[MS-PERMS]:

Permissions Web Service Protocol

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Revision Summary

Date	Revision History	Revision Class	Comments
4/4/2008	0.1	New	Initial Availability
6/27/2008	1.0	Major	Revised and edited the technical content
12/12/2008	1.01	Editorial	Revised and edited the technical content
7/13/2009	1.02	Major	Revised and edited the technical content
8/28/2009	1.03	Editorial	Revised and edited the technical content
11/6/2009	1.04	Editorial	Revised and edited the technical content
2/19/2010	2.0	Minor	Updated the technical content
3/31/2010	2.01	Editorial	Revised and edited the technical content
4/30/2010	2.02	Editorial	Revised and edited the technical content
6/7/2010	2.03	Editorial	Revised and edited the technical content
6/29/2010	2.04	Editorial	Changed language and formatting in the technical content.
7/23/2010	2.04	None	No changes to the meaning, language, or formatting of the technical content.
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6/10/2011	2.04	None	No changes to the meaning, language, or formatting of the technical content.
1/20/2012	3.0	Major	Significantly changed the technical content.
4/11/2012	3.0	None	No changes to the meaning, language, or formatting of the technical content.
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9/12/2012	3.0	None	No changes to the meaning, language, or formatting of the technical content.
10/8/2012	3.1	Minor	Clarified the meaning of the technical content.
2/11/2013	3.2	Minor	Clarified the meaning of the technical content.
7/30/2013	3.3	Minor	Clarified the meaning of the technical content.
11/18/2013	3.3	None	No changes to the meaning, language, or formatting of the technical content.

Date	Revision History	Revision Class	Comments
2/10/2014	3.3	None	No changes to the meaning, language, or formatting of the technical content.
4/30/2014	3.4	Minor	Clarified the meaning of the technical content.
7/31/2014	3.5	Minor	Clarified the meaning of the technical content.
10/30/2014	3.5	None	No changes to the meaning, language, or formatting of the technical content.
3/16/2015	4.0	Major	Significantly changed the technical content.
2/26/2016	5.0	Major	Significantly changed the technical content.

Table of Contents

1 Introduction

The Permissions Web Service Protocol enables protocol clients to manage permissions to items on the protocol server.

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:

Hypertext Transfer Protocol (HTTP): An application-level protocol for distributed, collaborative, hypermedia information systems (text, graphic images, sound, video, and other multimedia files) on the World Wide Web.

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

list: A container within a SharePoint site that stores list items. A list has a customizable schema that is composed of one or more fields.

role: A symbolic name that defines a class of users for a set of components. A role defines which users can call interfaces on a component.

security principal: An identity that can be used to regulate access to resources. A security principal can be a user, a computer, or a group that represents a set of users.

security principal name (SPN): The name that identifies a security principal (for example, machinename$@domainname for a machine joined to a domain or username@domainname for a user). Domainname is resolved using the Domain Name System (DNS).

site: A group of related pages and data within a SharePoint site collection. The structure and content of a site is based on a site definition. Also referred to as SharePoint site and web site.

SOAP: A lightweight protocol for exchanging structured information in a decentralized, distributed environment. **SOAP** uses **XML** technologies to define an extensible messaging framework, which provides a message construct that can be exchanged over a variety of underlying protocols. The framework has been designed to be independent of any particular programming model and other implementation-specific semantics. SOAP 1.2 supersedes SOAP 1.1. See [SOAP1.2-1/2003].

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

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

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

SOAP message: An **XML** document consisting of a mandatory SOAP envelope, an optional SOAP header, and a mandatory **SOAP body**. See [SOAP1.2-1/2007] section 5 for more information.

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

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

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

XML: The Extensible Markup Language, as described in [XML1.0].

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

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

1.2 References

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

1.2.1 Normative References

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

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

[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

[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

[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

None.

1.3 Overview

This protocol enables protocol clients to manage permissions to content on a protocol server. The content can be stored as **sites** or **lists**, and the protocol is to be used through a **Web service**. It defines messages to add, modify, get and remove permissions.

This protocol only manages the permissions. The protocol server implementation is expected to store and enforce them.

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:
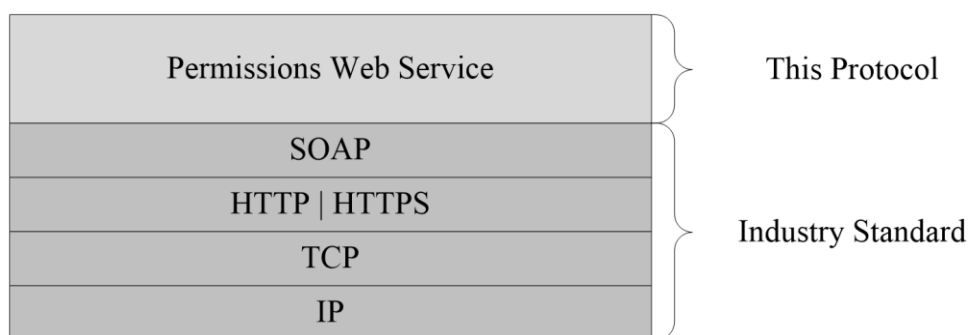
Figure 1: This protocol in relation to other protocols

1.5 Prerequisites/Preconditions

This protocol operates against a site that is identified by a **URL** that is known by protocol clients. The protocol server endpoint is formed by appending "_vti_bin/permissions.asmx" to the URL of the site, for example http://www.example.com/Repository/_vti_bin/permissions.asmx.

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

1.6 Applicability Statement

This protocol provides operations for a protocol client to add, modify, get, and remove permissions from a site or a list. This protocol is not intended to be used to add new **roles**.

1.7 Versioning and Capability Negotiation

This protocol uses multiple transports with SOAP as specified in section 2.1.

1.8 Vendor-Extensible Fields

None.

1.9 Standards Assignments

None.

2   Messages

2.1   Transport

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

Protocol messages MUST be formatted as specified either in [SOAP1.1] section 4 or in [SOAP1.2/1] section 5. Protocol server faults MUST be returned either by using HTTP Status Codes as specified in [RFC2616] section 10 or by using **SOAP faults** as specified either in [SOAP1.1] section 4.4 or in [SOAP1.2/1] section 5.4.

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 **Web Services Description Language (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
soap	http://schemas.xmlsoap.org/wsdl/soap/	[SOAP1.1]
tns	http://schemas.microsoft.com/sharepoint/soap/directory/	
s	http://www.w3.org/2001/XMLSchema	[XMLSCHEMA1]
soap12	http://schemas.xmlsoap.org/wsdl/soap12/	[SOAP1.2/1] [SOAP1.2/2]
(none)	http://schemas.microsoft.com/sharepoint/soap/directory/	
wsdl	http://schemas.xmlsoap.org/wsdl/	[WSDL]

2.2.2   Messages

This specification does not define any common WSDL message definitions.

2.2.3   Elements

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

2.2.4   Complex Types

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

2.2.5 Simple Types

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

2.2.6 Attributes

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

2.2.7 Groups

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

2.2.8 Attribute Groups

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

3 Protocol Details

Except where specified, protocol clients SHOULD interpret HTTP Status Codes returned by the protocol server as specified in [RFC2616] section 10.

This protocol allows protocol servers to notify protocol clients of application-level faults by using SOAP faults. Except where specified, these SOAP faults are not significant for interoperability, and protocol clients can interpret them in an implementation-specific manner.

