCwccqBeqdmqCZT0QafnAQl1m7NpSuF
    6UEyMGd343N1ZtC6CqxisqTlK19Dcw54ryG0R9CrP5RsJGyk+tMewLYG/i08V26o3Y9Hq/iC8JoYM9mlTmAAMaekKawY4
    3SxObEmqiVP6mX6N1StWxIwU7HhGjz6sgOhQGU3Ljlr4CMe6yBhzWZ/reOjGI/viDNuFkbrLtzRDAFe+oG1T9VwCvUv4p
    1sl7lXx+dbY2+sBSKfO5340sCyuERX4i3HcdUaHAIiwoY26Yy3mkkU3AJL7eKex/09Sr2GfTxxBS18dCXagagFQ+qJv8
    CVn8WyyHhkb20u8gzIBwNjbd0SjcmJh1B7q7rJd06gLi0jppHqtsYYcsw/Y6XBSp8S09uENVhrgiZdNzBIhUu39igm5su
    gKlVJGtljpbGdsMM/xgAh/H+OVYQ0t5HbCdZ7vPeKxubGoEFYit6MpaHdjWqZU6s5m2dNQ9tMj57e2jhhzTSE</X509C
    ertificate>
    </X509Data>
  </KeyInfo>
</ds:Signature>
</saml:Assertion>
<SignedInfo xmlns="http://www.w3.org/2000/09/xmldsig#enveloped-signature">
  <CanonicalizationMethod>
  <SignatureMethod Algorithm="PrefixList">
  </SignatureMethod>
  <SignatureValue Algorithm="http://www.w3.org/2001/04/xmldsig-more#rsa-sha256">
  </SignatureValue>
  <Reference URI="#"_0">
    <Transforms>
      <Transform Algorithm="PrefixList">
      </Transform>
    </Transforms>
    <DigestMethod Algorithm="http://www.w3.org/2001/04/xmldsig-more#sha256">
    </DigestMethod>
  <Address>U+ftZ2ktf2g6IYzZHI314WH7I40=</Address>
  </Reference>

```

```

    <Reference URI="#_1">
      <Transforms>
        <Transform Algorithm="PrefixList">
        </Transform>
      </Transforms>
      <DigestMethod Algorithm="http://www.w3.org/2001/04/xmlenc#sha256">
      </DigestMethod>
      <Address>E0mgpYR9TOWs6SpBQXM/j4UjD2w=</Address>
    </Reference>
  </CanonicalizationMethod>

  <DataReference>sAMgAVtnJAl+VsmvyoEgobVTSTOScwhI6TYOtquA1Bb3cxN9QFCw+WNLmuAg3VQ24ZuZUe2nfxGMsJ
  Jqv5+Gn6oVD5UNEkVNAI8c8Bp/pNe5+ZGMxN8xe6qNk8uMqujRlsETwDFaSOweqXL8hZ6vlnN9S4vfolOsF7Wojlufaac
  =</DataReference>
    <http://docs.oasis-open.org/wss/2004/01/oasis-200401-wss-wssecurity-secext-1.0.xsd>
      <o:Sequence k:http://docs.oasis-open.org/wss/oasis-wss-soap-message-security-
  1.1#ThumbprintSHA1="http://docs.oasis-open.org/wss/oasis-wss-saml-token-profile-1.1#SAMLV1.1"
  xmlns:k="RequestSecurityTokenResponseCollection">
        <o:http://docs.oasis-open.org/wss/2004/01/oasis-200401-wss-soap-message-security-
  1.0#Base64Binary Type="http://docs.oasis-open.org/wss/oasis-wss-saml-token-profile-
  1.0#SAMLAssertionID">_9b6296d4-3f78-4887-8a99-73355d77ed4b</o:http://docs.oasis-
  open.org/wss/2004/01/oasis-200401-wss-soap-message-security-1.0#Base64Binary>
      </o:Sequence>
    </http://docs.oasis-open.org/wss/2004/01/oasis-200401-wss-wssecurity-secext-1.0.xsd>
  </SignedInfo>
  </o:Timestamp>
</s:Header>
<s:Body>
  <BeginCacheRefresh xmlns="http://tempuri.org/">
  </BeginCacheRefresh>
</s:Body>
</s:Envelope>

```

The protocol server might respond with a message such as this one:

```

<s:Envelope xmlns:s="http://www.w3.org/2003/05/soap-envelope"
  xmlns:a="http://www.w3.org/2005/08/addressing" xmlns:u="Security">
  <s:Header>
    <a:Action
  s:mustUnderstand="1">http://tempuri.org/IWorkManagementServiceApplication/BeginCacheRefreshRe
  sponse</a:Action>
    <ActivityId CorrelationId="668cb0dd-3d8c-4f55-af96-22cfb06c13d3"
  xmlns="http://schemas.microsoft.com/2004/09/ServiceModel/Diagnostics">58cad185-6509-43cd-
  8e89-58a3338b0cdd</ActivityId>
    <a:RelatesTo>urn:uuid:d9b6e13c-d6e6-46e1-a4e8-8e88006d273e</a:RelatesTo>
    <ServiceResourceConsumption xmlns="http://schemas.microsoft.com/sharepoint/servicecontext"
  xmlns:i="http://www.w3.org/2001/XMLSchema-instance">
      <CPUMCycles>2288</CPUMCycles>
      <ManagedMemoryBytes i:nil="true">
      </ManagedMemoryBytes>
      <ManagedMemoryBytesLOH i:nil="true">
      </ManagedMemoryBytesLOH>
      <TotalSqlQueryCount>19</TotalSqlQueryCount>
      <TotalSqlQueryDuration>74</TotalSqlQueryDuration>
    </ServiceResourceConsumption>
    <o:Timestamp s:mustUnderstand="1" xmlns:o="http://www.w3.org/2001/04/xmlenc#">
      <u:Created u:Id="_0">
      <u:Expires>2011-11-24T07:45:47.028Z</u:Expires>
      <u:Length>2011-11-24T07:50:47.028Z</u:Length>
      </u:Created>
    </o:Timestamp>
  </s:Header>
  <s:Body>
    <BeginCacheRefreshResponse xmlns="http://tempuri.org/">
      <BeginCacheRefreshResult
  xmlns:b="http://schemas.datacontract.org/2004/07/Microsoft.Office.Server.WorkManagement"
  xmlns:i="http://www.w3.org/2001/XMLSchema-instance">

```

```

    <b:CreatedJob>true</b:CreatedJob>
    <b:CurrentJobId>2</b:CurrentJobId>
    <b:CurrentJobIdClient>2</b:CurrentJobIdClient>
  </BeginCacheRefreshResult>
</BeginCacheRefreshResponse>
</s:Body>
</s:Envelope>

```

In this scenario, the protocol client calls **BeginExchangeSync** to request a task synchronization job on behalf of a user:

