[MS-UPWCFWS]:
User Profile Property Service Application Web Service Protocol Specification

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Revision Summary

Date	Revision History	Revision Class	Comments
07/13/2009	0.1	Major	Initial Availability
08/28/2009	0.2	Editorial	Revised and edited the technical content
11/06/2009	0.3	Editorial	Revised and edited the technical content
02/19/2010	1.0	Major	Updated and revised the technical content
03/31/2010	1.01	Editorial	Revised and edited the technical content
04/30/2010	1.02	Editorial	Revised and edited the technical content
06/07/2010	1.03	Editorial	Revised and edited the technical content
06/29/2010	1.04	Editorial	Changed language and formatting in the technical content.
07/23/2010	1.05	Minor	Clarified the meaning of the technical content.
09/27/2010	1.05	No change	No changes to the meaning, language, or formatting of the technical content.
11/15/2010	1.05	No change	No changes to the meaning, language, or formatting of the technical content.
12/17/2010	1.05	No change	No changes to the meaning, language, or formatting of the technical content.
03/18/2011	1.05	No change	No changes to the meaning, language, or formatting of the technical content.
06/10/2011	1.05	No change	No changes to the meaning, language, or formatting of the technical content.
01/20/2012	2.0	Major	Significantly changed the technical content.
04/11/2012	2.0	No change	No changes to the meaning, language, or formatting of the technical content.
07/16/2012	2.0	No change	No changes to the meaning, language, or formatting of the technical content.

Table of Contents

1 Introduction

This document specifies the User Profile Property Service Application Web Service Protocol, which is built upon the Windows Communication Foundation and enables a protocol client to retrieve user profile application configuration information that is located in a user profile store on a site.

Sections 1.8, 2, and 3 of this specification are normative and can contain the terms MAY, SHOULD, MUST, MUST NOT, and SHOULD NOT as defined in RFC 2119. Sections 1.5 and 1.9 are also normative but cannot contain those terms. All other sections and examples in this specification are informative.

1.1 Glossary

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

access control entry (ACE)
access control list (ACL)
Augmented Backus-Naur Form (ABNF)
base64
domain controller (DC)
Domain Name System (DNS)
GUID
Hypertext Transfer Protocol (HTTP)
Hypertext Transfer Protocol over Secure Sockets Layer (HTTPS)
language code identifier (LCID)
security identifier (SID)
service
Transmission Control Protocol (TCP)
user object
XML

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

application server
Business Data Connectivity (BDC)
collation
data connection
endpoint
group
partition
provisioned
schema version
security principal
Simple Object Access Protocol (SOAP)
SOAP action
SOAP body
SOAP fault
social data
subscriber
Uniform Resource Identifier (URI)
Uniform Resource Locator (URL)
user profile
User Profile Service
user profile store
Web Services Description Language (WSDL)

WSDL message
WSDL operation
XML namespace
XML namespace prefix
XML schema

The following terms are specific to this document:

Identity Lifecycle Management Service: A set of identity management services that enables protocol clients to manage digital identities from creation through retirement. Services include identity synchronization, certificate and password management, and user provisioning.

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

1.2 References

References to Microsoft Open Specifications documentation do not include a publishing year because links are to the latest version of the technical documents, which are updated frequently. References to other documents include a publishing year when one is available.

1.2.1 Normative References

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

[MS-DTYP] Microsoft Corporation, "Windows Data Types".

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

[MS-UPIESP] Microsoft Corporation, "User Profile Import and Export Stored Procedures Protocol Specification".

[MS-WSSFO3] Microsoft Corporation, "Windows SharePoint Services (WSS): File Operations Database Communications Version 3 Protocol Specification".

[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.ietf.org/rfc/rfc2616.txt

[RFC5234] Crocker, D., Ed., and Overell, P., "Augmented BNF for Syntax Specifications: ABNF", STD 68, RFC 5234, January 2008, http://www.rfc-editor.org/rfc/rfc5234.txt

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

[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

[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

[XML] World Wide Web Consortium, "Extensible Markup Language (XML) 1.0 (Fourth Edition)", W3C Recommendation, August 2006, http://www.w3.org/TR/2006/REC-xml-20060816/

[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.S., Ed., Beech, D., Ed., Maloney, M., Ed., and Mendelsohn, N., Ed., "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-GLOS] Microsoft Corporation, "Windows Protocols Master Glossary".

[MS-OFCGLOS] Microsoft Corporation, "Microsoft Office Master Glossary".

[MS-SPTWS] Microsoft Corporation, "Service Platform Topology Web Service Protocol Specification".

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

[RFC2822] Resnick, P., Ed., "Internet Message Format", STD 11, RFC 2822, April 2001, http://www.ietf.org/rfc/rfc2822.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 Protocol Overview (Synopsis)

This protocol enables protocol clients to interact with the **User Profile Service** running on the middle-tier **application server**. The protocol client obtains information required to establish a connection, retrieves information about the permissions associated with the protocol client, and retrieves **URLs** to the sites that offer the User Profile Service. The protocol does not require that the protocol client had previous interaction with this **service**, nor does it require state information from the protocol client. The protocol requires that the protocol client obtain the URL of the service **endpoint (4)** of this protocol server and authenticate to use this service.

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 **Hypertext Transfer Protocol over Secure Sockets Layer (HTTPS)**, as described in [RFC2818].

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

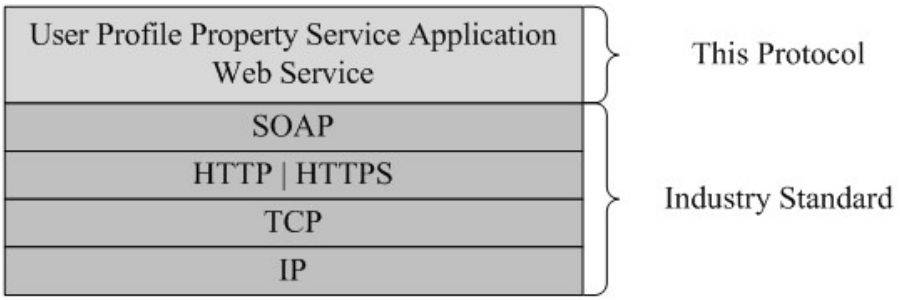

Figure 1: This protocol in relation to other protocols

1.5 Prerequisites/Preconditions

This protocol operates against a protocol server that exposes one or more endpoint (4) **URIs** that are known by protocol clients. The endpoint (4) URI of the protocol server and the transport that is used by the protocol server are either known by the protocol client or obtained by using the discovery mechanism that is described in [MS-SPTWS].