This protocol allows protocol servers to perform implementation-specific authorization checks and notify protocol clients of authorization faults either by using HTTP Status Codes or by using SOAP faults as specified previously in this section.

3.1 Permissions Soap Server Details

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.

A server implementation of this protocol MUST maintain a list of permissions for each list or site that it contains. Such permissions MUST be accessible by the name of the list or site that it relates to.

3.1.2 Timers

None.

3.1.3 Initialization

None.

3.1.4 Message Processing Events and Sequencing Rules

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

Operation	Description
AddPermission	Used to add permissions on a site or a list.
AddPermissionCollection	Used to add a collection of permissions on a site or a list.
GetPermissionCollection	Used to get the permission collection for a site or a list.
RemovePermission	Used to remove a specified permission from a list or a site.
RemovePermissionCollection	Used to remove permissions from a list or a site for the specified **security principal** collection.
UpdatePermission	Used to modify permissions of a list or site for the specified security principal or security group.

3.1.4.1 AddPermission

This operation is used to add site permissions for the specified security principal or security group that exists on the site, or to add permissions to the specified list for the specified security principal (2) or security group that exists on the site.

```
<wsdl:operation name="AddPermission">
 <wsdl:input message="tns:AddPermissionSoapIn" />
 <wsdl:output message="tns:AddPermissionSoapOut" />
</wsdl:operation>
```

The protocol client sends an **AddPermissionSoapIn** request message and the protocol server responds with an **AddPermissionSoapOut** response message, as follows:

- If the value specified in **objectType** is "list" and no list with the name specified in **objectName** exists, the server MUST return a SOAP fault with error code 0x82000006.

- If the value specified in **objectType** is not "list" or "web", the server MUST return a SOAP fault with error code 0x80131600.

- If the value specified in **permissionType** is not "user", "group", or "role", the server MUST return a SOAP fault with error code 0x80131600.

- If the security principal or the security group specified in **permissionIdentifier** does not exist, the server MUST return a SOAP fault with error code 0x80131600.

3.1.4.1.1 Messages

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

Message	Description
AddPermissionSoapIn	A request to initiate a **AddPermission** operation on the protocol server.
AddPermissionSoapOut	A response from the protocol server at completion of the **AddPermission** operation.

3.1.4.1.1.1   AddPermissionSoapIn

The request message for an **AddPermission** operation.

The **SOAP action** value of the message is defined as:

```
http://schemas.microsoft.com/sharepoint/soap/directory/AddPermission
```

The **SOAP body** contains an **AddPermission** element.

3.1.4.1.1.2   AddPermissionSoapOut

The response message of an **AddPermission** operation.

The SOAP body contains an **AddPermissionResponse** element.

3.1.4.1.2 Elements

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

Element	Description
AddPermission	The input data of an **AddPermission** operation.
AddPermissionResponse	The output data of an **AddPermission** operation.

3.1.4.1.2.1   AddPermission

The input data of an **AddPermission** operation. The definition of the **AddPermission** element is as follows:

```
<s:element name="AddPermission">
 <s:complexType>
 <s:sequence>
  <s:element name="objectName" type="s:string" minOccurs="1" maxOccurs="1"/>
  <s:element name="objectType" type="s:string" minOccurs="1" maxOccurs="1"/>
  <s:element name="permissionIdentifier" type="s:string" minOccurs="1" maxOccurs="1"/>
  <s:element name="permissionType" type="s:string" minOccurs="1" maxOccurs="1"/>
  <s:element name="permissionMask" type="s:int" minOccurs="1" maxOccurs="1"/>
 </s:sequence>
 </s:complexType>
</s:element>
```

objectName: A string that contains the name of a list or a site. The specified list (1) or site (2) specified in this parameter MUST exist on the protocol server.

objectType: A string that specifies whether permission is to be added to a list (1) or a site (2). The value MUST be "list" for a list (1) or "web" for a site (2).

permissionIdentifier: A string that contains the name of the security group or the **security principal name (SPN)** of the security principal to whom the permission applies. The security principal or security group MUST already exist on the site on the protocol server.

permissionType: A string that specifies whether permission applies to a security principal or to a security group. The value MUST be "user" for security principal, "group" for security group, or "role". If **permissionType** equals "role" and **objectType** equals "web", permissions for the role will not be updated. If **permissionType** equals "role" and **objectType** equals "list", permissions for all security principals assigned to the role will be updated.<1>

permissionMask: A Rights Mask that is lower 32 bits of the WSS Rights Mask that is specified in [MS-WSSFO3] section 2.2.2.15.

3.1.4.1.2.2   AddPermissionResponse

The output data of an **AddPermission** operation. If the operation succeeds, an **AddPermissionResponse** MUST be returned by the protocol server.

The definition of the **AddPermissionResponse** element is as follows:

```
<s:element name="AddPermissionResponse">
 <s:complexType/>
</s:element>
```

3.1.4.1.3 Complex Types

None.

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 AddPermissionCollection

This operation is used to add site permissions for the specified collection of security principals or security groups, or to add permissions to a list for the specified collection of security principals or security groups that exist on the protocol server.

```
<wsdl:operation name="AddPermissionCollection">
 <wsdl:input message="tns:AddPermissionCollectionSoapIn" />
 <wsdl:output message="tns:AddPermissionCollectionSoapOut" />
</wsdl:operation>
```

The protocol client sends an **AddPermissionCollectionSoapIn** request message and the protocol server responds with an **AddPermissionCollectionSoapOut** response message, as follows:

- If the value specified in **objectType** is "list" and no list with the name specified in **objectName** exists, the server MUST return a SOAP fault with error code 0x82000006.

- If the value specified in **objectType** is not "list" or "web", the server MUST return a SOAP fault with error code 0x80131600.

- If the value specified in **permissionsInfoXml** is an invalid **XML**, the server returns a SOAP fault without an error code.

3.1.4.2.1 Messages

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

Message	Description
AddPermissionCollectionSoapIn	A request to initiate a **AddPermissionCollection** operation on the protocol server.
AddPermissionCollectionSoapOut	A response from the protocol server at completion of the **AddPermissionCollection** operation.

3.1.4.2.1.1 AddPermissionCollectionSoapIn

The request message for an **AddPermissionCollection** operation.

The SOAP action value of the message is defined as:

```
http://schemas.microsoft.com/sharepoint/soap/directory/AddPermissionCollection
```

The SOAP body contains an **AddPermissionCollection** element.

3.1.4.2.1.2 AddPermissionCollectionSoapOut

The response message of an **AddPermissionCollection** operation.

The SOAP body contains an **AddPermissionCollectionResponse** element.

3.1.4.2.2 Elements

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

Element	Description
AddPermissionCollection	The input data of an **AddPermissionCollection** operation.
AddPermissionCollectionResponse	The output data of an **AddPermissionCollection** operation.