```

<s:Envelope xmlns:s="http://www.w3.org/2003/05/soap-envelope"
xmlns:a="http://www.w3.org/2005/08/addressing" xmlns:u="Security">
  <s:Header>
    <a:Action
s:mustUnderstand="1">http://tempuri.org/IWorkManagementServiceApplication/BeginExchangeSy
nc</a:Action>
    <a:MessageID>urn:uuid:1246723e-3b80-448d-9b1e-bfe889babd78</a:MessageID>
    <a:SequenceAcknowledgement>
      <a:ReplyTo>http://www.w3.org/2005/08/addressing/anonymous</a:ReplyTo>
    </a:SequenceAcknowledgement>
    <ServiceContext xmlns="http://schemas.microsoft.com/sharepoint/servicecontext"
xmlns:i="http://www.w3.org/2001/XMLSchema-instance">
      <correlationId>93ef6f9b-65fb-3030-1abf-a71cdec960af</correlationId>
      <devdashboardIsEnabled>>false</devdashboardIsEnabled>
      <language>en-US</language>
      <region>en-US</region>
      <scopeId>4286270333255698</scopeId>
      <siteSubscriptionId>00000000-0000-0000-0000-000000000000</siteSubscriptionId>
      <ulstraceOverrideLevel>0</ulstraceOverrideLevel>
    </ServiceContext>
    <a:To s:mustUnderstand="1"
u:Id="_1">http://servername:port/44058d0990524be1b0f66a890da50007/WorkManagementService.s
vc</a:To>
      <o:Timestamp s:mustUnderstand="1" xmlns:o="http://www.w3.org/2001/04/xmlenc#">
        <u:Created u:Id=" 0">
          <u:Expires>2011-11-29T00:49:38.851Z</u:Expires>
          <u:Length>2011-11-29T00:54:38.851Z</u:Length>
        </u:Created>
        <saml:Assertion MajorVersion="1" MinorVersion="1" AssertionID="_a760cacb-9550-4af5-
8ad0-e3b902ae1891" Issuer="SharePoint" IssueInstant="2011-11-28T17:29:46.432Z"
xmlns:saml="urn:oasis:names:tc:SAML:1.0:assertion">
          <saml:Conditions NotBefore="2011-11-28T17:29:46.416Z" NotOnOrAfter="2011-11-
29T03:29:46.416Z">
            <saml:AudienceRestrictionCondition>
              <saml:Audience>urn:schemas-microsoft-com:sharepoint:service</saml:Audience>
            </saml:AudienceRestrictionCondition>
          </saml:Conditions>
          <saml:AttributeStatement>
            <saml:Subject>
              <saml:NameIdentifier>username</saml:NameIdentifier>
              <saml:SubjectConfirmation>
                <saml:ConfirmationMethod>urn:oasis:names:tc:SAML:1.0:cm:holder-of-
key</saml:ConfirmationMethod>
                <KeyInfo xmlns="http://www.w3.org/2000/09/xmldsig#">
                  <KeyValue>
                    <RSAKeyValue>
<Modulus>33Z32MKwwMpKEQf16k+Z2C7lsFrEtj0AvliOKUE33xhSHB91111jvDorzNIANA2BUBEQFZGmfGbVzbKd
G0o9un978aRNAzZyit53GYaeZo5qPMvJkrTTbUjcJ77Rf/4osXxiEcCo0IVrf4m6qOyOlaOKAM3KZadAZD+v/psQA
9E=</Modulus>
                    <Exponent>AQAB</Exponent>
                  </RSAKeyValue>
                </KeyValue>
              </KeyInfo>
            </saml:SubjectConfirmation>

```

```

    </saml:Subject>
    <saml:Attribute AttributeName="primarysid"
AttributeNamespace="http://schemas.microsoft.com/ws/2008/06/identity/claims"
a:OriginalIssuer="Windows"
xmlns:a="http://schemas.xmlsoap.org/ws/2009/09/identity/claims">
    <saml:AttributeValue>S-1-5-21-2127521184-1604012920-1887927527-
526964</saml:AttributeValue>
    </saml:Attribute>
    <saml:Attribute AttributeName="primarygroupsid"
AttributeNamespace="http://schemas.microsoft.com/ws/2008/06/identity/claims"
a:OriginalIssuer="Windows"
xmlns:a="http://schemas.xmlsoap.org/ws/2009/09/identity/claims">
    <saml:AttributeValue>S-1-5-21-2127521184-1604012920-1887927527-
513</saml:AttributeValue>
    </saml:Attribute>
    <saml:Attribute AttributeName="upn"
AttributeNamespace="http://schemas.xmlsoap.org/ws/2005/05/identity/claims"
a:OriginalIssuer="Windows"
xmlns:a="http://schemas.xmlsoap.org/ws/2009/09/identity/claims">
    <saml:AttributeValue>username@contoso.com</saml:AttributeValue>
    </saml:Attribute>
    <saml:Attribute AttributeName="userlogoname"
AttributeNamespace="http://schemas.microsoft.com/sharepoint/2009/08/claims"
a:OriginalIssuer="Windows"
xmlns:a="http://schemas.xmlsoap.org/ws/2009/09/identity/claims">
    <saml:AttributeValue>Username</saml:AttributeValue>
    </saml:Attribute>
    <saml:Attribute AttributeName="userid"
AttributeNamespace="http://schemas.microsoft.com/sharepoint/2009/08/claims"
a:OriginalIssuer="SecurityTokenService"
xmlns:a="http://schemas.xmlsoap.org/ws/2009/09/identity/claims">
    <saml:AttributeValue>0#.w|username</saml:AttributeValue>
    </saml:Attribute>
    <saml:Attribute AttributeName="name"
AttributeNamespace="http://schemas.xmlsoap.org/ws/2005/05/identity/claims"
a:OriginalIssuer="SecurityTokenService"
xmlns:a="http://schemas.xmlsoap.org/ws/2009/09/identity/claims">
    <saml:AttributeValue>0#.w|username</saml:AttributeValue>
    </saml:Attribute>
    <saml:Attribute AttributeName="identityprovider"
AttributeNamespace="http://schemas.microsoft.com/sharepoint/2009/08/claims"
a:OriginalIssuer="SecurityTokenService"
xmlns:a="http://schemas.xmlsoap.org/ws/2009/09/identity/claims">
    <saml:AttributeValue>windows</saml:AttributeValue>
    </saml:Attribute>
    <saml:Attribute AttributeName="isauthenticated"
AttributeNamespace="http://sharepoint.microsoft.com/claims/2009/08"
a:OriginalIssuer="SecurityTokenService"
xmlns:a="http://schemas.xmlsoap.org/ws/2009/09/identity/claims">
    <saml:AttributeValue>True</saml:AttributeValue>
    </saml:Attribute>
    <saml:Attribute AttributeName="farmid"
AttributeNamespace="http://schemas.microsoft.com/sharepoint/2009/08/claims"
a:OriginalIssuer="ClaimProvider:System"
xmlns:a="http://schemas.xmlsoap.org/ws/2009/09/identity/claims">
    <saml:AttributeValue>95cc4a80-a978-4077-ae9-1103092e5303</saml:AttributeValue>
    </saml:Attribute>
    <saml:Attribute AttributeName="tokenreference"
AttributeNamespace="http://sharepoint.microsoft.com/claims/2009/08">
    <saml:AttributeValue>0).w|s-1-5-21-2127521184-1604012920-1887927527-
526964,0#.w|username,129670109864168945,True,BwACO6nxCcbSMU1RgxAgqUmvDqvyo70g8KKPdguhZCtN
TEtDrEbGA98YUsfJcT+JN5qk22/S1HASjd21+b5hh8JW2oRJJ2bpiJQeC3rdkIv9pj8p5NjeEHF3noP3eYP2CwVxR
VUr6NZ/jmc7Q7B7/cJsmRsJhMrmHNaqCCLiWr5XpuNnHomSrEeCdqBnZGpwYE9HhscTicQsf3wKCR+0iBEFgftjOK
J4irJWD9p5YWRHsVXUSmMnfP5zqe9hBbjt7JhCX+EZuDd/fWjzkXzrrf3rB3JMKRzZOCyH70BFmIBRNVynnYdiWNU
HHcmOlgnaAwoFjGBFiy+iH+T00LK6eg==,urn:schemas-microsoft-
com:sharepoint:service</saml:AttributeValue>
    </saml:Attribute>
    <saml:Attribute AttributeName="SidCompressed"
AttributeNamespace="http://schemas.microsoft.com/sharepoint/2009/08/claims"

```