The protocol client obtains the requisite ApplicationClassId and ApplicationVersion values and the endpoint (4) URI of the protocol server that provides the discovery mechanism, as described in [MS-SPTWS], by means that are independent of either protocol.

This protocol requires the protocol client to have appropriate permission to call the methods on the protocol server.

The protocol client implements the token-based security mechanisms that are required by the protocol server and related security protocols, as described in [MS-SPSTWS].

1.6 Applicability Statement

This protocol retrieves basic connectivity and configuration information for the user profile middle-tier service. It is the first interaction between a protocol client and this site service, and is required before the protocol client retrieves any **user profile** information.

1.7 Versioning and Capability Negotiation

This document covers versioning issues in the following areas:

- **Supported Transports**: This protocol can be implemented by using transports that support sending SOAP messages, as specified in section 2.1.
- **Protocol Versions**: This protocol is not versioned.
- **Capability Negotiation**: This protocol does not support version negotiation.

1.8 Vendor-Extensible Fields

None.

1.9 Standards Assignments

None.

2 Messages

2.1 Transport

Protocol servers MUST support Simple Object Access Protocol (SOAP) over Hypertext Transfer Protocol (HTTP), Hypertext Transfer Protocol over Secure Sockets Layer (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 MAY 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 know 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 **XML schema**, as specified in [XMLSCHEMA1] and [XMLSCHEMA2], and **WSDL**, as specified 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
q1	http://Microsoft/Office/Server/UserProfiles	
q2	http://schemas.datacontract.org/2004/07/Microsoft.SharePoint.Administration	
q3	http://schemas.microsoft.com/2003/10/Serialization/Arrays	
q4	http://schemas.datacontract.org/2004/07/Microsoft.Office.Server.Utilities	
soap	http://schemas.xmlsoap.org/wsdl/soap/	[SOAP1.1]
tns	http://tempuri.org/	
tns1	http://schemas.microsoft.com/2003/10/Serialization/	
tns2	http://tempuri.org/Imports	
wsam	http://www.w3.org/2007/05/addressing/metadata	

Prefix	Namespace URI	Reference
wsdl	http://schemas.xmlsoap.org/wsdl/	[WSDL]
xs	http://www.w3.org/2001/XMLSchema	[XMLSCHEMA1] [XMLSCHEMA2]

2.2.2 Messages

This specification does not define any common WSDL message definitions.

2.2.3 Elements

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

2.2.4 Complex Types

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
char	
duration	

2.2.5.1 char

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

```
<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/

```
<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>
```

2.2.6 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

This specification does not define any common XML schema data structures.

3 Protocol Details

This is a server-side protocol. 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 simply exposes the current configuration state of the User Profile Service to all authenticated **user objects**. There are no dependencies between the information sent in one client-server request/response pair and the next pair; all dependencies are based on the current state of the application service. They are specified in the following figure.

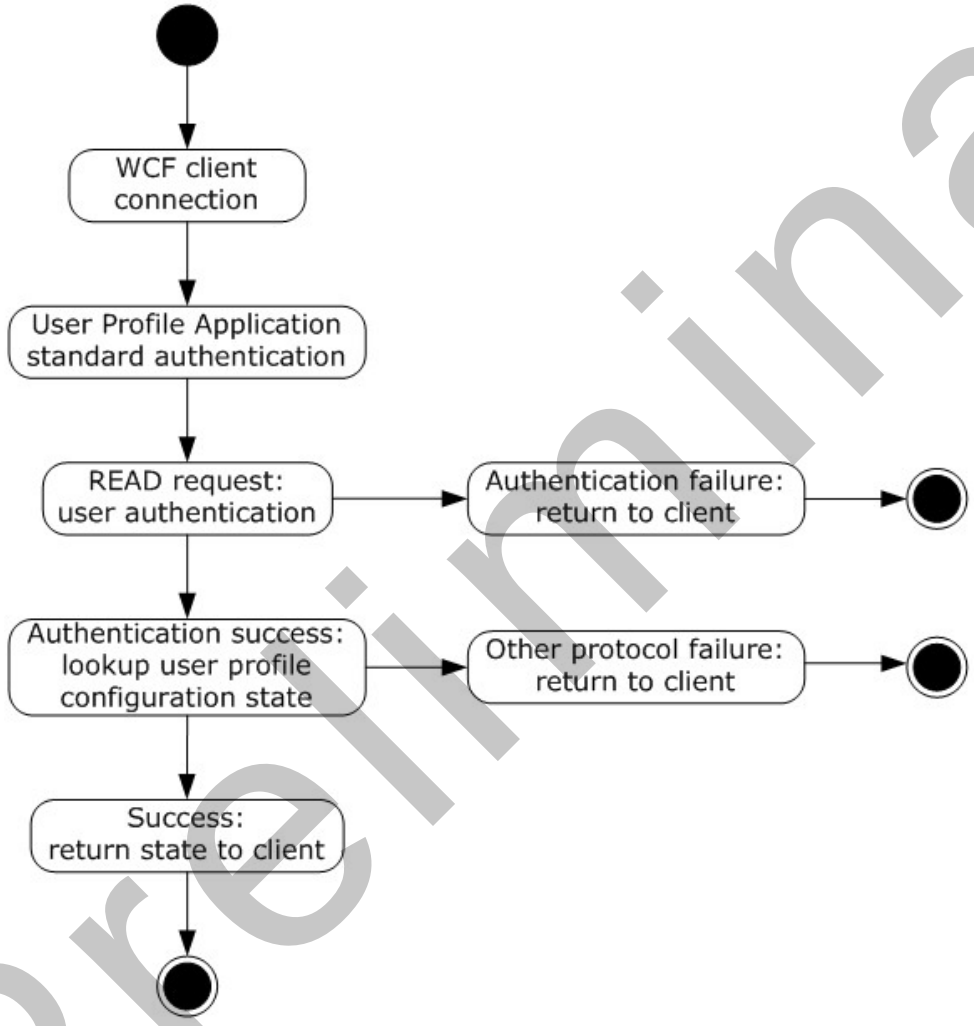

Figure 2: State Dependencies of the application service

The User Profile Service uses authentication mechanisms that are standard for Web Services and SOAP.

3.1.1 Abstract Data Model

This section describes a conceptual model of possible data organization that an implementation maintains to participate in this protocol. The described organization is provided to facilitate the explanation of how the protocol behaves. This document does not mandate that implementations adhere to this model as long as their external behavior is consistent with that described in this document.

This protocol enables protocol clients to query the latest configuration state information for the User Profile Service.

3.1.2 Timers

None.

3.1.3 Initialization

None.

3.1.4 Message Processing Events and Sequencing Rules

This protocol supports only the **GetProfileProperties** operation. This **WSDL operation** is stateless.

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

Operation	Description
GetProfileProperties	This WSDL operation retrieves the configuration state of the User Profile Service.

3.1.4.1 GetProfileProperties

This WSDL operation retrieves the configuration state of the User Profile Service.