3.1.4.2.2.1 AddPermissionCollection

The input data of an **AddPermissionCollection** operation. The definition of the **AddPermissionCollection** element is as follows:

```
<s:element name="AddPermissionCollection">
 <s:complexType>
  <s:sequence>
   <s:element name="objectName" type="s:string" minOccurs="1"/>
   <s:element name="objectType" type="s:string" minOccurs="1"/>
   <s:element name="permissionsInfoXml" minOccurs="1">
    <s:complexType>
     <s:sequence>
      <s:element name="Permissions">
       <s:complexType>
        <s:sequence>
         <s:element name="Users" minOccurs="0" maxOccurs="1">
          <s:complexType>
           <s:sequence>
            <s:element minOccurs="0" maxOccurs="100" name="User">
             <s:complexType>
              <s:attribute name="LoginName" type="s:string" use="required" />
              <s:attribute name="Email" type="s:string" use="optional" />
              <s:attribute name="Name" type="s:string" use="optional" />
              <s:attribute name="Notes" type="s:string" use="optional" />
              <s:attribute name="PermissionMask" type="s:int" use="required" />
             </s:complexType>
            </s:element>
           </s:sequence>
          </s:complexType>
```

```
          </s:element>
          <s:element name="Groups" minOccurs="0" maxOccurs="1">
           <s:complexType>
            <s:sequence>
             <s:element minOccurs="0" maxOccurs="100" name="Group">
              <s:complexType>
               <s:attribute name="GroupName" type="s:string" use="required" />
               <s:attribute name="PermissionMask" type="s:int" use="required" />
              </s:complexType>
             </s:element>
            </s:sequence>
           </s:complexType>
          </s:element>
          <s:element name="Roles" minOccurs="0" maxOccurs="1">
           <s:complexType>
            <s:sequence>
             <s:element minOccurs="0" maxOccurs="100" name="Role">
              <s:complexType>
               <s:attribute name="RoleName" type="s:string" use="required" />
               <s:attribute name="PermissionMask" type="s:int" use="required" />
              </s:complexType>
             </s:element>
            </s:sequence>
           </s:complexType>
          </s:element>
         </s:sequence>
        </s:complexType>
       </s:element>
      </s:sequence>
     </s:complexType>
    </s:element>
   </s:sequence>
  </s:complexType>
 </s:element>
```

objectName: A string that contains the name of a list or a site. The list (1) or site (2) specified in this parameter MUST exist on the protocol server.

objectType: A string that specifies whether permissions are to be added to a list (1) or a site (2). The value MUST be "list" for a list (1) or "web" for a site (2).

permissionsInfoXml: An XML fragment that contains the permissions to add. The XML fragment MUST adhere to the schema specified previously in this section.

Permissions: A complex type that represents the permissions to add.

Users: A complex type that represents a collection of existing users with specified permissions.

User: A complex type that represents an existing user with specified permissions.

User.LoginName: A string that specifies the user identifier (login).

User.Email: A string that specifies the user email.

User.Name: A string that specifies the user name.

User.Notes: A string that specifies the user notes.

User.PermissionMask: A Rights Mask that represents the lower 32 bits of the WSS Rights Mask that is specified in [MS-WSSFO3] section 2.2.2.15.

Groups: A complex type that represents a collection of existing cross-site groups with specified permissions.

Group: A complex type that represents an existing cross-site group with specified permissions.

Group.GroupName: A string that specifies the cross-site group name.

Group.PermissionMask: A Rights Mask that is represents the lower 32 bits of the WSS Rights Mask that is specified in [MS-WSSFO3] section 2.2.2.15.

Roles: A complex type that represents a collection of existing roles with specified permissions.

Role: A complex type that represents an existing role definition for a user, group, or Web site.

Role.RoleName: A string that specifies the role name.

Role.PermissionMask: A Rights Mask that represents the lower 32 bits of the WSS Rights Mask that is specified in [MS-WSSFO3] section 2.2.2.15.

3.1.4.2.2   AddPermissionCollectionResponse

The output data of an **AddPermissionCollection** operation. If the operation succeeds, an **AddPermissionCollectionResponse** MUST be returned by the protocol server.

The definition of the **AddPermissionCollectionResponse** element is as follows:

```
<s:element name="AddPermissionCollectionResponse">
<s:complexType/>
</s:element>
```

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 GetPermissionCollection

This operation is used to retrieve the permission collection for a site or a list from a protocol server.

```
<wsdl:operation name="GetPermissionCollection">
 <wsdl:input message="tns:GetPermissionCollectionSoapIn" />
 <wsdl:output message="tns:GetPermissionCollectionSoapOut" />
</wsdl:operation>
```

The protocol client sends a **GetPermissionCollectionSoapIn** request message and the protocol server responds with a **GetPermissionCollectionSoapOut** response message, as follows:

- If the value specified in **objectType** is "list" and no list with the name specified in **objectName** exists, the server MUST return a SOAP fault with error code 0x82000006.

- If the value specified in **objectType** is not "list" or "web", the server MUST return a SOAP fault with error code 0x80131600.

3.1.4.3.1 Messages

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

Message	Description
GetPermissionCollectionSoapIn	A request to initiate a **GetPermissionCollection** operation on the protocol server.
GetPermissionCollectionSoapOut	A response from the protocol server at completion of the **GetPermissionCollection** operation.

3.1.4.3.1.1 GetPermissionCollectionSoapIn

The request message for a **GetPermissionCollection** operation.

The SOAP action value of the message is defined as:

```
http://schemas.microsoft.com/sharepoint/soap/directory/GetPermissionCollection
```

The SOAP body contains a **GetPermissionCollection** element.

3.1.4.3.1.2 GetPermissionCollectionSoapOut

The response message of a **GetPermissionCollection** operation.

The SOAP body contains a **GetPermissionCollectionResponse** element.

3.1.4.3.2 Elements

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

Element	Description
GetPermissionCollection	The input data for a **GetPermissionCollection** operation.
GetPermissionCollectionResponse	The output data of a **GetPermissionCollection** operation.

3.1.4.3.2.1 GetPermissionCollection

The input data for a **GetPermissionCollection** operation. The definition of the **GetPermissionCollection** element is as follows:

```
<s:element name="GetPermissionCollection">
 <s:complexType>
  <s:sequence>
   <s:element name="objectName" type="s:string" minOccurs="1" maxOccurs="1"/>
   <s:element name="objectType" type="s:string" minOccurs="1" maxOccurs="1"/>
  </s:sequence>
 </s:complexType>
</s:element>
```

objectName: A string that contains the name of a list or a site. The list (1) or site (2) specified in this parameter MUST exist on the protocol server.

objectType: A string that specifies whether permissions are to be retrieved for a list (1) or a site (2). The value MUST be "list" for a list (1) or "web" for a site (2).

3.1.4.3.2.2   GetPermissionCollectionResponse

The output data of a **GetPermissionCollection** operation. If the operation succeeds, a **GetPermissionCollectionResponse** MUST be returned by the protocol server.

```
<s:element name="GetPermissionCollectionResponse">
 <s:complexType>
  <s:sequence>
   <s:element minOccurs="0" maxOccurs="1" name="GetPermissionCollectionResult">
    <s:complexType>
     <s:sequence>
     <s:element name="GetPermissionCollection">
     <s:complexType>
     <s:sequence>
      <s:element maxOccurs="unbounded" name="Permission">
       <s:complexType>
        <s:attribute name="MemberID" type="s:int" use="required" />
        <s:attribute name="Mask" type="s:int" use="required" />
        <s:attribute name="MemberIsUser" type="s:string" use="required" />
        <s:attribute name="MemberGlobal" type="s:string" use="required" />
        <s:attribute name="UserLogin" type="s:string" use="optional" />
        <s:attribute name="GroupName" type="s:string" use="optional" />
       </s:complexType>
      </s:element>
     </s:sequence>
     </s:complexType>
    </s:element>
    </s:sequence>
   </s:complexType>
  </s:element>
  </s:sequence>
 </s:complexType>
</s:element>
```

GetPermissionCollectionResult: An XML fragment that contains the permissions for the specified site or list. The XML fragment MUST adhere to the preceding schema.