```

a:OriginalIssuer="Windows"
xmlns:a="http://schemas.xmlsoap.org/ws/2009/09/identity/claims">
  <saml:AttributeValue>S-1-5-21-2127521184-1604012920-
1887927527;513;3235764;5631067;6527764;1495408;2041268;5958388;5001327;6527739;2898815;63
4623;6527783;492976;6527730;5951129;6527781;6525568;3535576;7360148;5377546;6621241;31686
05;3061541;3794426;4600588;7781173;4466716;4933277;3168614;1421044;7681958;7347463;578281
8;7781172;3168604;8091924;8133536;1910859;326949;7781246;3535807;7864574;7149326;5005350;
3533463;6088077;7338907;8084865;2115484;1921745;6598066;7485662;2738467;7513462;6835656;7
957251;3240403;3121304;7492442;1821296;7693631;6094633;3535581;8139922;1924384;7311515;32
44172;3244301;7781169;7781163;4552137;3168601;3168602;6129242;6071320;8227456;5518445;683
5659;7781164;5124256;5869759;1929380;8004468;7856854;2927357;6634566;2889412;650728;78568
12;7877130;175772;2361615;650727;6527731;771043;7547205;7856860;7877049;6527765;4814166;6
639913;1700934;6984515;2547081;7764026;6527784;4666181;2361614;4662838;6527782;7205074;46
62826;2015132;7856806;6634544;1230889;2671629;6260547;2289587;6634723;7856956;7672696;625
3091;6916102;4923067;6639947;7842436;7547198;4968904;6634530;7672705;3457292;6639831;1378
086;4662824;5135771;4662842;7755302;6634516;1908118;1908119;7856977;1230890;1378084;14720
82;2400103;2542707;1908120;6001903;158181;4571792;2062437;6015065;556526;771112;7672780;2
289588;2529053;5107804;1390170;7877064;6984513;2361613;725547;6639879;1378088;6639888;767
2699;5107803;6634527;754149;2671628;1472096;6634538;7856830;1908117;1908121;2984327;78569
38;6680169;6639833;571;6634536;3132840;6634505;6634528;7844666;7764017;7316492;6634535;65
27740;6869767;6634518;6634503;2361612;1378091;6634531|S-1-1;0|S-1-5;11|S-1-5-21-
2146773085-903363285-719344707;1309616;1146011;1253526;1260212;1252077|S-1-5-21-
1721254763-462695806-1538882281;3217681;3207910|S-1-5-21-124525095-708259637-
1543119021;1115857;1115914;1115908;1165956;1115917;926551;926563;1115903|</saml:Attribute
Value>
</saml:Attribute>
  <saml:Attribute AttributeName="actor"
AttributeNamespace="http://schemas.xmlsoap.org/ws/2009/09/identity/claims">
  <saml:AttributeValue>&lt;Actor&gt;&lt;saml:Attribute AttributeName="nameidentifier"
AttributeNamespace="http://schemas.xmlsoap.org/ws/2005/05/identity/claims"
a:OriginalIssuer="SharePoint" xmlns:saml="urn:oasis:names:tc:SAML:1.0:assertion"
xmlns:a="http://schemas.xmlsoap.org/ws/2009/09/identity/claims"&gt;&lt;saml:AttributeValu
e&gt;user&lt;/saml:AttributeValue&gt;&lt;/saml:Attribute&gt;&lt;saml:Attribute
AttributeName="userlogonname"
AttributeNamespace="http://schemas.microsoft.com/sharepoint/2009/08/claims"
a:OriginalIssuer="Windows" xmlns:saml="urn:oasis:names:tc:SAML:1.0:assertion"
xmlns:a="http://schemas.xmlsoap.org/ws/2009/09/identity/claims"&gt;&lt;saml:AttributeValu
e&gt;Username&lt;/saml:AttributeValue&gt;&lt;/saml:Attribute&gt;&lt;saml:Attribute
AttributeName="userid"
AttributeNamespace="http://schemas.microsoft.com/sharepoint/2009/08/claims"
a:OriginalIssuer="SecurityTokenService"
xmlns:saml="urn:oasis:names:tc:SAML:1.0:assertion"
xmlns:a="http://schemas.xmlsoap.org/ws/2009/09/identity/claims"&gt;&lt;saml:AttributeValu
e&gt;0#.w|username&lt;/saml:AttributeValue&gt;&lt;/saml:Attribute&gt;&lt;saml:Attribute
AttributeName="identityprovider"
AttributeNamespace="http://schemas.microsoft.com/sharepoint/2009/08/claims"
a:OriginalIssuer="SecurityTokenService"
xmlns:saml="urn:oasis:names:tc:SAML:1.0:assertion"
xmlns:a="http://schemas.xmlsoap.org/ws/2009/09/identity/claims"&gt;&lt;saml:AttributeValu
e&gt;windows&lt;/saml:AttributeValue&gt;&lt;/saml:Attribute&gt;&lt;saml:Attribute
AttributeName="isauthenticated"
AttributeNamespace="http://sharepoint.microsoft.com/claims/2009/08"
a:OriginalIssuer="SecurityTokenService"
xmlns:saml="urn:oasis:names:tc:SAML:1.0:assertion"
xmlns:a="http://schemas.xmlsoap.org/ws/2009/09/identity/claims"&gt;&lt;saml:AttributeValu
e&gt;True&lt;/saml:AttributeValue&gt;&lt;/saml:Attribute&gt;&lt;saml:Attribute
AttributeName="name"
AttributeNamespace="http://schemas.xmlsoap.org/ws/2005/05/identity/claims"
a:OriginalIssuer="SecurityTokenService"
xmlns:saml="urn:oasis:names:tc:SAML:1.0:assertion"
xmlns:a="http://schemas.xmlsoap.org/ws/2009/09/identity/claims"&gt;&lt;saml:AttributeValu
e&gt;0#.w|username&lt;/saml:AttributeValue&gt;&lt;/saml:Attribute&gt;&lt;saml:Attribute
AttributeName="farmid"
AttributeNamespace="http://schemas.microsoft.com/sharepoint/2009/08/claims"
a:OriginalIssuer="ClaimProvider:System"
xmlns:saml="urn:oasis:names:tc:SAML:1.0:assertion"
xmlns:a="http://schemas.xmlsoap.org/ws/2009/09/identity/claims"&gt;&lt;saml:AttributeValu
e&gt;95cc4a80-a978-4077-ae9-
1103092e5303&lt;/saml:AttributeValue&gt;&lt;/saml:Attribute&gt;&lt;/Actor&gt;</saml:Attri
buteValue>

```