```
<wsdl:operation name="GetProfileProperties" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input wsam:Action="http://Microsoft.Office.Server.UserProfiles/GetProfileProperties"
message="tns:IProfilePropertyService_GetProfileProperties_InputMessage"
xmlns:wsam="http://www.w3.org/2007/05/addressing/metadata"/>
  <wsdl:output
wsam:Action="http://tempuri.org/IProfilePropertyService/GetProfilePropertiesResponse"
message="tns:IProfilePropertyService_GetProfileProperties_OutputMessage"
xmlns:wsam="http://www.w3.org/2007/05/addressing/metadata"/>
</wsdl:operation>
```

The protocol client sends an **IProfilePropertyService_GetProfileProperties_InputMessage** request message and the protocol server responds with an **IProfilePropertyService_GetProfileProperties_OutputMessage** response message containing the configuration state information associated with the application service.

3.1.4.1.1 Messages

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

Message	Description
IProfilePropertyService_GetProfileProperties_InputMessage	The request WSDL message for the **GetProfileProperties** WSDL operation.
IProfilePropertyService_GetProfileProperties_OutputMessage	The response WSDL message for the **GetProfileProperties** WSDL operation.

3.1.4.1.1.1 IProfilePropertyService_GetProfileProperties_InputMessage

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

The **SOAP action** value is:

```
http://Microsoft.Office.Server.UserProfiles/GetProfileProperties
```

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

3.1.4.1.1.2 IProfilePropertyService_GetProfileProperties_OutputMessage

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

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

3.1.4.1.2 Elements

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

Element	Description
GetProfileProperties	The input data for the **GetProfileProperties** WSDL operation.
GetProfilePropertiesResponse	The result data for the **GetProfileProperties** WSDL operation.

3.1.4.1.2.1 GetProfileProperties

The input data for the **GetProfileProperties** WSDL operation.

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

3.1.4.1.2.2 GetProfilePropertiesResponse

The result data for the **GetProfileProperties** WSDL operation.

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

```
      <xs:element xmlns:q1="http://Microsoft/Office/Server/UserProfiles" minOccurs="0"
name="GetProfilePropertiesResult" nillable="true" type="q1:ProfilePropertyData"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

GetProfilePropertiesResult: A **ProfilePropertyData** element that contains the configuration state information. However, if connection failures, authentication failures, or other transport errors occurred before the request reached the corresponding SOAP service endpoint (4), then the element will not contain the **ProfilePropertyData** element.

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
ProfilePropertyData	
ArrayOfguid	

3.1.4.1.3.1 ProfilePropertyData

Namespace: http://Microsoft/Office/Server/UserProfiles

This complex type is the main payload that the **GetProfileProperties** operation sends to the protocol client. It exposes the information required for a SOAP protocol client to connect to a User Profile Service that is currently running.

Because the User Profile Service configuration state contains optional elements, the protocol client MUST plan for the possibility that elements are not present.

```
<xs:complexType name="ProfilePropertyData" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="0" name="AppID" type="tns1:guid"/>
    <xs:element
xmlns:q2="http://schemas.datacontract.org/2004/07/Microsoft.SharePoint.Administration"
minOccurs="0" name="AppStatus" type="q2:SPObjectStatus"/>
    <xs:element minOccurs="0" name="ChangeJobSchedule" nillable="true" type="xs:string"/>
    <xs:element minOccurs="0" name="DaysWorthOfEventsToKeep" type="xs:int"/>
    <xs:element minOccurs="0" name="DocumentsFollowingLimit" type="xs:int"/>
    <xs:element minOccurs="0" name="FeedCacheLMTTTLDeltaHours" type="xs:int"/>
    <xs:element minOccurs="0" name="FeedCacheTTLHours" type="xs:int"/>
    <xs:element minOccurs="0" name="ILMMachineName" nillable="true" type="xs:string"/>
    <xs:element minOccurs="0" name="IgnoreIsActiveFlag" type="xs:boolean"/>
    <xs:element minOccurs="0" name="IsClaimProvider" nillable="true" type="xs:boolean"/>
    <xs:element minOccurs="0" name="IsIlmFullyConfigured" type="xs:boolean"/>
    <xs:element minOccurs="0" name="IsInitialDataPopulated" type="xs:boolean"/>
    <xs:element minOccurs="0" name="IsSynchronizationRunning" type="xs:boolean"/>
    <xs:element minOccurs="0" name="IsUpscaleILMUsed" type="xs:boolean"/>
    <xs:element minOccurs="0" name="IsUsersOnlyILMImport" type="xs:boolean"/>
    <xs:element minOccurs="0" name="NetBIOSDomainNamesEnabled" type="xs:boolean"/>
    <xs:element minOccurs="0" name="NoILMUsed" type="xs:boolean"/>
    <xs:element xmlns:q3="http://schemas.microsoft.com/2003/10/Serialization/Arrays"
minOccurs="0" name="PartitionIDs" nillable="true" type="q3:ArrayOfguid"/>
```

```
    <xs:element
xmlns:q4="http://schemas.datacontract.org/2004/07/Microsoft.Office.Server.Utilities"
minOccurs="0" name="PartitionOptions" type="q4:SPPartitionOptions"/>
    <xs:element minOccurs="0" name="PeopleFollowingLimit" type="xs:int"/>
    <xs:element minOccurs="0" name="PerfmonInstanceHandle" type="xs:int"/>
    <xs:element minOccurs="0" name="ProfileDatabaseBackwardsCompatibleSchemaVersion"
nillable="true" type="xs:string"/>
    <xs:element minOccurs="0" name="ProfileDatabaseConnectionString" nillable="true"
type="xs:string"/>
    <xs:element minOccurs="0" name="ProfileDatabaseSchemaVersion" nillable="true"
type="xs:string"/>
    <xs:element minOccurs="0" name="ProfileStoreCollationId" type="xs:int"/>
    <xs:element minOccurs="0" name="ProfileStoreLanguage" type="xs:int"/>
    <xs:element minOccurs="0" name="Secret" type="tns1:guid"/>
    <xs:element minOccurs="0" name="SerializedAdministratorAcl" nillable="true"
type="xs:string"/>
    <xs:element minOccurs="0" name="SitesFollowingLimit" type="xs:int"/>
    <xs:element minOccurs="0" name="SkipBDCImport" type="xs:boolean"/>
    <xs:element minOccurs="0" name="SocialDatabaseBackwardsCompatibleSchemaVersion"
nillable="true" type="xs:string"/>
    <xs:element minOccurs="0" name="SocialDatabaseConnectionString" nillable="true"
type="xs:string"/>
    <xs:element minOccurs="0" name="SocialDatabaseSchemaVersion" nillable="true"
type="xs:string"/>
    <xs:element minOccurs="0" name="SyncServiceInstanceId" type="tns1:guid"/>
    <xs:element minOccurs="0" name="UseOnlyPreferredDomainControllers" type="xs:boolean"/>
  </xs:sequence>
</xs:complexType>
```