Permission: A complex type that represents the permissions for the specified site or list.

Permission.MemberID: A unique 32-bit integer that specifies the **MemberID** of the user or group for the permission.

Permission.Mask: A Rights Mask that represents the lower 32 bits of the WSS Rights Mask specified in [MS-WSSFO3] section 2.2.2.15.

Permission.MemberIsUser: A string that specifies whether the related member is user.

Permission.MemberGlobal: A string that specifies whether the related member is global.

Permission.UserLogin: A string that specifies the related user identifier (login).

Permission.GroupName: A string that specifies the related cross-site group name.

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 RemovePermission

This operation is used to remove a specified permission from a list or a site.

```
<wsdl:operation name="RemovePermission">
 <wsdl:input message="tns:RemovePermissionSoapIn" />
 <wsdl:output message="tns:RemovePermissionSoapOut" />
</wsdl:operation>
```

The protocol client sends a **RemovePermissionSoapIn** request message and the protocol server responds with a **RemovePermissionSoapOut** response message, as follows:

- If the value specified in **objectType** is "list" and no list with the name specified in **objectName** exists, the server MUST return a SOAP fault with error code 0x82000006.

- If the value specified in **objectType** is not "list" or "web", the server MUST return a SOAP fault with error code 0x80131600.

- If the value specified in **permissionType** is not "user" or "group", the server MUST return a SOAP fault with error code 0x80131600.

- If the security principal (2) or the security group specified in **permissionIdentifier** does not exist, the server MUST return a SOAP fault with error code 0x80131600.

3.1.4.4.1 Messages

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

Message	Description
RemovePermissionSoapIn	A request to initiate a **RemovePermission** operation on the protocol server.
RemovePermissionSoapOut	A response from the protocol server at completion of the **RemovePermission** operation.

3.1.4.4.1.1   RemovePermissionSoapIn

The request message for a **RemovePermission** operation.

The SOAP action value of the message is defined as:

```
http://schemas.microsoft.com/sharepoint/soap/directory/RemovePermission
```

The SOAP body contains a **RemovePermission** element.

3.1.4.4.1.2   RemovePermissionSoapOut

The response message of a **RemovePermission** operation.

The SOAP body contains a RemovePermissionResponse element.

3.1.4.4.2 Elements

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

Element	Description
RemovePermission	The input data for a **RemovePermission** operation.
RemovePermissionResponse	The output data of a **RemovePermission** operation.

3.1.4.4.2.1   RemovePermission

The input data for a **RemovePermission** operation. The definition of the **RemovePermission** element is as follows:

```
<s:element name="RemovePermission">
 <s:complexType>
  <s:sequence>
   <s:element minOccurs="1" maxOccurs="1" name="objectName" type="s:string" />
   <s:element minOccurs="1" maxOccurs="1" name="objectType" type="s:string" />
   <s:element minOccurs="1" maxOccurs="1" name="permissionIdentifier" type="s:string" />
   <s:element minOccurs="1" maxOccurs="1" name="permissionType" type="s:string" />
  </s:sequence>
 </s:complexType>
</s:element>
```

objectName: A string that contains the name of a list or a site. The specified list (1) or site (2) specified in this parameter MUST exist on the protocol server.

objectType: A string that specifies whether permission is to be removed for a list or a site. The value MUST be "list" for a list or "web" for a site.

permissionIdentifier: A string that contains the name of the security group or the name of the security principal (2) whose permission is to be removed. The specified security principal (2) or security group MUST already exist on the site.

permissionType: A string that specifies whether permission is to be removed for the security principal (2) or security group. The value MUST be "user" for security principal (2), "group" for security group, or "role". If **permissionType** equals "role" and **objectType** equals "web", permissions for the role will not be removed. If **permissionType** equals "role" and **objectType** equals "list", permissions for all security principals (2) assigned to the role will remain unchanged.<2>

3.1.4.4.2.2   RemovePermissionResponse

The output data of a **RemovePermission** operation. If the operation succeeds, a **RemovePermissionResponse** MUST be returned by the protocol server.

```
<s:element name="RemovePermissionResponse">
  <s:complexType/>
</s: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 RemovePermissionCollection

This operation is used to remove permissions from a list or a site for the specified security principals (2).

```
<wsdl:operation name="RemovePermissionCollection">
 <wsdl:input message="tns:RemovePermissionCollectionSoapIn" />
 <wsdl:output message="tns:RemovePermissionCollectionSoapOut" />
</wsdl:operation>
```

The protocol client sends a **RemovePermissionCollectionSoapIn** request message and the protocol server responds with a **RemovePermissionCollectionSoapOut** response message, as follows:

- If the value specified in **objectType** is "list" and no list with the name specified in **objectName** exists, the server MUST return a SOAP fault with error code 0x82000006.

- If the value specified in **objectType** is not "list" or "web", the server MUST return a SOAP fault with error code 0x80131600.

- If the value specified in **memberIdsXml** is an invalid XML, the server returns a SOAP fault without an error code.

3.1.4.5.1 Messages

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

Message	Description
RemovePermissionCollectionSoapIn	A request to initiate a **RemovePermissionCollection** operation on the protocol server.
RemovePermissionCollectionSoapOut	A response from the protocol server at completion of the **RemovePermissionCollection** operation.

3.1.4.5.1.1 RemovePermissionCollectionSoapIn

The request message for a **RemovePermissionCollection** operation.

The SOAP action value of the message is defined as:

```
http://schemas.microsoft.com/sharepoint/soap/directory/RemovePermissionCollection
```

The SOAP body contains a **RemovePermissionCollection** element.

3.1.4.5.1.2 RemovePermissionCollectionSoapOut

The response message of a **RemovePermissionCollection** operation.

The SOAP body contains a **RemovePermissionCollectionResponse** element.

3.1.4.5.2 Elements

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

Element	Description
RemovePermissionCollection	The input data for a **RemovePermissionCollection** operation.
RemovePermissionCollectionResponse	The output data of a **RemovePermissionCollection** operation.

3.1.4.5.2.1 RemovePermissionCollection

The input data for a **RemovePermissionCollection** operation. The definition of the **RemovePermissionCollection** element is as follows:

```
<s:element name="RemovePermissionCollection">
 <s:complexType>
  <s:sequence>
   <s:element name="objectName" type="s:string" minOccurs="1"/>
   <s:element name="objectType" type="s:string" minOccurs="1"/>
   <s:element name="memberIdsXml" minOccurs="1">
    <s:complexType>
     <s:sequence>
      <s:element name="Members">
       <s:complexType>
        <s:sequence>
         <s:element maxOccurs="unbounded" name="Member">
          <s:complexType>
           <s:attribute name="ID" type="s:int" use="required" />
          </s:complexType>
         </s:element>
        </s:sequence>
       </s:complexType>
      </s:element>
     </s:sequence>
    </s:complexType>
   </s:element>
  </s:sequence>
 </s:complexType>
</s:element>
```

objectName: A string that contains the name of a list or a site. The list (1) or site (2) specified in this parameter MUST exist on the protocol server.

objectType: A string that specifies whether permissions are to be removed for a list or a site. The value MUST be "list" for a list or "web" for a site.

memberIdsXml: An XML fragment that contains the permissions to be removed from the specified list. The XML fragment MUST adhere to the schema specified previously in this section.

Members: A complex type that represents a collection of members associated with permissions that are to be removed.

Member: A complex type that represents a user or group associated with a permission that are to be removed.

Member.ID: A 32-bit integer that specifies a unique member associated with a permission.

3.1.4.5.2.2 RemovePermissionCollectionResponse

The output data of a **RemovePermissionCollection** operation. If the operation succeeds, a **RemovePermissionCollectionResponse** MUST be returned by the protocol server.