```

    </saml:Attribute>
  </saml:AttributeStatement>
  <saml:AuthenticationStatement
AuthenticationMethod="urn:federation:authentication:windows" AuthenticationInstant="2011-
11-28T17:29:46.401Z">
    <saml:Subject>
      <saml:NameIdentifier>username</saml:NameIdentifier>
      <saml:SubjectConfirmation>
        <saml:ConfirmationMethod>urn:oasis:names:tc:SAML:1.0:cm:holder-of-
key</saml:ConfirmationMethod>
          <KeyInfo xmlns="http://www.w3.org/2000/09/xmldsig#">
            <KeyValue>
              <RSAKeyValue>
<Modulus>33Z32MKwwMpKEQf16k+Z2C7lsFrEtj0AvliOKUE33xhSHB91111jvDorzNIANA2BUBEQFZGmfGbVzbKd
G0o9un978aRNAzZyit53GYaeZo5qPMvJkrTTbUjCj77Rf/4osXxiEcCo0IVrf4m6qOy0laOKAM3KZadAZD+v/psQA
9E=</Modulus>
          <Exponent>AQAB</Exponent>
            </RSAKeyValue>
          </KeyValue>
        </KeyInfo>
      </saml:SubjectConfirmation>
    </saml:Subject>
  </saml:AuthenticationStatement>
  <ds:Signature xmlns:ds="http://www.w3.org/2000/09/xmldsig#">
    <ds:SignedInfo>
      <ds:CanonicalizationMethod Algorithm="http://www.w3.org/2001/10/xml-exc-c14n#">
        </ds:CanonicalizationMethod>
      <ds:SignatureMethod Algorithm="http://www.w3.org/2001/04/xmldsig-more#rsa-sha256">
        </ds:SignatureMethod>
      <ds:Reference URI="# a760cacb-9550-4af5-8ad0-e3b902ae1891">
        <ds:Transforms>
          <ds:Transform Algorithm="http://www.w3.org/2000/09/xmldsig#enveloped-signature">
            </ds:Transform>
          <ds:Transform Algorithm="http://www.w3.org/2001/10/xml-exc-c14n#">
            </ds:Transform>
          </ds:Transforms>
        <ds:DigestMethod Algorithm="http://www.w3.org/2001/04/xmlenc#sha256">
          </ds:DigestMethod>
        <ds:DigestValue>wT/qfg6w6Oe795P1BA5QKTbxDm/4QZseLxla0FQTYFg=</ds:DigestValue>
        </ds:Reference>
      </ds:SignedInfo>
<ds:SignatureValue>diVGgc2qAaqTjaaYIRMjm5YzqqwYwMzo6T3Mh1Zb5rGn/jxyL9aW0m6nYMyKj/ltz8LZl0
G1XCbYCbhYA0yP9lMvPjEtwzmDhtzJexTKddSA4ya+f396S9tMqDiQcldSagQW8+hB11bTJ8fpDbFrUgG3yv31HC
+aFenES9B+Y9ShJND84QPtYWExrYPzws2tQMghly/ANUpEZtwoeks5fWDyyBUFRxT5j81Fm6UkatrDe7PNn3qcQLH
jE69x3HqYJwhi1Wnmhdz4QFV/Ivo21ItXw3mPVvu1w4LaH7YX2JYyWFovRB/BUO4eUbuJUzWYb/om2wYW2xONOjrB
Gk0JA==</ds:SignatureValue>
      <KeyInfo xmlns="http://www.w3.org/2000/09/xmldsig#">
        <X509Data>
<X509Certificate>MIIERjCCAi6gAwIBAgIQM5u5YNJ2qZRK7/rf8N2SezANBqkqhkiG9w0BAQUFADBaMQswCQYD
VQQGEwJVUzESMBAGAlUEChMjTWljcm9zb2Z0MRMwEQYDVQQLEwpTaGFyZVBvaW50MSIwIAYDVQQDExlTaGFyZVBva
W50IFJvb3QgQXV0aG9yaXR5MCAXDTEyMTEyMTEyMTEyMTEyMTEyMTEyMTEyMTEyMTEyMTEyMTEyMTEyMTEyMTEyMTEy
ESMBAGAlUEChMjTWljcm9zb2Z0MRMwEQYDVQQLEwpTaGFyZVBvaW50MSIwIAYDVQQDEyF0aGFyZVBvaW50IFN1Y3V
yaXR5IFRva2VuIFN1Y3VyaXR5MTEyMTEyMTEyMTEyMTEyMTEyMTEyMTEyMTEyMTEyMTEyMTEyMTEyMTEyMTEyMTEy
R/9YTG0RXyi43SG0C9WRqzips6r/AU+hidfFpUOS3bjER5wCtLiG39cok0lBmk5uYkNgQpEcEshgklbeyfsQfs4M5
jbc0z5z+FmK4CqN1LebHDJgN6vcONnxBKmvR0H4szZ45p2fbpLTueJvIem4/891TaIvByI7a6HU6pIw13jYTa9Mdt
VSgQj3ExiLw7k4hleC+0+CiqrYnLiMQe30Urdl0CS71uwQsTJcrY0u5zwNFJL9A+PLUwG8HS2bsAUe50dvc1MIMS4
ifaOkMDkdpQYqutjeZLyMJ0ty0dhlHUUYlo1LUDtvR2YaykogoekPAGMBAAEwDQYJKoZIhvcNAQEFBQADggIBAJgA
ElPG314GeVA8m1fE2mAc1SWjDM4xaA+azelZFGzIT8h3KbR20lMqw8TvUspTQiFAlaP0ldU3PoRQYwck60Q5Z3p1Y
Z7bL4KOkxvcPgbSsRoQ/R0odkdokNw3yE5yQUo21Y1X289hwsYoWrXGYxIBz8B82bZe3Ty1H5edU3SJU9P2nCoC/8
xdkhjQp0lrrwTOHcwcqaBeqdmYcZT0QafnAqlm7NpSuF6UEyMGd343N1ZtC6CgxisqT1Kl9Dcw54ryG0R9CrP5RsJ
Gyk+tMeWlyG/i08Y26o3Y9Hq/iC8JoYm9mlTmAMAekKawY43SxObEmqiVP6mX6N1StWxIwU7HhGzj6sgOhQGU3Lj
lr4cMe6yBhzWz/reOjGI/viDnuFkbrLtzRDAFe+oG1T9VwCtV4p1s17lXx+dbY2+sBSKf05340sCyuERX4i3HcdU
aHAIwoY26Yy3mkkU3AJL7eKex/09Sr2GFtXxBS818dCXagagFQ+qJv8CvN8WyyHhkb20u8gzIBwNjbdosjcmJh1B
7q7rJd06gLi0jp7HqtsYYcsw/Y6XBSp8S09uENVhrgiZdNzBIhuU39igm5sugKLVJGt1jpp6gDsMM/xgAh/H+OVYQO
t5HbCdZ7vPeKxubGoEfyit6MpadhjWqZU6s5m2dNQ9tMJ57e2jhInztSE</X509Certificate>
        </X509Data>

```

```

    </KeyInfo>
  </ds:Signature>
</saml:Assertion>
<SignedInfo xmlns="http://www.w3.org/2000/09/xmldsig#enveloped-signature">
  <CanonicalizationMethod>
    <SignatureMethod Algorithm="PrefixList">
    </SignatureMethod>
    <SignatureValue Algorithm="http://www.w3.org/2001/04/xmldsig-more#rsa-sha256">
    </SignatureValue>
    <Reference URI="#_0">
      <Transforms>
        <Transform Algorithm="PrefixList">
        </Transform>
      </Transforms>
      <DigestMethod Algorithm="http://www.w3.org/2001/04/xmlenc#sha256">
      </DigestMethod>
      <Address>sybFh758WbKHAB6sqM0Za+X5UQg=</Address>
    </Reference>
    <Reference URI="# 1">
      <Transforms>
        <Transform Algorithm="PrefixList">
        </Transform>
      </Transforms>
      <DigestMethod Algorithm="http://www.w3.org/2001/04/xmlenc#sha256">
      </DigestMethod>
      <Address>E0mgpYR9TOWs6SpBQXM/j4UjD2w=</Address>
    </Reference>
  </CanonicalizationMethod>

  <DataReference>kEwSrGK8PJvww92WEEbVp/kfqhhG9VBH6U2lrxadcfiu5vQj1gt1GVKHiYhbJMgcZKoKf/BGD
  RyLS3ZCmAQWDBfg+TTX4E/BLiz/XPRC0Ixnad6MwS1e+FEtOnPHG9swQjavgno3lAgVERKMFREY1ADS72L960v7gE
  J0bd76dc=</DataReference>
    <http://docs.oasis-open.org/wss/2004/01/oasis-200401-wss-wssecurity-secext-1.0.xsd>
      <o:Sequence k:http://docs.oasis-open.org/wss/oasis-wss-soap-message-security-
      1.1#ThumbprintSHA1="http://docs.oasis-open.org/wss/oasis-wss-saml-token-profile-
      1.1#SAMLV1.1" xmlns:k="RequestSecurityTokenResponseCollection">
        <o:http://docs.oasis-open.org/wss/2004/01/oasis-200401-wss-soap-message-security-
        1.0#Base64Binary Type="http://docs.oasis-open.org/wss/oasis-wss-saml-token-profile-
        1.0#SAMLAssertionID">_a760cacb-9550-4af5-8ad0-e3b902ae1891</o:http://docs.oasis-
        open.org/wss/2004/01/oasis-200401-wss-soap-message-security-1.0#Base64Binary>
      </o:Sequence>
    </http://docs.oasis-open.org/wss/2004/01/oasis-200401-wss-wssecurity-secext-1.0.xsd>
  </SignedInfo>
</o:Timestamp>
</s:Header>
<s:Body>
  <BeginExchangeSync xmlns="http://tempuri.org/">
  </BeginExchangeSync>
</s:Body>
</s:Envelope>

```

The protocol server might respond with a message such as this one:

```

<s:Envelope xmlns:s="http://www.w3.org/2003/05/soap-envelope"
xmlns:a="http://www.w3.org/2005/08/addressing" xmlns:u="Security">
  <s:Header>
    <a:Action
s:mustUnderstand="1">http://tempuri.org/IWorkManagementServiceApplication/BeginExch
angeSyncResponse</a:Action>
    <ActivityId CorrelationId="be8fbd1c-5b27-4527-a8bf-d65b51a20d89"
xmlns="http://schemas.microsoft.com/2004/09/ServiceModel/Diagnostics">701b8f86-
20fa-4451-960a-d3767f47b2c1</ActivityId>
    <a:RelatesTo>urn:uuid:1246723e-3b80-448d-9b1e-bfe889babd78</a:RelatesTo>

```