AppID: The unique identifier of the User Profile Service that is currently running.

AppStatus: An **SPObjectStatus** (section 3.1.4.1.4.2) enumeration that specifies the current state of the User Profile Service specified by the **AppID** element.

ChangeJobSchedule: A string that specifies the schedule for the automated processing of tasks for the User Profile Service associated with the specified **AppID** element. The string MUST be formatted as specified by the following **ABNF** ([RFC5234]) grammar.

```
ChangeJobSchedule = SecondRecurrence / MinuteRecurrence / HourlyRecurrence / DailyRecurrence/
WeeklyRecurrence / MonthlyRecurrence / YearlyRecurrence
SecondRecurrence = "every " NONZEROSECONDORMINUTE " seconds"
MinuteRecurrence = "every " NONZEROSECONDORMINUTE " minutes " [SecondOrMinuteInstance]
HourlyRecurrence = "hourly " SecondOrMinuteInstance
DailyRecurrence = "daily " TimeInstance
WeeklyRecurrence = "weekly " DayInstance
MonthlyRecurrence = "monthly " (DateInstance / OrdinalDayInstance)
YearlyRecurrence = "yearly " MonthInstance
MonthInstance = ("at " MONTH " " DATE " " HourInstance) / ("between " MONTH " " DATE " "
HourInstance " and " MONTH " " DATE " " HourInstance)
DateInstance = ("at " DATE " " HourInstance) / ("between " DATE " " HourInstance " and " DATE
" " HourInstance)
DayInstance = ("at " DAY " " HourInstance) / ("between " DAY " " HourInstance " and " DAY " "
HourInstance)
OrdinalDayInstance = "at " ORDINAL " " DAY " " HourInstance
TimeInstance = ("at " HourInstance) / ("between " HourInstance " and " HourInstance)
SecondOrMinuteInstance = ("at " SECONDORMINUTE) / ("between " SECONDORMINUTE " and "
SECONDORMINUTE)
HourInstance = HOUR ":" SECONDORMINUTE [ ":" SECONDORMINUTE ]
```

```
MONTH = "jan" / "feb" / "mar" / "apr" / "may" / "jun"/ "jul" / "aug" / "sep" / "oct" / "nov"
/ "dec"
DATE = ( [ "1" / "2" ] NONZERODIGIT) / "10" / "20" / "30" / "31" ; 1-31
DAY = "sun" / "mon" / "tue" / "wed" / "thu" / "fri" / "sat" / "su" / "mo" / "tu" / "we" /
"th" / "fr" / "sa"
ORDINAL = "first" / "second" / "third" / "fourth" / "last"
HOUR = ( [ "1" ] DIGIT ) / "20" / "21" / "22" / "23" ; 0-23
SECONDORMINUTE = "0" / NONZEROSECONDORMINUTE ; 0-59
NONZEROSECONDORMINUTE = NONZERODIGIT / ( ( "1" / "2" / "3" / "4" / "5" ) DIGIT ) ; 1-59
NONZERODIGIT = "1" / "2" / "3" / "4" / "5" / "6" / "7" / "8" / "9" ; 1-9
DIGIT = "0" / NONZERODIGIT ; 0-9
```

DaysWorthOfEventsToKeep: The number of days that logs for tracking changes in the **user profile store** are stored before they are removed.

DocumentsFollowingLimit: Limit for the number of documents a user can follow. The maximum value allowed for this is 500.

FeedCacheLMTTTLDeltaHours: The time to live for the last modified time of any feed cache entry.

FeedCacheTTLHours: The time to live for any feed cache entry.

ILMMachineName: The name of the computer in standard **DNS** format that runs the **Identity Lifecycle Management Service** associated with this User Profile Service.

IgnoreIsActiveFlag: Specifies whether the current authenticated user object that invoked this request for the **GetProfileProperties** operation is active in this User Profile Service.

IsClaimProvider: The value MAY be TRUE, FALSE, or NULL. The protocol client MUST ignore this value.

IsIlmFullyConfigured: Specifies whether the computer, specified by the **ILMMachineName** element, is completely configured to synchronize user profile information with this User Profile Service.

IsInitialDataPopulated: Specifies whether user profile information was imported successfully at least once, which initially populates user profile information in the user profile store. For more details about synchronization, see [MS-UPIESP].

IsSynchronizationRunning: Indicates whether synchronization is running for this User Profile Service at the present time.

IsUpscaleILMUsed: Specifies whether the Identity Lifecycle Management Service is managed externally to the site. If this value is TRUE, the elements **ILMMachineName**, **IsIlmFullyConfigured**, **IsUsersOnlyILMImport**, **NextSynchronizationStage**, **SkipBDCImport**, and **SyncServiceInstanceId** are not applicable and MUST be ignored.

IsUsersOnlyILMImport: Specifies whether the user profile synchronization process imports only user objects for the Identity Lifecycle Management Service, or whether it also imports **groups (2)**.

NetBIOSDomainNamesEnabled: Indicates whether NetBIOS domain names are being used during synchronization of this User Profile Service with a directory using Identity Lifecycle Management Service.

NoILMUsed: Indicates whether the Identity Lifecycle Management Service-based synchronization is enabled for this User Profile Service.

PartitionIDs: The list of **partitions** that were **provisioned** for this User Profile Service.

PartitionOptions: Specifies whether partitioning is supported, as specified by the **SPPartitionOptions** (section 3.1.4.1.4.4) enumeration.