```
<s:element name="RemovePermissionCollectionResponse">
 <s:complexType/>
</s: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 UpdatePermission

This operation is used to modify site permissions for the specified security principal (2) or security group, or to modify permissions of a list for the specified security principal (2) or security group.

```
<wsdl:operation name="UpdatePermission">
 <wsdl:input message="tns:UpdatePermissionSoapIn" />
 <wsdl:output message="tns:UpdatePermissionSoapOut" />
</wsdl:operation>
```

The protocol client sends an **UpdatePermissionSoapIn** request message and the protocol server responds with an **UpdatePermissionSoapOut** response message, as follows:

- If the value specified in **objectType** is "list" and no list with the name specified in **objectName** exists, the server MUST return a SOAP fault with error code 0x82000006.

- If the value specified in **objectType** is not "list" or "web", the server MUST return a SOAP fault with error code 0x80131600.

- If the value specified in **permissionType** is not "user" or "group", the server MUST return a SOAP fault with error code 0x80131600.

- If the security principal (2) or the security group specified in **permissionIdentifier** does not exist, the server MUST return a SOAP fault with error code 0x80131600.

3.1.4.6.1 Messages

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

Message	Description
UpdatePermissionSoapIn	A request to initiate a **UpdatePermission** operation on the protocol server.
UpdatePermissionSoapOut	A response from the protocol server at completion of the **UpdatePermission** operation.

3.1.4.6.1.1 UpdatePermissionSoapIn

The request message for an **UpdatePermission** operation.

The SOAP action value of the message is defined as:

```
http://schemas.microsoft.com/sharepoint/soap/directory/UpdatePermission
```

The SOAP body contains an **UpdatePermission** element.

3.1.4.6.1.2 UpdatePermissionSoapOut

The response message of an **UpdatePermission** operation.

The SOAP body contains an UpdatePermissionResponse element.

3.1.4.6.2 Elements

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

Element	Description
UpdatePermission	The input data of an **UpdatePermission** operation.
UpdatePermissionResponse	The output data for an **UpdatePermission** operation.

3.1.4.6.2.1 UpdatePermission

The input data of an **UpdatePermission** operation. The definition of the **UpdatePermission** element is as follows:

```
<s:element name="UpdatePermission">
 <s:complexType>
  <s:sequence>
   <s:element minOccurs="1" maxOccurs="1" name="objectName" type="s:string" />
   <s:element minOccurs="1" maxOccurs="1" name="objectType" type="s:string" />
   <s:element minOccurs="1" maxOccurs="1" name="permissionIdentifier" type="s:string" />
   <s:element minOccurs="1" maxOccurs="1" name="permissionType" type="s:string" />
   <s:element minOccurs="1" maxOccurs="1" name="permissionMask" type="s:int" />
  </s:sequence>
 </s:complexType>
</s:element>
```

objectName: A string that contains the name of a list or a site. The list (1) or site (2) specified in this parameter MUST exist on the protocol server.

objectType: A string that specifies whether permission is to be updated for a list or a site. The value MUST be "list" for a list or "web" for a site.

permissionIdentifier: A string that contains the name of the security group or the name of the security principal (2) to whom the permission applies. The security principal (2) or security group MUST already exist on the site (2) on the protocol server.

permissionType: A string that specifies whether permission applies to the security principal (2) or to the security group. The value MUST be "user" for security principal (2), "group" for security group, or

"role". If **permissionType** equals "role" and **objectType** equals "web", the server MUST return a SOAP fault with error code 0x80131600. If **permissionType** equals "role" and **objectType** equals "list", the server MUST return a SOAP fault with error code 0x80131600.<3>

permissionMask: A Rights Mask that is lower 32 bits of the WSS Rights Mask which is specified in [MS-WSSFO3] section 2.2.2.15.

3.1.4.6.2.2   UpdatePermissionResponse

The output data for an **UpdatePermission** operation. If the operation succeeds, an **UpdatePermissionResponse** MUST be returned by the protocol server.

```
<s:element name="UpdatePermissionResponse">
 <s:complexType/>
</s:element>
```

3.1.4.6.3 Complex Types

None.

3.1.4.6.4 Simple Types

None.

3.1.4.6.5 Attributes

None.

3.1.4.6.6 Groups

None.

3.1.4.6.7 Attribute Groups

None.

3.1.5   Timer Events

None.

3.1.6   Other Local Events

None.

4   Protocol Examples

In this scenario, a protocol client first adds a permission to a list and then gets the collection of permissions for that list. The protocol client then updates the recently added permission and gets the collection of permissions again to see the updated collection.

A protocol client first constructs the following **SOAP message** to add a permission to a list. The protocol client sends the SOAP message to the protocol server:

```
<soap:Envelope xmlns:soap="http://schemas.xmlsoap.org/soap/envelope/"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:xsd="http://www.w3.org/2001/XMLSchema">
 <soap:Body>
  <AddPermission xmlns="http://schemas.microsoft.com/sharepoint/soap/directory/">
   <objectName>
    Announcements
   </objectName>
   <objectType>
    list
   </objectType>
   <permissionIdentifier>
    HelpGroup
   </permissionIdentifier>
   <permissionType>
    group
   </permissionType>
   <permissionMask>
    -1
   </permissionMask>
  </AddPermission>
 </soap:Body>
</soap:Envelope>
```

The protocol server then responds with the following:

```
<soap:Envelope xmlns:soap="http://schemas.xmlsoap.org/soap/envelope/"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:xsd="http://www.w3.org/2001/XMLSchema">
 <soap:Body>
  <AddPermissionResponse xmlns="http://schemas.microsoft.com/sharepoint/soap/directory/" />
 </soap:Body>
</soap:Envelope>
```

To get the collection of permissions from a list, the protocol client next constructs the following SOAP message. The protocol client sends the SOAP message to the protocol server:

```
<soap:Envelope xmlns:soap="http://schemas.xmlsoap.org/soap/envelope/"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:xsd="http://www.w3.org/2001/XMLSchema">
 <soap:Body>
  <GetPermissionCollection xmlns="http://schemas.microsoft.com/sharepoint/soap/directory/">
   <objectName>
    Announcements
   </objectName>
   <objectType>
    list
   </objectType>
  </GetPermissionCollection>
 </soap:Body>
</soap:Envelope>
```