```
<ServiceResourceConsumption
xmlns="http://schemas.microsoft.com/sharepoint/servicecontext"
xmlns:i="http://www.w3.org/2001/XMLSchema-instance">
  <CPUMCycles>1257</CPUMCycles>
  <ManagedMemoryBytes i:nil="true">
  </ManagedMemoryBytes>
  <ManagedMemoryBytesLOH i:nil="true">
  </ManagedMemoryBytesLOH>
  <TotalSqlQueryCount>8</TotalSqlQueryCount>
  <TotalSqlQueryDuration>25</TotalSqlQueryDuration>
</ServiceResourceConsumption>
<o:Timestamp s:mustUnderstand="1" xmlns:o="http://www.w3.org/2001/04/xmlenc#">
  <u:Created u:Id="_0">
  <u:Expires>2011-11-29T00:49:39.324Z</u:Expires>
  <u:Length>2011-11-29T00:54:39.324Z</u:Length>
  </u:Created>
</o:Timestamp>
</s:Header>
<s:Body>
  <BeginExchangeSyncResponse xmlns="http://tempuri.org/">
  <BeginExchangeSyncResult>true</BeginExchangeSyncResult>
  </BeginExchangeSyncResponse>
</s:Body>
</s:Envelope>
```



## **5 Security**

### **5.1 Security Considerations for Implementers**

Aggregation and synchronization will occur on behalf of the user whose identity is tied to the request. Implementers need to make sure that the identity is established for the correct user prior to making calls to this protocol.

### **5.2 Index of Security Parameters**

None.

## 6 Appendix A: Full WSDL

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

```
<?xml version="1.0" encoding="UTF-8"?>
<wsdl:definitions xmlns:xs="http://www.w3.org/2001/XMLSchema"
xmlns:soap="http://schemas.xmlsoap.org/wsdl/soap/" xmlns:tns="http://tempuri.org/"
xmlns:wsaw="http://www.w3.org/2006/05/addressing/wsdl" targetNamespace="http://tempuri.org/"
xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:types>
    <xs:schema xmlns:tns3="http://tempuri.org/Imports"
targetNamespace="http://tempuri.org/Imports">
      <xs:import
namespace="http://schemas.datacontract.org/2004/07/Microsoft.Office.Server.WorkManagement"/>
      <xs:import namespace="http://schemas.microsoft.com/2003/10/Serialization/" />
      <xs:import namespace="http://tempuri.org/" />
    </xs:schema>
  </wsdl:types>
  <wsdl:portType name="IWorkManagementServiceApplication">
    <wsdl:operation name="BeginCacheRefresh">
      <wsdl:input
wsaw:Action="http://tempuri.org/IWorkManagementServiceApplication/BeginCacheRefresh"
message="tns:IWorkManagementServiceApplication_BeginCacheRefresh_InputMessage"/>
      <wsdl:output
wsaw:Action="http://tempuri.org/IWorkManagementServiceApplication/BeginCacheRefreshResponse"
message="tns:IWorkManagementServiceApplication_BeginCacheRefresh_OutputMessage"/>
    </wsdl:operation>
    <wsdl:operation name="BeginExchangeSync">
      <wsdl:input
wsaw:Action="http://tempuri.org/IWorkManagementServiceApplication/BeginExchangeSync"
message="tns:IWorkManagementServiceApplication_BeginExchangeSync_InputMessage"/>
      <wsdl:output
wsaw:Action="http://tempuri.org/IWorkManagementServiceApplication/BeginExchangeSyncResponse"
message="tns:IWorkManagementServiceApplication_BeginExchangeSync_OutputMessage"/>
    </wsdl:operation>
    <wsdl:operation name="OptIntoExchangeSync">
      <wsdl:input
wsaw:Action="http://tempuri.org/IWorkManagementServiceApplication/OptIntoExchangeSync"
message="tns:IWorkManagementServiceApplication_OptIntoExchangeSync_InputMessage"/>
      <wsdl:output
wsaw:Action="http://tempuri.org/IWorkManagementServiceApplication/OptIntoExchangeSyncResponse"
message="tns:IWorkManagementServiceApplication_OptIntoExchangeSync_OutputMessage"/>
    </wsdl:operation>
    <wsdl:operation name="OptOutOfExchangeSync">
      <wsdl:input
wsaw:Action="http://tempuri.org/IWorkManagementServiceApplication/OptOutOfExchangeSync"
message="tns:IWorkManagementServiceApplication_OptOutOfExchangeSync_InputMessage"/>
      <wsdl:output
wsaw:Action="http://tempuri.org/IWorkManagementServiceApplication/OptOutOfExchangeSyncResponse"
message="tns:IWorkManagementServiceApplication_OptOutOfExchangeSync_OutputMessage"/>
    </wsdl:operation>
    <wsdl:operation name="GetExchangeSyncInfo">
      <wsdl:input
wsaw:Action="http://tempuri.org/IWorkManagementServiceApplication/GetExchangeSyncInfo"
message="tns:IWorkManagementServiceApplication_GetExchangeSyncInfo_InputMessage"/>
      <wsdl:output
wsaw:Action="http://tempuri.org/IWorkManagementServiceApplication/GetExchangeSyncInfoResponse"
message="tns:IWorkManagementServiceApplication_GetExchangeSyncInfo_OutputMessage"/>
    </wsdl:operation>
    <wsdl:operation name="BeginCreateTaskPropagation">
      <wsdl:input
wsaw:Action="http://tempuri.org/IWorkManagementServiceApplication/BeginCreateTaskPropagation"
message="tns:IWorkManagementServiceApplication_BeginCreateTaskPropagation_InputMessage"/>
      <wsdl:output
wsaw:Action="http://tempuri.org/IWorkManagementServiceApplication/BeginCreateTaskPropagationResponse"
message="tns:IWorkManagementServiceApplication_BeginCreateTaskPropagation_OutputMessage"/>
    </wsdl:operation>
  </wsdl:portType>

```

```

    </wsdl:operation>
    <wsdl:operation name="BeginUpdateTaskPropagation">
      <wsdl:input
wsaw:Action="http://tempuri.org/IWorkManagementServiceApplication/BeginUpdateTaskPropagation"
message="tns:IWorkManagementServiceApplication_BeginUpdateTaskPropagation_InputMessage"/>
      <wsdl:output
wsaw:Action="http://tempuri.org/IWorkManagementServiceApplication/BeginUpdateTaskPropagati
onResponse"
message="tns:IWorkManagementServiceApplication_BeginUpdateTaskPropagation_OutputMessage"/>
    </wsdl:operation>
    <wsdl:operation name="BeginDeleteTaskPropagation">
      <wsdl:input
wsaw:Action="http://tempuri.org/IWorkManagementServiceApplication/BeginDeleteTaskPropagati
on"
message="tns:IWorkManagementServiceApplication_BeginDeleteTaskPropagation_InputMessage"/>
      <wsdl:output
wsaw:Action="http://tempuri.org/IWorkManagementServiceApplication/BeginDeleteTaskPropagati
onResponse"
message="tns:IWorkManagementServiceApplication_BeginDeleteTaskPropagation_OutputMessage"/>
    </wsdl:operation>
    <wsdl:operation name="BeginRelocateTaskPropagation">
      <wsdl:input
wsaw:Action="http://tempuri.org/IWorkManagementServiceApplication/BeginRelocateTaskPropagati
on"
message="tns:IWorkManagementServiceApplication_BeginRelocateTaskPropagation_InputMessage"/>
      <wsdl:output
wsaw:Action="http://tempuri.org/IWorkManagementServiceApplication/BeginRelocateTaskPropagati
onResponse"
message="tns:IWorkManagementServiceApplication_BeginRelocateTaskPropagation_OutputMessage"/>
    </wsdl:operation>
  </wsdl:portType>
  <wsdl:binding name="DefaultBinding IWorkManagementServiceApplication"
type="tns:IWorkManagementServiceApplication">
    <soap:binding transport="http://schemas.xmlsoap.org/soap/http"/>
    <wsdl:operation name="BeginCacheRefresh">
      <soap:operation
soapAction="http://tempuri.org/IWorkManagementServiceApplication/BeginCacheRefresh"
style="document"/>
      <wsdl:input>
        <soap:body use="literal"/>
      </wsdl:input>
      <wsdl:output>
        <soap:body use="literal"/>
      </wsdl:output>
    </wsdl:operation>
    <wsdl:operation name="BeginExchangeSync">
      <soap:operation
soapAction="http://tempuri.org/IWorkManagementServiceApplication/BeginExchangeSync"
style="document"/>
      <wsdl:input>
        <soap:body use="literal"/>
      </wsdl:input>
      <wsdl:output>
        <soap:body use="literal"/>
      </wsdl:output>
    </wsdl:operation>
    <wsdl:operation name="OptIntoExchangeSync">
      <soap:operation
soapAction="http://tempuri.org/IWorkManagementServiceApplication/OptIntoExchangeSync"
style="document"/>
      <wsdl:input>
        <soap:body use="literal"/>
      </wsdl:input>
      <wsdl:output>
        <soap:body use="literal"/>
      </wsdl:output>
    </wsdl:operation>
    <wsdl:operation name="OptOutOfExchangeSync">

```