PeopleFollowingLimit: Limit for the number of people a user can follow. The maximum value allowed for this is 1000.

PerfmonInstanceHandle: MUST be set to -1.

ProfileDatabaseBackwardsCompatibleSchemaVersion: The earliest **schema version** with which the schema version of the user profile store is backward-compatible. The current schema is not considered to be compatible with any database schema with a version number lower than this version number. This version number appears in the version number format specified in the description of **ProfileDatabaseSchemaVersion**.

ProfileDatabaseConnectionString: The **data connection (2)** string that is associated with the user profile store.

ProfileDatabaseSchemaVersion: The current schema version number of the user profile store. The version number appears in the format major.minor[.build[.revision]], where major, minor, build, and revision are non-negative integers. 4.0 and 12.0.47.0 are examples of valid version numbers. When the database schema is updated, this version number is increased. For the purpose of comparing version numbers, the integer fields appear in decreasing order of significance.

ProfileStoreCollationId: The **collation** identifier of the user profile store.

ProfileStoreLanguage: **LCID** of the language of the user profile store.

Secret: A shared secret between the protocol client and protocol server.

SerializedAdministratorAcl: A string that specifies the **access control list (ACL)** that specifies the user objects that have administrative permissions associated with this user profile application. The protocol client uses this information to enable or disable specific administrator-only interactions with the User Profile Service. This field is optional because verification of authentication occurs at the service endpoint (4). This string MUST be well-formed **XML**, as specified by [XML] section 2. The root node of the XML MUST be an "acl" element. The "acl" element MUST specify a **version** attribute whose value MUST be the string ([XMLSCHEMA2] section 3.2.1) "1.0". The "acl" element MUST contain one "ace" child element for each **access control entry (ACE)** appearing in the **ACL**. Each "ace" element MUST specify the following attributes:

- **identityName**: A string ([XMLSCHEMA2] section 3.2.1) that specifies the login name of the **security principal (2)**.
- **displayName**: A string ([XMLSCHEMA2] section 3.2.1) that specifies the display name of the principal.
- **sid**: A string ([XMLSCHEMA2] section 3.2.1) that specifies the **security identifier (SID)** of the principal. This is the contents of the **SID** byte array specified in [MS-DTYP] section 2.4.2, represented as a string via **base64** encoding.
- **allowRights**: A string ([XMLSCHEMA2] section 3.2.1) that specifies a Windows SharePoint Services Rights Mask ([MS-WSSFO3] section 2.2.2.15) that specifies the permissions granted to the principal. This string MUST consist of the integer representation of the Windows SharePoint Services Rights Mask ([MS-WSSFO3]).

- **denyRights**: A string ([XMLSCHEMA2] section 3.2.1) that specifies a Windows SharePoint Services Rights Mask ([MS-WSSFO3] section 2.2.2.15) that specifies the permissions denied to the principal. This string MUST consist of the integer representation of the Windows SharePoint Services Rights Mask ([MS-WSSFO3]).

SitesFollowingLimit: Limit for the number of Sites a user can follow. The maximum value allowed for this is 500.

SkipBDCImport: Specifies whether the **Business Data Connectivity (BDC)** synchronization steps will be skipped during the process that synchronizes the user profile store with external sources. The BDC synchronization steps correspond to the **SynchronizationStage** enumeration values **BusinessDataCatalogImport**, **BusinessDataCatalogSync**, and **MossFinalExport** as specified in section 3.1.4.1.4.3. For more details about synchronization, see [MS-UPIESP].

SocialDatabaseBackwardsCompatibleSchemaVersion: The earliest schema version with which the schema version of the social data within the user profile store is backward-compatible. The current schema is not considered to be compatible with any database schema with a version number lower than this version number. This version number appears in the version number format specified in the description of **ProfileDatabaseSchemaVersion**.

SocialDatabaseConnectionString: The data connection (2) string associated with the **social data** within the user profile store.

SocialDatabaseSchemaVersion: The schema version of the social data within the user profile store. When the schema is updated, this version number is increased. This version number appears in the version number format specified in the description of **ProfileDatabaseSchemaVersion**.

SyncServiceInstanceId: The identifier of the user profile store's profile synchronization service instance.

UseOnlyPreferredDomainControllers: Specifies whether communication will only take place with a specified **domain controller (DC)**, or whether communication MAY also take place with other domain controllers.

3.1.4.1.3.2 ArrayOfguid

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

The **ArrayOfguid** element specifies a list of **GUIDs**.

```
<xs:complexType name="ArrayOfguid" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="unbounded" name="guid" type="tns1:guid"/>
  </xs:sequence>
</xs:complexType>
```

guid: A **GUID** as specified in section 3.1.4.1.4.1.

3.1.4.1.4 Simple Types

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

Simple type	Description
guid	
SPObjectStatus	
SPPartitionOptions	

3.1.4.1.4.1 guid

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

A GUID that is 16 bytes long.

```
<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>
```

3.1.4.1.4.2 SPObjectStatus

Namespace: http://schemas.datacontract.org/2004/07/Microsoft.SharePoint.Administration

This element specifies the processing status of the object or service.

```
<xs:simpleType name="SPObjectStatus" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:restriction base="xs:string">
    <xs:enumeration value="Online"/>
    <xs:enumeration value="Disabled"/>
    <xs:enumeration value="Offline"/>
    <xs:enumeration value="Unprovisioning"/>
    <xs:enumeration value="Provisioning"/>
    <xs:enumeration value="Upgrading"/>
  </xs:restriction>
</xs:simpleType>
```

The following table specifies the allowable values for **SPObjectStatus**.

Value	Meaning
Online	The object or service is online and ready.
Disabled	The object or service is disabled and is not accessible.
Offline	The object or service is temporarily offline.
Unprovisioning	The object or service is being un-provisioned and will be disabled shortly.
Provisioning	The object or service is being provisioned and is temporarily unavailable.
Upgrading	The object or service is being upgraded and is temporarily offline.

3.1.4.1.4.3 SynchronizationStage

3.1.4.1.4.4 SPPartitionOptions

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

This element is an enumeration that specifies whether the User Profile Service was partitioned.

```
<xs:simpleType name="SPPartitionOptions" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:restriction base="xs:string">
    <xs:enumeration value="UnPartitioned"/>
    <xs:enumeration value="UniquePartitionPerSubscription"/>
  </xs:restriction>
</xs:simpleType>
```

The following table specifies the allowable values for **SPPartitionOptions**.