The protocol server then responds with the following:

```
<soap:Envelope xmlns:soap="http://schemas.xmlsoap.org/soap/envelope/"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:xsd="http://www.w3.org/2001/XMLSchema">
 <soap:Body>
  <GetPermissionCollectionResponse
xmlns="http://schemas.microsoft.com/sharepoint/soap/directory/">
   <GetPermissionCollectionResult>
    <GetPermissionCollection>
     <Permissions>
      <Permission MemberID="1" Mask="-1" MemberIsUser="True" MemberGlobal="False"
UserLogin="MYDOMAIN\user1" />
      <Permission MemberID="3" Mask="-1" MemberIsUser="False" MemberGlobal="True"
GroupName="Farm Administrators" />
      <Permission MemberID="5" Mask="-1" MemberIsUser="False" MemberGlobal="True"
GroupName="HelpGroup" />
     </Permissions>
    </GetPermissionCollection>
   </GetPermissionCollectionResult>
  </GetPermissionCollectionResponse>
 </soap:Body>
</soap:Envelope>
```

To update the permissions for a group to a list, the protocol client constructs the following SOAP message and sends it to the protocol server:

```
<soap:Envelope xmlns:soap="http://schemas.xmlsoap.org/soap/envelope/"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:xsd="http://www.w3.org/2001/XMLSchema">
 <soap:Body>
  <UpdatePermission xmlns="http://schemas.microsoft.com/sharepoint/soap/directory/">
   <objectName>
    Announcements
   </objectName>
   <objectType>
    list
   </objectType>
   <permissionIdentifier>
    HelpGroup
   </permissionIdentifier>
   <permissionType>
    group
   </permissionType>
   <permissionMask>
    138612833
   </permissionMask>
  </UpdatePermission>
 </soap:Body>
</soap:Envelope>
```

The protocol server then responds with the following:

```
<soap:Envelope xmlns:soap="http://schemas.xmlsoap.org/soap/envelope/"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:xsd="http://www.w3.org/2001/XMLSchema">
 <soap:Body>
  <UpdatePermissionResponse xmlns="http://schemas.microsoft.com/sharepoint/soap/directory/"
/>
 </soap:Body>
</soap:Envelope>
```

To get the collection of permissions from a list, the protocol client then constructs the following SOAP message and sends it to the protocol server:

```
<soap:Envelope xmlns:soap="http://schemas.xmlsoap.org/soap/envelope/"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:xsd="http://www.w3.org/2001/XMLSchema">
 <soap:Body>
  <GetPermissionCollection xmlns="http://schemas.microsoft.com/sharepoint/soap/directory/">
   <objectName>
    Announcements
   </objectName>
   <objectType>
    list
   </objectType>
  </GetPermissionCollection>
 </soap:Body>
</soap:Envelope>
```

The protocol server then responds with the following:

```
<soap:Envelope xmlns:soap="http://schemas.xmlsoap.org/soap/envelope/"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:xsd="http://www.w3.org/2001/XMLSchema">
 <soap:Body>
  <GetPermissionCollectionResponse
xmlns="http://schemas.microsoft.com/sharepoint/soap/directory/">
   <GetPermissionCollectionResult>
    <GetPermissionCollection>
     <Permissions>
      <Permission MemberID="1" Mask="-1" MemberIsUser="True" MemberGlobal="False"
UserLogin="MYDOMAIN\user1" />
      <Permission MemberID="3" Mask="-1" MemberIsUser="False" MemberGlobal="True"
GroupName="Farm Administrators" />
      <Permission MemberID="5" Mask="138612833" MemberIsUser="False" MemberGlobal="True"
GroupName="HelpGroup" />
     </Permissions>
    </GetPermissionCollection>
   </GetPermissionCollectionResult>
  </GetPermissionCollectionResponse>
 </soap:Body>
</soap:Envelope>
```

5 Security

5.1 Security Considerations for Implementers

None.

5.2 Index of Security Parameters

None.