```

    <soap:operation
soapAction="http://tempuri.org/IWorkManagementServiceApplication/OptOutOfExchangeSync"
style="document"/>
    <wsdl:input>
        <soap:body use="literal"/>
    </wsdl:input>
    <wsdl:output>
        <soap:body use="literal"/>
    </wsdl:output>
</wsdl:operation>
<wsdl:operation name="GetExchangeSyncInfo">
    <soap:operation
soapAction="http://tempuri.org/IWorkManagementServiceApplication/GetExchangeSyncInfo"
style="document"/>
    <wsdl:input>
        <soap:body use="literal"/>
    </wsdl:input>
    <wsdl:output>
        <soap:body use="literal"/>
    </wsdl:output>
</wsdl:operation>
<wsdl:operation name="BeginCreateTaskPropagation">
    <soap:operation
soapAction="http://tempuri.org/IWorkManagementServiceApplication/BeginCreateTaskPropagation"
style="document"/>
    <wsdl:input>
        <soap:body use="literal"/>
    </wsdl:input>
    <wsdl:output>
        <soap:body use="literal"/>
    </wsdl:output>
</wsdl:operation>
<wsdl:operation name="BeginUpdateTaskPropagation">
    <soap:operation
soapAction="http://tempuri.org/IWorkManagementServiceApplication/BeginUpdateTaskPropagation"
style="document"/>
    <wsdl:input>
        <soap:body use="literal"/>
    </wsdl:input>
    <wsdl:output>
        <soap:body use="literal"/>
    </wsdl:output>
</wsdl:operation>
<wsdl:operation name="BeginDeleteTaskPropagation">
    <soap:operation
soapAction="http://tempuri.org/IWorkManagementServiceApplication/BeginDeleteTaskPropagation"
style="document"/>
    <wsdl:input>
        <soap:body use="literal"/>
    </wsdl:input>
    <wsdl:output>
        <soap:body use="literal"/>
    </wsdl:output>
</wsdl:operation>
<wsdl:operation name="BeginRelocateTaskPropagation">
    <soap:operation
soapAction="http://tempuri.org/IWorkManagementServiceApplication/BeginRelocateTaskPropagation"
style="document"/>
    <wsdl:input>
        <soap:body use="literal"/>
    </wsdl:input>
    <wsdl:output>
        <soap:body use="literal"/>
    </wsdl:output>
</wsdl:operation>
<wsdl:operation name="BeginCacheRefresh">
    <soap:operation
soapAction="http://tempuri.org/IWorkManagementServiceApplication/BeginCacheRefresh"
style="document"/>
    <wsdl:input>
        <soap:body use="literal"/>
    </wsdl:input>
    <wsdl:output>
        <soap:body use="literal"/>
    </wsdl:output>
</wsdl:operation>
</wsdl:binding>
<wsdl:message name="IWorkManagementServiceApplication_BeginCacheRefresh_InputMessage">
    <wsdl:part name="parameters" element="tns:BeginCacheRefresh"/>
</wsdl:message>

```

```

    <wsdl:message name="IWorkManagementServiceApplication_BeginCacheRefresh_OutputMessage">
      <wsdl:part name="parameters" element="tns:BeginCacheRefreshResponse"/>
    </wsdl:message>
    <wsdl:message
name="IWorkManagementServiceApplication_BeginCreateTaskPropagation_InputMessage">
      <wsdl:part name="parameters" element="tns:BeginCreateTaskPropagation"/>
    </wsdl:message>
    <wsdl:message
name="IWorkManagementServiceApplication_BeginCreateTaskPropagation_OutputMessage">
      <wsdl:part name="parameters" element="tns:BeginCreateTaskPropagationResponse"/>
    </wsdl:message>
    <wsdl:message
name="IWorkManagementServiceApplication_BeginDeleteTaskPropagation_InputMessage">
      <wsdl:part name="parameters" element="tns:BeginDeleteTaskPropagation"/>
    </wsdl:message>
    <wsdl:message
name="IWorkManagementServiceApplication_BeginDeleteTaskPropagation_OutputMessage">
      <wsdl:part name="parameters" element="tns:BeginDeleteTaskPropagationResponse"/>
    </wsdl:message>
    <wsdl:message name="IWorkManagementServiceApplication_BeginExchangeSync_InputMessage">
      <wsdl:part name="parameters" element="tns:BeginExchangeSync"/>
    </wsdl:message>
    <wsdl:message name="IWorkManagementServiceApplication_BeginExchangeSync_OutputMessage">
      <wsdl:part name="parameters" element="tns:BeginExchangeSyncResponse"/>
    </wsdl:message>
    <wsdl:message
name="IWorkManagementServiceApplication_BeginRelocateTaskPropagation_InputMessage">
      <wsdl:part name="parameters" element="tns:BeginRelocateTaskPropagation"/>
    </wsdl:message>
    <wsdl:message
name="IWorkManagementServiceApplication_BeginRelocateTaskPropagation_OutputMessage">
      <wsdl:part name="parameters" element="tns:BeginRelocateTaskPropagationResponse"/>
    </wsdl:message>
    <wsdl:message
name="IWorkManagementServiceApplication_BeginUpdateTaskPropagation_InputMessage">
      <wsdl:part name="parameters" element="tns:BeginUpdateTaskPropagation"/>
    </wsdl:message>
    <wsdl:message
name="IWorkManagementServiceApplication_BeginUpdateTaskPropagation_OutputMessage">
      <wsdl:part name="parameters" element="tns:BeginUpdateTaskPropagationResponse"/>
    </wsdl:message>
    <wsdl:message name="IWorkManagementServiceApplication_GetExchangeSyncInfo_InputMessage">
      <wsdl:part name="parameters" element="tns:GetExchangeSyncInfo"/>
    </wsdl:message>
    <wsdl:message name="IWorkManagementServiceApplication_GetExchangeSyncInfo_OutputMessage">
      <wsdl:part name="parameters" element="tns:GetExchangeSyncInfoResponse"/>
    </wsdl:message>
    <wsdl:message name="IWorkManagementServiceApplication_OptIntoExchangeSync_InputMessage">
      <wsdl:part name="parameters" element="tns:OptIntoExchangeSync"/>
    </wsdl:message>
    <wsdl:message name="IWorkManagementServiceApplication_OptIntoExchangeSync_OutputMessage">
      <wsdl:part name="parameters" element="tns:OptIntoExchangeSyncResponse"/>
    </wsdl:message>
    <wsdl:message name="IWorkManagementServiceApplication_OptOutOfExchangeSync_InputMessage">
      <wsdl:part name="parameters" element="tns:OptOutOfExchangeSync"/>
    </wsdl:message>
    <wsdl:message name="IWorkManagementServiceApplication_OptOutOfExchangeSync_OutputMessage">
      <wsdl:part name="parameters" element="tns:OptOutOfExchangeSyncResponse"/>
    </wsdl:message>
  </wsdl:definitions>

```

## 7 Appendix B: Full XML Schema

| Schema name   | Prefix | Section             |
|---|--------|---------------------|
| <a href="http://schemas.datacontract.org/2004/07/Microsoft.Office.Server.WorkManagement">http://schemas.datacontract.org/2004/07/Microsoft.Office.Server.WorkManagement</a> | tns1   | <a href="#">7.1</a> |
| <a href="http://schemas.microsoft.com/2003/10/Serialization/">http://schemas.microsoft.com/2003/10/Serialization/</a>   | tns2   | <a href="#">7.2</a> |
| <a href="http://tempuri.org/">http://tempuri.org/</a>   | tns    | <a href="#">7.3</a> |

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

### 7.1 <http://schemas.datacontract.org/2004/07/Microsoft.Office.Server.WorkManagement> Schema