Value	Meaning
UnPartitioned	Not Partitioned
UniquePartitionPerSubscription	Partitioned so that a unique partition exists for each **subscriber**, and each subscriber is isolated from the information or changes for another subscriber.

3.1.4.1.5 Attributes

None.

3.1.4.1.6 Groups

None.

3.1.4.1.7 Attribute Groups

None.

3.1.5 Timer Events

None.

3.1.6 Other Local Events

None.

4 Protocol Examples

This section describes example scenarios for retrieving the current configuration state of the User Profile Service.

4.1 Retrieving User Profile Service Configuration State

The protocol client constructs the following WSDL message to retrieve the current configuration state of the User Profile Service.

```
<s:Envelope xmlns:s="http://www.w3.org/2003/05/soap-envelope"
xmlns:a="http://www.w3.org/2005/08/addressing" xmlns:u="http://docs.oasis-
open.org/wss/2004/01/oasis-200401-wss-wssecurity-utility-1.0.xsd">
  <s:Header>
    <a:Action
s:mustUnderstand="1">http://Microsoft.Office.Server.UserProfiles/GetProfileProperties</a:Acti
on>
    <a:MessageID>urn:uuid:3eb21222-2b62-4735-a9ac-e673a6ee31df</a:MessageID>
    <a:ReplyTo>
      <a:Address>http://www.w3.org/2005/08/addressing/anonymous</a:Address>
    </a:ReplyTo>
    <a:To
s:mustUnderstand="1">net.tcp://mossperf64d2325:32845/59de0abe24804e18aeccdc292a7581f1/Profile
PropertyService.svc</a:To>
    <o:Security s:mustUnderstand="1" xmlns:o="http://docs.oasis-open.org/wss/2004/01/oasis-
200401-wss-wssecurity-secext-1.0.xsd">
      ...
    </o:Security>
  </s:Header>
  <s:Body>
    <GetProfileProperties xmlns="http://tempuri.org/"></GetProfileProperties>
  </s:Body>
</s:Envelope>
```

The protocol server sends the following response.

```
  <s:Envelope xmlns:s="http://www.w3.org/2003/05/soap-envelope"
xmlns:a="http://www.w3.org/2005/08/addressing" xmlns:u="http://docs.oasis-
open.org/wss/2004/01/oasis-200401-wss-wssecurity-utility-1.0.xsd">
    <s:Header>
      <a:Action
s:mustUnderstand="1">http://tempuri.org/IProfilePropertyService/GetProfilePropertiesResponse<
/a:Action>
      <a:RelatesTo>urn:uuid:3eb21222-2b62-4735-a9ac-e673a6ee31df</a:RelatesTo>
      <a:To s:mustUnderstand="1">http://www.w3.org/2005/08/addressing/anonymous</a:To>
      <o:Security s:mustUnderstand="1" xmlns:o="http://docs.oasis-open.org/wss/2004/01/oasis-
200401-wss-wssecurity-secext-1.0.xsd">
      ...
      </o:Security>
    </s:Header>
    <s:Body>
      <GetProfilePropertiesResponse xmlns="http://tempuri.org/">
        <GetProfilePropertiesResult xmlns:b="http://Microsoft/Office/Server/UserProfiles"
xmlns:i="http://www.w3.org/2001/XMLSchema-instance">
          <d4p1:AppID>9f5c3c8f-beec-44ea-bc04-6ffe2fb0e7bc</d4p1:AppID>
          <d4p1:AppStatus>Online</d4p1:AppStatus>
          <d4p1:ChangeJobSchedule>hourly between 0 and 0</d4p1:ChangeJobSchedule>
          <d4p1:ILMMachineName i:nil="true"></d4p1:ILMMachineName>
```

```
          <d4p1:IgnoreIsActiveFlag>false</d4p1:IgnoreIsActiveFlag>
          <d4p1:IsClaimProvider i:nil="true"></d4p1:IsClaimProvider>
          <d4p1:IsIlmFullyConfigured>false</d4p1:IsIlmFullyConfigured>
          <d4p1:IsInitialDataPopulated>false</d4p1:IsInitialDataPopulated>
          <d4p1:IsUpscaleILMUsed>false</d4p1:IsUpscaleILMUsed>
          <d4p1:IsUsersOnlyILMImport>false</d4p1:IsUsersOnlyILMImport>
          <d4p1:NextSynchronizationStage>None</d4p1:NextSynchronizationStage>
          <d4p1:PartitionIDs
xmlns:d5p1="http://schemas.microsoft.com/2003/10/Serialization/Arrays">
            <d5p1:guid>0c37852b-34d0-418e-91c6-2ac25af4be5b</d5p1:guid>
          </d4p1:PartitionIDs>
          <d4p1:PartitionOptions>UnPartitioned</d4p1:PartitionOptions>
          <d4p1:PerfmonInstanceHandle>-1</d4p1:PerfmonInstanceHandle>

<d4p1:ProfileDatabaseBackwardsCompatibleSchemaVersion>14.0.82.0</d4p1:ProfileDatabaseBackward
sCompatibleSchemaVersion>
           <d4p1:ProfileDatabaseConnectionString>Data Source=TestMachine;Initial
Catalog="User Profile Service
Application_ProfileDB_715524f91eac4f7caeee38a2f53375c9";Integrated
Security=True;Enlist=False;Connect Timeout=15</d4p1:ProfileDatabaseConnectionString>
           <d4p1:ProfileDatabaseSchemaVersion>14.0.82.0</d4p1:ProfileDatabaseSchemaVersion>
          <d4p1:ProfileStoreCollationId>25</d4p1:ProfileStoreCollationId>
          <d4p1:ProfileStoreLanguage>1033</d4p1:ProfileStoreLanguage>
          <d4p1:SerializedAdministratorAcl>
            <acl version="1.0">
              <ace identityName="domain\user1" displayName="User 1"
sid="AQUAAAAAAAUVAAAAoGXPfnhLm1/nfIdwKgQBAA==" allowRights="8" denyRights="0" />
            </acl>
          </d4p1:SerializedAdministratorAcl>
          <d4p1:SkipBDCImport>false</d4p1:SkipBDCImport>

<d4p1:SocialDatabaseBackwardsCompatibleSchemaVersion>14.0.21.0</d4p1:SocialDatabaseBackwardsC
ompatibleSchemaVersion>
          <d4p1:SocialDatabaseConnectionString>Data Source=TestMachine;Initial Catalog="User
Profile Service Application_SocialDB_bba7ac6987904e2b93f3aded1af2e65d";Integrated
Security=True;Enlist=False;Connect Timeout=15</d4p1:SocialDatabaseConnectionString>
          <d4p1:SocialDatabaseSchemaVersion>14.0.21.0</d4p1:SocialDatabaseSchemaVersion>
          <d4p1:SyncServiceInstanceId>00000000-0000-0000-0000-
000000000000</d4p1:SyncServiceInstanceId>

<d4p1:UseOnlyPreferredDomainControllers>false</d4p1:UseOnlyPreferredDomainControllers>
        </GetProfilePropertiesResult>
      </GetProfilePropertiesResponse>
    </s:Body>
  </s:Envelope>
```

5 Security

5.1 Security Considerations for Implementers

There are no security considerations that are specific to this protocol. General security considerations pertaining to [RFC2822] apply.