6 Appendix A: Full WSDL

For ease of implementation, the full WSDL and schema are provided in this appendix.

```xml
<?xml version="1.0" encoding="utf-8"?>
<wsdl:definitions xmlns:soap="http://schemas.xmlsoap.org/wsdl/soap/"
xmlns:tm="http://microsoft.com/wsdl/mime/textMatching/"
xmlns:soapenc="http://schemas.xmlsoap.org/soap/encoding/"
xmlns:mime="http://schemas.xmlsoap.org/wsdl/mime/"
xmlns:tns="http://schemas.microsoft.com/sharepoint/soap/directory/"
xmlns:s1="http://microsoft.com/wsdl/types/" xmlns:s="http://www.w3.org/2001/XMLSchema"
xmlns:soap12="http://schemas.xmlsoap.org/wsdl/soap12/"
xmlns:http="http://schemas.xmlsoap.org/wsdl/http/"
targetNamespace="http://schemas.microsoft.com/sharepoint/soap/directory/"
xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
 <wsdl:types>
  <s:schema elementFormDefault="qualified"
targetNamespace="http://schemas.microsoft.com/sharepoint/soap/directory/">
   <s:import namespace="http://microsoft.com/wsdl/types/" />
   <s:element name="GetPermissionCollection">
    <s:complexType>
     <s:sequence>
      <s:element minOccurs="1" maxOccurs="1" name="objectName" type="s:string" />
      <s:element minOccurs="1" maxOccurs="1" name="objectType" type="s:string" />
     </s:sequence>
    </s:complexType>
   </s:element>
   <s:element name="GetPermissionCollectionResponse">
    <s:complexType>
     <s:sequence>
      <s:element minOccurs="0" maxOccurs="1" name="GetPermissionCollectionResult">
       <s:complexType>
        <s:sequence>
         <s:element name="GetPermissionCollection">
          <s:complexType>
           <s:sequence>
            <s:element maxOccurs="unbounded" name="Permission">
             <s:complexType>
              <s:attribute name="MemberID" type="s:int" use="required" />
              <s:attribute name="Mask" type="s:int" use="required" />
              <s:attribute name="MemberIsUser" type="s:string" use="required" />
              <s:attribute name="MemberGlobal" type="s:string" use="required" />
              <s:attribute name="UserLogin" type="s:string" use="optional" />
              <s:attribute name="GroupName" type="s:string" use="optional" />
             </s:complexType>
            </s:element>
           </s:sequence>
          </s:complexType>
         </s:element>
        </s:sequence>
       </s:complexType>
      </s:element>
     </s:sequence>
    </s:complexType>
   </s:element>
   <s:element name="AddPermission">
    <s:complexType>
     <s:sequence>
      <s:element minOccurs="1" maxOccurs="1" name="objectName" type="s:string" />
      <s:element minOccurs="1" maxOccurs="1" name="objectType" type="s:string" />
      <s:element minOccurs="1" maxOccurs="1" name="permissionIdentifier" type="s:string" />
      <s:element minOccurs="1" maxOccurs="1" name="permissionType" type="s:string" />
      <s:element minOccurs="1" maxOccurs="1" name="permissionMask" type="s:int" />
     </s:sequence>
    </s:complexType>
   </s:element>
   <s:element name="AddPermissionResponse">
```

```
 <s:complexType />
</s:element>
<s:element name="AddPermissionCollection">
 <s:complexType>
  <s:sequence>
   <s:element name="objectName" type="s:string" minOccurs="1"/>
   <s:element name="objectType" type="s:string" minOccurs="1"/>
   <s:element name="permissionsInfoXml" minOccurs="1">
    <s:complexType>
     <s:sequence>
      <s:element name="Permissions">
       <s:complexType>
        <s:sequence>
         <s:element name="Users" minOccurs="0" maxOccurs="1">
          <s:complexType>
           <s:sequence>
            <s:element minOccurs="0" maxOccurs="100" name="User">
             <s:complexType>
              <s:attribute name="LoginName" type="s:string" use="required" />
              <s:attribute name="Email" type="s:string" use="optional" />
              <s:attribute name="Name" type="s:string" use="optional" />
              <s:attribute name="Notes" type="s:string" use="optional" />
              <s:attribute name="PermissionMask" type="s:int" use="required" />
             </s:complexType>
            </s:element>
           </s:sequence>
          </s:complexType>
         </s:element>
         <s:element name="Groups" minOccurs="0" maxOccurs="1">
          <s:complexType>
           <s:sequence>
            <s:element minOccurs="0" maxOccurs="100" name="Group">
             <s:complexType>
              <s:attribute name="GroupName" type="s:string" use="required" />
              <s:attribute name="PermissionMask" type="s:int" use="required" />
             </s:complexType>
            </s:element>
           </s:sequence>
          </s:complexType>
         </s:element>
         <s:element name="Roles" minOccurs="0" maxOccurs="1">
          <s:complexType>
           <s:sequence>
            <s:element minOccurs="0" maxOccurs="100" name="Role">
             <s:complexType>
              <s:attribute name="RoleName" type="s:string" use="required" />
              <s:attribute name="PermissionMask" type="s:int" use="required" />
             </s:complexType>
            </s:element>
           </s:sequence>
          </s:complexType>
         </s:element>
        </s:sequence>
       </s:complexType>
      </s:element>
     </s:sequence>
    </s:complexType>
   </s:element>
  </s:sequence>
 </s:complexType>
</s:element>
<s:element name="AddPermissionCollectionResponse">
 <s:complexType />
</s:element>
<s:element name="UpdatePermission">
 <s:complexType>
  <s:sequence>
   <s:element minOccurs="1" maxOccurs="1" name="objectName" type="s:string" />
   <s:element minOccurs="1" maxOccurs="1" name="objectType" type="s:string" />
```

```
          <s:element minOccurs="1" maxOccurs="1" name="permissionIdentifier" type="s:string" />
          <s:element minOccurs="1" maxOccurs="1" name="permissionType" type="s:string" />
          <s:element minOccurs="1" maxOccurs="1" name="permissionMask" type="s:int" />
        </s:sequence>
      </s:complexType>
    </s:element>
    <s:element name="UpdatePermissionResponse">
     <s:complexType />
    </s:element>
    <s:element name="RemovePermission">
     <s:complexType>
      <s:sequence>
        <s:element minOccurs="1" maxOccurs="1" name="objectName" type="s:string" />
        <s:element minOccurs="1" maxOccurs="1" name="objectType" type="s:string" />
        <s:element minOccurs="1" maxOccurs="1" name="permissionIdentifier" type="s:string" />
        <s:element minOccurs="1" maxOccurs="1" name="permissionType" type="s:string" />
      </s:sequence>
     </s:complexType>
    </s:element>
    <s:element name="RemovePermissionResponse">
     <s:complexType />
    </s:element>
    <s:element name="RemovePermissionCollection">
     <s:complexType>
      <s:sequence>
       <s:element name="objectName" type="s:string" minOccurs="1"/>
       <s:element name="objectType" type="s:string" minOccurs="1"/>
       <s:element name="memberIdsXml" minOccurs="1">
        <s:complexType>
         <s:sequence>
          <s:element name="Members">
           <s:complexType>
            <s:sequence>
             <s:element maxOccurs="unbounded" name="Member">
              <s:complexType>
               <s:attribute name="ID" type="s:int" use="required" />
              </s:complexType>
             </s:element>
            </s:sequence>
           </s:complexType>
          </s:element>
         </s:sequence>
        </s:complexType>
       </s:element>
      </s:sequence>
     </s:complexType>
    </s:element>
    <s:element name="RemovePermissionCollectionResponse">
     <s:complexType />
    </s:element>
   </s:schema>
   <s:schema elementFormDefault="qualified"
targetNamespace="http://microsoft.com/wsdl/types/">
    <s:simpleType name="guid">
     <s:restriction base="s:string">
      <s:pattern value="[0-9a-fA-F]{8}-[0-9a-fA-F]{4}-[0-9a-fA-F]{4}-[0-9a-fA-F]{4}-[0-9a-fA-
F]{12}" />
     </s:restriction>
    </s:simpleType>
   </s:schema>
  </wsdl:types>
  <wsdl:message name="GetPermissionCollectionSoapIn">
   <wsdl:part name="parameters" element="tns:GetPermissionCollection" />
  </wsdl:message>
  <wsdl:message name="GetPermissionCollectionSoapOut">
   <wsdl:part name="parameters" element="tns:GetPermissionCollectionResponse" />
  </wsdl:message>
  <wsdl:message name="AddPermissionSoapIn">
   <wsdl:part name="parameters" element="tns:AddPermission" />
```

```
    </wsdl:message>
    <wsdl:message name="AddPermissionSoapOut">
     <wsdl:part name="parameters" element="tns:AddPermissionResponse" />
    </wsdl:message>
    <wsdl:message name="AddPermissionCollectionSoapIn">
     <wsdl:part name="parameters" element="tns:AddPermissionCollection" />
    </wsdl:message>
    <wsdl:message name="AddPermissionCollectionSoapOut">
     <wsdl:part name="parameters" element="tns:AddPermissionCollectionResponse" />
    </wsdl:message>
    <wsdl:message name="UpdatePermissionSoapIn">
     <wsdl:part name="parameters" element="tns:UpdatePermission" />
    </wsdl:message>
    <wsdl:message name="UpdatePermissionSoapOut">
     <wsdl:part name="parameters" element="tns:UpdatePermissionResponse" />
    </wsdl:message>
    <wsdl:message name="RemovePermissionSoapIn">
     <wsdl:part name="parameters" element="tns:RemovePermission" />
    </wsdl:message>
    <wsdl:message name="RemovePermissionSoapOut">
     <wsdl:part name="parameters" element="tns:RemovePermissionResponse" />
    </wsdl:message>
    <wsdl:message name="RemovePermissionCollectionSoapIn">
     <wsdl:part name="parameters" element="tns:RemovePermissionCollection" />
    </wsdl:message>
    <wsdl:message name="RemovePermissionCollectionSoapOut">
     <wsdl:part name="parameters" element="tns:RemovePermissionCollectionResponse" />
    </wsdl:message>
    <wsdl:portType name="PermissionsSoap">
     <wsdl:operation name="GetPermissionCollection">
      <wsdl:input message="tns:GetPermissionCollectionSoapIn" />
      <wsdl:output message="tns:GetPermissionCollectionSoapOut" />
     </wsdl:operation>
     <wsdl:operation name="AddPermission">
      <wsdl:input message="tns:AddPermissionSoapIn" />
      <wsdl:output message="tns:AddPermissionSoapOut" />
     </wsdl:operation>
     <wsdl:operation name="AddPermissionCollection">
      <wsdl:input message="tns:AddPermissionCollectionSoapIn" />
      <wsdl:output message="tns:AddPermissionCollectionSoapOut" />
     </wsdl:operation>
     <wsdl:operation name="UpdatePermission">
      <wsdl:input message="tns:UpdatePermissionSoapIn" />
      <wsdl:output message="tns:UpdatePermissionSoapOut" />
     </wsdl:operation>
     <wsdl:operation name="RemovePermission">
      <wsdl:input message="tns:RemovePermissionSoapIn" />
      <wsdl:output message="tns:RemovePermissionSoapOut" />
     </wsdl:operation>
     <wsdl:operation name="RemovePermissionCollection">
      <wsdl:input message="tns:RemovePermissionCollectionSoapIn" />
      <wsdl:output message="tns:RemovePermissionCollectionSoapOut" />
     </wsdl:operation>
    </wsdl:portType>
    <wsdl:binding name="PermissionsSoap" type="tns:PermissionsSoap">
     <soap:binding transport="http://schemas.xmlsoap.org/soap/http" />
     <wsdl:operation name="GetPermissionCollection">
      <soap:operation
soapAction="http://schemas.microsoft.com/sharepoint/soap/directory/GetPermissionCollection"
style="document" />
      <wsdl:input>
       <soap:body use="literal" />
      </wsdl:input>
      <wsdl:output>
       <soap:body use="literal" />
      </wsdl:output>
     </wsdl:operation>
     <wsdl:operation name="AddPermission">
```

```
      <soap:operation
soapAction="http://schemas.microsoft.com/sharepoint/soap/directory/AddPermission"
style="document" />
    <wsdl:input>
     <soap:body use="literal" />
    </wsdl:input>
    <wsdl:output>
     <soap:body use="literal" />
    </wsdl:output>
   </wsdl:operation>
   <wsdl:operation name="AddPermissionCollection">
    <soap:operation
soapAction="http://schemas.microsoft.com/sharepoint/soap/directory/AddPermissionCollection"
style="document" />
    <wsdl:input>
     <soap:body use="literal" />
    </wsdl:input>
    <wsdl:output>
     <soap:body use="literal" />
    </wsdl:output>
   </wsdl:operation>
   <wsdl:operation name="UpdatePermission">
    <soap:operation
soapAction="http://schemas.microsoft.com/sharepoint/soap/directory/UpdatePermission"
style="document" />
    <wsdl:input>
     <soap:body use="literal" />
    </wsdl:input>
    <wsdl:output>
     <soap:body use="literal" />
    </wsdl:output>
   </wsdl:operation>
   <wsdl:operation name="RemovePermission">
    <soap:operation
soapAction="http://schemas.microsoft.com/sharepoint/soap/directory/RemovePermission"
style="document" />
    <wsdl:input>
     <soap:body use="literal" />
    </wsdl:input>
    <wsdl:output>
     <soap:body use="literal" />
    </wsdl:output>
   </wsdl:operation>
   <wsdl:operation name="RemovePermissionCollection">
    <soap:operation
soapAction="http://schemas.microsoft.com/sharepoint/soap/directory/RemovePermissionCollection
" style="document" />
    <wsdl:input>
     <soap:body use="literal" />
    </wsdl:input>
    <wsdl:output>
     <soap:body use="literal" />
    </wsdl:output>
   </wsdl:operation>
 </wsdl:binding>
 <wsdl:binding name="PermissionsSoap12" type="tns:PermissionsSoap">
  <soap12:binding transport="http://schemas.xmlsoap.org/soap/http" />
  <wsdl:operation name="GetPermissionCollection">
   <soap12:operation
soapAction="http://schemas.microsoft.com/sharepoint/soap/directory/GetPermissionCollection"
style="document" />
    <wsdl:input>
     <soap12:body use="literal" />
    </wsdl:input>
    <wsdl:output>
     <soap12:body use="literal" />
    </wsdl:output>
   </wsdl:operation>
   <wsdl:operation name="AddPermission">
```

```
      <soap12:operation
soapAction="http://schemas.microsoft.com/sharepoint/soap/directory/AddPermission"
style="document" />
    <wsdl:input>
     <soap12:body use="literal" />
    </wsdl:input>
    <wsdl:output>
     <soap12:body use="literal" />
    </wsdl:output>
  </wsdl:operation>
  <wsdl:operation name="AddPermissionCollection">
    <soap12:operation
soapAction="http://schemas.microsoft.com/sharepoint/soap/directory/AddPermissionCollection"
style="document" />
    <wsdl:input>
     <soap12:body use="literal" />
    </wsdl:input>
    <wsdl:output>
     <soap12:body use="literal" />
    </wsdl:output>
  </wsdl:operation>
  <wsdl:operation name="UpdatePermission">
    <soap12:operation
soapAction="http://schemas.microsoft.com/sharepoint/soap/directory/UpdatePermission"
style="document" />
    <wsdl:input>
     <soap12:body use="literal" />
    </wsdl:input>
    <wsdl:output>
     <soap12:body use="literal" />
    </wsdl:output>
  </wsdl:operation>
  <wsdl:operation name="RemovePermission">
    <soap12:operation
soapAction="http://schemas.microsoft.com/sharepoint/soap/directory/RemovePermission"
style="document" />
    <wsdl:input>
     <soap12:body use="literal" />
    </wsdl:input>
    <wsdl:output>
     <soap12:body use="literal" />
    </wsdl:output>
  </wsdl:operation>
  <wsdl:operation name="RemovePermissionCollection">
    <soap12:operation
soapAction="http://schemas.microsoft.com/sharepoint/soap/directory/RemovePermissionCollection
" style="document" />
    <wsdl:input>
     <soap12:body use="literal" />
    </wsdl:input>
    <wsdl:output>
     <soap12:body use="literal" />
    </wsdl:output>
  </wsdl:operation>
 </wsdl:binding></wsdl:definitions>
```