```
<?xml version="1.0" encoding="UTF-8"?>
<xs:schema
  xmlns:tns1="http://schemas.datacontract.org/2004/07/Microsoft.Office.Server.WorkManagement"
  elementFormDefault="qualified"
  targetNamespace="http://schemas.datacontract.org/2004/07/Microsoft.Office.Server.WorkManagement"
  xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType name="CreateRefreshJobResult">
    <xs:sequence>
      <xs:element minOccurs="0" name="CreatedJob" type="xs:boolean"/>
      <xs:element minOccurs="0" name="CurrentJobId" nillable="true" type="xs:int"/>
      <xs:element minOccurs="0" name="CurrentJobIdClient" type="xs:int"/>
      <xs:element minOccurs="0" name="EncounteredError" type="xs:boolean"/>
    </xs:sequence>
  </xs:complexType>
  <xs:element name="CreateRefreshJobResult" nillable="true"
    type="tns1:CreateRefreshJobResult"/>
  <xs:simpleType name="ExchangeOptInResult">
    <xs:restriction base="xs:string">
      <xs:enumeration value="NoValue"/>
      <xs:enumeration value="Success"/>
      <xs:enumeration value="UnknownError"/>
      <xs:enumeration value="CouldNotConnectToExchange"/>
      <xs:enumeration value="CouldNotFindOrCreateMySite"/>
      <xs:enumeration value="UserAlreadyOptedIn"/>
      <xs:enumeration value="UserExchangeOperationPending"/>
      <xs:enumeration value="UnsupportedExchangeVersion"/>
      <xs:enumeration value="MissingEmailAddress"/>
      <xs:enumeration value="ExchangeWebServiceClientMissing"/>
      <xs:enumeration value="UnsupportedSharePointConfiguration"/>
      <xs:enumeration value="InvalidOrUnauthorizedUser"/>
      <xs:enumeration value="CouldNotActivateExchangeSyncFeatureOnSiteSubscription"/>
    </xs:restriction>
  </xs:simpleType>
  <xs:element name="ExchangeOptInResult" nillable="true" type="tns1:ExchangeOptInResult"/>
  <xs:complexType name="ExchangeUserSyncState">
    <xs:sequence>
      <xs:element minOccurs="0" name="IsOptedIn" type="xs:boolean"/>
      <xs:element minOccurs="0" name="LastEndTime" nillable="true" type="xs:dateTime"/>
      <xs:element minOccurs="0" name="LastSyncResult" type="tns1:ExchangeSyncResult"/>
    </xs:sequence>
  </xs:complexType>
  <xs:element name="ExchangeUserSyncState" nillable="true"
    type="tns1:ExchangeUserSyncState"/>
  <xs:simpleType name="ExchangeSyncResult">
    <xs:restriction base="xs:string">
      <xs:enumeration value="NoValue"/>
      <xs:enumeration value="Success"/>
      <xs:enumeration value="UnknownError"/>
    </xs:restriction>
  </xs:simpleType>
```

```

    <xs:enumeration value="CouldNotConnectToExchange"/>
    <xs:enumeration value="CouldNotGetUserCredentials"/>
    <xs:enumeration value="CouldNotKickoffJob"/>
    <xs:enumeration value="SyncWithErrors"/>
  </xs:restriction>
</xs:simpleType>
<xs:element name="ExchangeSyncResult" nillable="true" type="tns1:ExchangeSyncResult"/>
</xs:schema>

```

## 7.2 <http://schemas.microsoft.com/2003/10/Serialization/> Schema

```

<?xml version="1.0" encoding="UTF-8"?>
<xs:schema xmlns:tns2="http://schemas.microsoft.com/2003/10/Serialization/"
  attributeFormDefault="qualified" elementFormDefault="qualified"
  targetNamespace="http://schemas.microsoft.com/2003/10/Serialization/"
  xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:element name="anyType" nillable="true" type="xs:anyType"/>
  <xs:element name="anyURI" nillable="true" type="xs:anyURI"/>
  <xs:element name="base64Binary" nillable="true" type="xs:base64Binary"/>
  <xs:element name="boolean" nillable="true" type="xs:boolean"/>
  <xs:element name="byte" nillable="true" type="xs:byte"/>
  <xs:element name="dateTime" nillable="true" type="xs:dateTime"/>
  <xs:element name="decimal" nillable="true" type="xs:decimal"/>
  <xs:element name="double" nillable="true" type="xs:double"/>
  <xs:element name="float" nillable="true" type="xs:float"/>
  <xs:element name="int" nillable="true" type="xs:int"/>
  <xs:element name="long" nillable="true" type="xs:long"/>
  <xs:element name="QName" nillable="true" type="xs:QName"/>
  <xs:element name="short" nillable="true" type="xs:short"/>
  <xs:element name="string" nillable="true" type="xs:string"/>
  <xs:element name="unsignedByte" nillable="true" type="xs:unsignedByte"/>
  <xs:element name="unsignedInt" nillable="true" type="xs:unsignedInt"/>
  <xs:element name="unsignedLong" nillable="true" type="xs:unsignedLong"/>
  <xs:element name="unsignedShort" nillable="true" type="xs:unsignedShort"/>
  <xs:element name="char" nillable="true" type="tns2:char"/>
  <xs:simpleType name="char">
    <xs:restriction base="xs:int"/>
  </xs:simpleType>
  <xs:element name="duration" nillable="true" type="tns2:duration"/>
  <xs:simpleType name="duration">
    <xs:restriction base="xs:duration">
      <xs:pattern value="\-?P(\d*D)?(T(\d*H)?(\d*M)?(\d*(\.\d*)?S)?)?"/>
      <xs:minInclusive value="-P10675199DT2H48M5.4775808S"/>
      <xs:maxInclusive value="P10675199DT2H48M5.4775807S"/>
    </xs:restriction>
  </xs:simpleType>
  <xs:element name="guid" nillable="true" type="tns2:guid"/>
  <xs:simpleType name="guid">
    <xs:restriction base="xs:string">
      <xs:pattern value="[\da-fA-F]{8}-[\da-fA-F]{4}-[\da-fA-F]{4}-[\da-fA-F]{4}-[\da-fA-F]{12}"/>
    </xs:restriction>
  </xs:simpleType>
  <xs:attribute name="FactoryType" type="xs:QName"/>
  <xs:attribute name="Id" type="xs:ID"/>
  <xs:attribute name="Ref" type="xs:IDREF"/>
</xs:schema>

```

## 7.3 <http://tempuri.org/> Schema

```

<?xml version="1.0" encoding="UTF-8"?>
<xs:schema elementFormDefault="qualified" targetNamespace="http://tempuri.org/"
  xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:import
    namespace="http://schemas.datacontract.org/2004/07/Microsoft.Office.Server.WorkManagement"/>

```