This protocol does not introduce any additional security considerations beyond those that apply to its underlying protocols.

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"?>
<wsdl:definitions xmlns:tns="http://tempuri.org/"
xmlns:soap="http://schemas.xmlsoap.org/wsdl/soap/"
xmlns:xs="http://www.w3.org/2001/XMLSchema"
xmlns:wsam="http://www.w3.org/2007/05/addressing/metadata" name="ProfilePropertyService"
targetNamespace="http://tempuri.org/" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:types>
    <xs:schema xmlns:tns2="http://tempuri.org/Imports"
targetNamespace="http://tempuri.org/Imports">
      <xs:import namespace="http://tempuri.org/"/>
      <xs:import namespace="http://schemas.microsoft.com/2003/10/Serialization/"/>
      <xs:import namespace="http://Microsoft/Office/Server/UserProfiles"/>
      <xs:import
namespace="http://schemas.datacontract.org/2004/07/Microsoft.SharePoint.Administration"/>
      <xs:import namespace="http://schemas.microsoft.com/2003/10/Serialization/Arrays"/>
      <xs:import
namespace="http://schemas.datacontract.org/2004/07/Microsoft.Office.Server.Utilities"/>
    </xs:schema>
  </wsdl:types>
  <wsdl:message name="IProfilePropertyService_GetProfileProperties_InputMessage">
    <wsdl:part name="parameters" element="tns:GetProfileProperties"/>
  </wsdl:message>
  <wsdl:message name="IProfilePropertyService_GetProfileProperties_OutputMessage">
    <wsdl:part name="parameters" element="tns:GetProfilePropertiesResponse"/>
  </wsdl:message>
  <wsdl:portType name="IProfilePropertyService">
    <wsdl:operation name="GetProfileProperties">
      <wsdl:input
wsam:Action="http://Microsoft.Office.Server.UserProfiles/GetProfileProperties"
message="tns:IProfilePropertyService_GetProfileProperties_InputMessage"/>
      <wsdl:output
wsam:Action="http://tempuri.org/IProfilePropertyService/GetProfilePropertiesResponse"
message="tns:IProfilePropertyService_GetProfileProperties_OutputMessage"/>
    </wsdl:operation>
  </wsdl:portType>
  <wsdl:binding name="CustomBinding_IProfilePropertyService"
type="tns:IProfilePropertyService">
    <soap:binding transport="http://schemas.xmlsoap.org/soap/http"/>
    <wsdl:operation name="GetProfileProperties">
      <soap:operation
soapAction="http://Microsoft.Office.Server.UserProfiles/GetProfileProperties"
style="document"/>
      <wsdl:input>
        <soap:body use="literal"/>
      </wsdl:input>
      <wsdl:output>
        <soap:body use="literal"/>
      </wsdl:output>
    </wsdl:operation>
  </wsdl:binding>
</wsdl:definitions>
```

7 Appendix B: Full XML Schema

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

Schema name	Prefix	Section
http://tempuri.org/	tns	7.1
http://schemas.microsoft.com/2003/10/Serialization/	tns1	7.2
http://Microsoft/Office/Server/UserProfiles	q1	7.3
http://schemas.datacontract.org/2004/07/Microsoft.SharePoint.Administration	q2	7.4
http://schemas.microsoft.com/2003/10/Serialization/Arrays	q3	7.5
http://schemas.datacontract.org/2004/07/Microsoft.Office.Server.Utilities	q4	7.6

7.1 http://tempuri.org/ Schema

```
<?xml version="1.0"?>
<xs:schema elementFormDefault="qualified" targetNamespace="http://tempuri.org/"
xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:import namespace="http://Microsoft/Office/Server/UserProfiles"/>
  <xs:element name="GetProfileProperties">
    <xs:complexType>
      <xs:sequence/>
    </xs:complexType>
  </xs:element>
  <xs:element name="GetProfilePropertiesResponse">
    <xs:complexType>
      <xs:sequence>
        <xs:element xmlns:q1="http://Microsoft/Office/Server/UserProfiles" minOccurs="0"
name="GetProfilePropertiesResult" nillable="true" type="q1:ProfilePropertyData"/>
      </xs:sequence>
    </xs:complexType>
  </xs:element>
</xs:schema>
```

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