7   Appendix B: 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.

- The 2007 Microsoft Office system

- Microsoft Office 2010 suites

- Microsoft Office 2013

- Windows SharePoint Services 2.0

- Windows SharePoint Services 3.0

- Microsoft SharePoint Foundation 2010

- Microsoft SharePoint Foundation 2013

- Microsoft Office 2016

- Microsoft SharePoint Server 2016

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

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

<1> Section 3.1.4.1.2.1: This is the expected behavior but when "role" is given, Windows SharePoint Services 3.0 does not work as expected.

<2> Section 3.1.4.4.2.1: This is the expected behavior but when "role" is given, Windows SharePoint Services 3.0 does not work as expected.

<3> Section 3.1.4.6.2.1: This is the expected behavior but when "role" is given, Windows SharePoint Services 3.0 does not work as expected.

8   Change Tracking

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

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

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

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

- The removal of a document from the documentation set.

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

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

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

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

- New content added.

- Content updated.

- Content removed.

- New product behavior note added.

- Product behavior note updated.

- Product behavior note removed.

- New protocol syntax added.

- Protocol syntax updated.

- Protocol syntax removed.

- New content added due to protocol revision.

- Content updated due to protocol revision.

- Content removed due to protocol revision.

- New protocol syntax added due to protocol revision.

- Protocol syntax updated due to protocol revision.

- Protocol syntax removed due to protocol revision.

- Obsolete document removed.

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

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

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

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

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

Section	Tracking number (if applicable) and description	Major change (Y or N)	Change type
7 Appendix B: Product Behavior	Updated list of supported products.	Y	Content updated due to protocol revision.

9 Index