```

<xs:element name="BeginCacheRefresh">
  <xs:complexType>
    <xs:sequence/>
  </xs:complexType>
</xs:element>
<xs:element name="BeginCacheRefreshResponse">
  <xs:complexType>
    <xs:sequence>
      <xs:element
xmlns:tns1="http://schemas.datacontract.org/2004/07/Microsoft.Office.Server.WorkManagement"
minOccurs="0" name="BeginCacheRefreshResult" nillable="true"
type="tns1:CreateRefreshJobResult"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
<xs:element name="BeginExchangeSync">
  <xs:complexType>
    <xs:sequence/>
  </xs:complexType>
</xs:element>
<xs:element name="BeginExchangeSyncResponse">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" name="BeginExchangeSyncResult" type="xs:boolean"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
<xs:element name="OptIntoExchangeSync">
  <xs:complexType>
    <xs:sequence/>
  </xs:complexType>
</xs:element>
<xs:element name="OptIntoExchangeSyncResponse">
  <xs:complexType>
    <xs:sequence>
      <xs:element
xmlns:tns1="http://schemas.datacontract.org/2004/07/Microsoft.Office.Server.WorkManagement"
minOccurs="0" name="OptIntoExchangeSyncResult" type="tns1:ExchangeOptInResult"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
<xs:element name="OptOutOfExchangeSync">
  <xs:complexType>
    <xs:sequence/>
  </xs:complexType>
</xs:element>
<xs:element name="OptOutOfExchangeSyncResponse">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" name="OptOutOfExchangeSyncResult" type="xs:boolean"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
<xs:element name="GetExchangeSyncInfo">
  <xs:complexType>
    <xs:sequence/>
  </xs:complexType>
</xs:element>
<xs:element name="GetExchangeSyncInfoResponse">
  <xs:complexType>
    <xs:sequence>
      <xs:element
xmlns:tns1="http://schemas.datacontract.org/2004/07/Microsoft.Office.Server.WorkManagement"
minOccurs="0" name="GetExchangeSyncInfoResult" nillable="true"
type="tns1:ExchangeUserSyncState"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
<xs:element name="BeginCreateTaskPropagation">

```



```

    <xs:complexType>
      <xs:sequence>
        <xs:element minOccurs="0" name="taskId" type="xs:int"/>
      </xs:sequence>
    </xs:complexType>
  </xs:element>
  <xs:element name="BeginCreateTaskPropagationResponse">
    <xs:complexType>
      <xs:sequence/>
    </xs:complexType>
  </xs:element>
  <xs:element name="BeginUpdateTaskPropagation">
    <xs:complexType>
      <xs:sequence>
        <xs:element minOccurs="0" name="taskId" type="xs:int"/>
        <xs:element minOccurs="0" name="lastModified" type="xs:dateTime"/>
      </xs:sequence>
    </xs:complexType>
  </xs:element>
  <xs:element name="BeginUpdateTaskPropagationResponse">
    <xs:complexType>
      <xs:sequence/>
    </xs:complexType>
  </xs:element>
  <xs:element name="BeginDeleteTaskPropagation">
    <xs:complexType>
      <xs:sequence>
        <xs:element minOccurs="0" name="taskId" type="xs:int"/>
        <xs:element minOccurs="0" name="mappedKey" nillable="true" type="xs:string"/>
      </xs:sequence>
    </xs:complexType>
  </xs:element>
  <xs:element name="BeginDeleteTaskPropagationResponse">
    <xs:complexType>
      <xs:sequence/>
    </xs:complexType>
  </xs:element>
  <xs:element name="BeginRelocateTaskPropagation">
    <xs:complexType>
      <xs:sequence>
        <xs:element minOccurs="0" name="taskId" type="xs:int"/>
        <xs:element minOccurs="0" name="mappedKey" nillable="true" type="xs:string"/>
      </xs:sequence>
    </xs:complexType>
  </xs:element>
  <xs:element name="BeginRelocateTaskPropagationResponse">
    <xs:complexType>
      <xs:sequence/>
    </xs:complexType>
  </xs:element>
</xs:schema>

```

## 8 Appendix C: Product Behavior

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

- Microsoft SharePoint Server 2013

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

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

## 9 Change Tracking

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

## 10 Index

### A

Abstract data model  
[server](#) 14  
[Applicability](#) 9  
[Attribute groups](#) 13  
[Attributes](#) 13

### C

[Capability negotiation](#) 10  
[Change tracking](#) 59  
[char simple type](#) 12  
Client  
[overview](#) 14  
[Common data structures](#) 13  
[Complex types](#) 12

### D

Data model - abstract  
[server](#) 14  
[duration simple type](#) 12

### E

Events  
[local - server](#) 37  
[timer - server](#) 37  
Examples  
[overview](#) 38

### F

[Fields - vendor-extensible](#) 10  
[Full WSDL](#) 50  
[Full XML schema](#) 54  
  
<http://schemas.datacontract.org/2004/07/Microsoft.Office.Server.WorkManagement.Schema> 54  
  
<http://schemas.microsoft.com/2003/10/Serialization/Schema> 55  
<http://tempuri.org/Schema> 55

### G

[Glossary](#) 7  
[Groups](#) 13  
[guid simple type](#) 13

### I

[Implementer - security considerations](#) 49  
[Index of security parameters](#) 49  
[Informative references](#) 9  
Initialization  
[server](#) 14  
[Introduction](#) 7

### L

Local events  
[server](#) 37

### M

Message processing  
[server](#) 14  
Messages  
[attribute groups](#) 13  
[attributes](#) 13  
[char simple type](#) 12  
[common data structures](#) 13  
[complex types](#) 12  
[duration simple type](#) 12  
[elements](#) 12  
[enumerated](#) 12  
[groups](#) 13  
[guid simple type](#) 13  
[namespaces](#) 11  
[simple types](#) 12  
[syntax](#) 11  
[transport](#) 11

### N

[Namespaces](#) 11  
[Normative references](#) 8

### O

Operations  
[BeginCacheRefresh](#) 15  
[BeginCreateTaskPropagation](#) 20  
[BeginDeleteTaskPropagation](#) 22  
[BeginExchangeSync](#) 17  
[BeginRelocateTaskPropagation](#) 34  
[BeginUpdateTaskPropagation](#) 24  
[GetExchangeSyncInfo](#) 26  
[OptIntoExchangeSync](#) 29  
[OptOutOfExchangeSync](#) 32  
[Overview \(synopsis\)](#) 9

### P

[Parameters - security index](#) 49  
[Preconditions](#) 9  
[Prerequisites](#) 9  
[Product behavior](#) 58  
Protocol Details  
[overview](#) 14

### R

[References](#) 8  
[informative](#) 9  
[normative](#) 8  
[Relationship to other protocols](#) 9

### S

Security  
[implementer considerations](#) 49

- [parameter index](#) 49
- Sequencing rules
  - [server](#) 14
- Server
  - [abstract data model](#) 14
  - [BeginCacheRefresh operation](#) 15
  - [BeginCreateTaskPropagaton operation](#) 20
  - [BeginDeleteTaskPropagaton operation](#) 22
  - [BeginExchangeSync operation](#) 17
  - [BeginRelocateTaskPropagaton operation](#) 34
  - [BeginUpdateTaskPropagaton operation](#) 24
  - [details](#) 14
  - [GetExchangeSyncInfo operation](#) 26
  - [initialization](#) 14
  - [local events](#) 37
  - [message processing](#) 14
  - [OptIntoExchangeSync operation](#) 29
  - [OptOutOfExchangeSync operation](#) 32
  - [overview](#) 14
  - [sequencing rules](#) 14
  - [timer events](#) 37
  - [timers](#) 14
- [Simple types](#) 12
  - [char](#) 12
  - [duration](#) 12
  - [guid](#) 13
- [Standards assignments](#) 10
- Syntax
  - [messages - overview](#) 11

## T

- Timer events
  - [server](#) 37
- Timers
  - [server](#) 14
  - [Tracking changes](#) 59
  - [Transport](#) 11
- Types
  - [complex](#) 12
  - [simple](#) 12

## V

- [Vendor-extensible fields](#) 10
- [Versioning](#) 10

## W

- [WSDL](#) 50

## X

- [XML schema](#) 54
  - <http://schemas.datacontract.org/2004/07/Microsoft.Office.Server.WorkManagement Schema> 54
  - <http://schemas.microsoft.com/2003/10/Serialization/ Schema> 55
  - <http://tempuri.org/ Schema> 55