```
<?xml version="1.0"?>
<xs:schema xmlns:tns1="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="tns1:char"/>
  <xs:simpleType name="char">
    <xs:restriction base="xs:int"/>
  </xs:simpleType>
  <xs:element name="duration" nillable="true" type="tns1: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="tns1: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://Microsoft/Office/Server/UserProfiles Schema

```
<?xml version="1.0"?>
<xs:schema xmlns:tns1="http://schemas.microsoft.com/2003/10/Serialization/"
xmlns:q1="http://Microsoft/Office/Server/UserProfiles" elementFormDefault="qualified"
targetNamespace="http://Microsoft/Office/Server/UserProfiles"
xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:import namespace="http://schemas.microsoft.com/2003/10/Serialization/"/>
  <xs:import
namespace="http://schemas.datacontract.org/2004/07/Microsoft.SharePoint.Administration"/>
  <xs:import namespace="http://schemas.microsoft.com/2003/10/Serialization/Arrays"/>
  <xs:import
namespace="http://schemas.datacontract.org/2004/07/Microsoft.Office.Server.Utilities"/>
  <xs:complexType name="ProfilePropertyData">
    <xs:sequence>
      <xs:element minOccurs="0" name="AppID" type="tns1:guid"/>
      <xs:element
xmlns:q2="http://schemas.datacontract.org/2004/07/Microsoft.SharePoint.Administration"
minOccurs="0" name="AppStatus" type="q2:SPObjectStatus"/>
      <xs:element minOccurs="0" name="ChangeJobSchedule" nillable="true" type="xs:string"/>
      <xs:element minOccurs="0" name="DaysWorthOfEventsToKeep" type="xs:int"/>
      <xs:element minOccurs="0" name="DocumentsFollowingLimit" type="xs:int"/>
      <xs:element minOccurs="0" name="FeedCacheLMTTTLDeltaHours" type="xs:int"/>
      <xs:element minOccurs="0" name="FeedCacheTTLHours" type="xs:int"/>
      <xs:element minOccurs="0" name="ILMMachineName" nillable="true" type="xs:string"/>
      <xs:element minOccurs="0" name="IgnoreIsActiveFlag" type="xs:boolean"/>
```

```
      <xs:element minOccurs="0" name="IsClaimProvider" nillable="true" type="xs:boolean"/>
      <xs:element minOccurs="0" name="IsIlmFullyConfigured" type="xs:boolean"/>
      <xs:element minOccurs="0" name="IsInitialDataPopulated" type="xs:boolean"/>
      <xs:element minOccurs="0" name="IsSynchronizationRunning" type="xs:boolean"/>
      <xs:element minOccurs="0" name="IsUpscaleILMUsed" type="xs:boolean"/>
      <xs:element minOccurs="0" name="IsUsersOnlyILMImport" type="xs:boolean"/>
      <xs:element minOccurs="0" name="NetBIOSDomainNamesEnabled" type="xs:boolean"/>
      <xs:element minOccurs="0" name="NoILMUsed" type="xs:boolean"/>
      <xs:element xmlns:q3="http://schemas.microsoft.com/2003/10/Serialization/Arrays"
minOccurs="0" name="PartitionIDs" nillable="true" type="q3:ArrayOfguid"/>
      <xs:element
xmlns:q4="http://schemas.datacontract.org/2004/07/Microsoft.Office.Server.Utilities"
minOccurs="0" name="PartitionOptions" type="q4:SPPartitionOptions"/>
      <xs:element minOccurs="0" name="PeopleFollowingLimit" type="xs:int"/>
      <xs:element minOccurs="0" name="PerfmonInstanceHandle" type="xs:int"/>
      <xs:element minOccurs="0" name="ProfileDatabaseBackwardsCompatibleSchemaVersion"
nillable="true" type="xs:string"/>
      <xs:element minOccurs="0" name="ProfileDatabaseConnectionString" nillable="true"
type="xs:string"/>
      <xs:element minOccurs="0" name="ProfileDatabaseSchemaVersion" nillable="true"
type="xs:string"/>
      <xs:element minOccurs="0" name="ProfileStoreCollationId" type="xs:int"/>
      <xs:element minOccurs="0" name="ProfileStoreLanguage" type="xs:int"/>
      <xs:element minOccurs="0" name="Secret" type="tns1:guid"/>
      <xs:element minOccurs="0" name="SerializedAdministratorAcl" nillable="true"
type="xs:string"/>
      <xs:element minOccurs="0" name="SitesFollowingLimit" type="xs:int"/>
      <xs:element minOccurs="0" name="SkipBDCImport" type="xs:boolean"/>
      <xs:element minOccurs="0" name="SocialDatabaseBackwardsCompatibleSchemaVersion"
nillable="true" type="xs:string"/>
      <xs:element minOccurs="0" name="SocialDatabaseConnectionString" nillable="true"
type="xs:string"/>
      <xs:element minOccurs="0" name="SocialDatabaseSchemaVersion" nillable="true"
type="xs:string"/>
      <xs:element minOccurs="0" name="SyncServiceInstanceId" type="tns1:guid"/>
      <xs:element minOccurs="0" name="UseOnlyPreferredDomainControllers" type="xs:boolean"/>
    </xs:sequence>
  </xs:complexType>
  <xs:element name="ProfilePropertyData" nillable="true" type="q1:ProfilePropertyData"/>
</xs:schema>
```

7.4 http://schemas.datacontract.org/2004/07/Microsoft.SharePoint.Administration Schema

```
<?xml version="1.0"?>
<xs:schema
xmlns:q2="http://schemas.datacontract.org/2004/07/Microsoft.SharePoint.Administration"
elementFormDefault="qualified"
targetNamespace="http://schemas.datacontract.org/2004/07/Microsoft.SharePoint.Administration"
xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:simpleType name="SPObjectStatus">
    <xs:restriction base="xs:string">
      <xs:enumeration value="Online"/>
      <xs:enumeration value="Disabled"/>
      <xs:enumeration value="Offline"/>
      <xs:enumeration value="Unprovisioning"/>
      <xs:enumeration value="Provisioning"/>
```

```
      <xs:enumeration value="Upgrading"/>
    </xs:restriction>
  </xs:simpleType>
  <xs:element name="SPObjectStatus" nillable="true" type="q2:SPObjectStatus"/>
</xs:schema>
```

7.5 http://schemas.microsoft.com/2003/10/Serialization/Arrays Schema

```
<?xml version="1.0"?>
<xs:schema xmlns:q3="http://schemas.microsoft.com/2003/10/Serialization/Arrays"
xmlns:tns1="http://schemas.microsoft.com/2003/10/Serialization/"
elementFormDefault="qualified"
targetNamespace="http://schemas.microsoft.com/2003/10/Serialization/Arrays"
xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:import namespace="http://schemas.microsoft.com/2003/10/Serialization/"/>
  <xs:complexType name="ArrayOfguid">
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="unbounded" name="guid" type="tns1:guid"/>
    </xs:sequence>
  </xs:complexType>
  <xs:element name="ArrayOfguid" nillable="true" type="q3:ArrayOfguid"/>
</xs:schema>
```

7.6 http://schemas.datacontract.org/2004/07/Microsoft.Office.Server.Utilities Schema

```
<?xml version="1.0"?>
<xs:schema
xmlns:q4="http://schemas.datacontract.org/2004/07/Microsoft.Office.Server.Utilities"
elementFormDefault="qualified"
targetNamespace="http://schemas.datacontract.org/2004/07/Microsoft.Office.Server.Utilities"
xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:simpleType name="SPPartitionOptions">
    <xs:restriction base="xs:string">
      <xs:enumeration value="UnPartitioned"/>
      <xs:enumeration value="UniquePartitionPerSubscription"/>
    </xs:restriction>
  </xs:simpleType>
  <xs:element name="SPPartitionOptions" nillable="true" type="q4:SPPartitionOptions"/>
</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 2010
- Microsoft® SharePoint® Server 2013 Preview

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

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

9 Change Tracking

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

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