[MS-AADT]:
Access Application Design Time Protocol Specification

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Revision Summary

Date	Revision History	Revision Class	Comments
01/20/2012	0.1	New	Released new document.

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Access Application Design Time Protocol Specification

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Release: Sunday, January 22, 2012

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1   Introduction

The Access Application Design Time Protocol enables a protocol client to modify the behavior of **database applications** and to create, modify, and delete objects in such applications.

Sections 1.8, 2, and 3 of this specification are normative and contain RFC 2119 language. Sections 1.5 and 1.9 are also normative but cannot contain RFC 2119 language. All other sections and examples in this specification are informative.

1.1   Glossary

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

firewall rule
Hypertext Transfer Protocol (HTTP)
Hypertext Transfer Protocol over Secure Sockets Layer (HTTPS)
IPv4 address in string format
IPv6 address in string format

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

base64 encoding
Boolean
collation
color level
culture name
database application
endpoint
Simple Object Access Protocol (SOAP)
site
SOAP action
SOAP body
SOAP fault
SOAP fault code
theme
token
Uniform Resource Identifier (URI)
Web Services Description Language (WSDL)
WSDL message
WSDL operation
XML namespace
XML namespace prefix
XML schema

The following terms are specific to this document:

surrogate pair: A pair of 16-bit Unicode encoding values that, together, represent a single 32-bit character, as described in [ISO-10646]. For more information about surrogate pairs and combining character sequences, see the Unicode Standard in [UNICODE].

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 Specification documents do not include a publishing year because links are to the latest version of the 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.

[ISO/IEC-29500-1] International Organization for Standardization, "Information Technology - Document description and processing languages - Office Open XML File Formats - Part 1: Fundamentals and Markup Language Reference", ISO/IEC PRF 29500-1:2008, http://www.iso.org/iso/iso_catalogue/catalogue_tc/catalogue_detail.htm?csnumber=51463

[ISO/IEC-29500-2] International Organization for Standardization, "Information technology -- Document description and processing languages -- Office Open XML File Formats -- Part 2: Open Packaging Conventions", ISO/IEC 29500-2:2008, http://www.iso.org/iso/iso_catalogue/catalogue_tc/catalogue_detail.htm?csnumber=51459

[MC-CSDL] Microsoft Corporation, "Conceptual Schema Definition File Format".

[MS-ADR] Microsoft Corporation, "Access Services Data Run Time Protocol Specification".

[MS-ASDT] Microsoft Corporation, "Access Server Design Time Protocol Specification".

[MS-AXL2] Microsoft Corporation, "Access Application Transfer Data Structure Version 2".

[MSDN-TSQL-Ref] Microsoft Corporation, "Transact-SQL Reference", http://msdn.microsoft.com/en-us/library/ms189826(SQL.90).aspx

[RFC1123] Braden, R., "Requirements for Internet Hosts - Application and Support", STD 3, RFC 1123, October 1989, http://www.ietf.org/rfc/rfc1123.txt

[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

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

[RFC4291] Hinden, R., and Deering, S., "IP Version 6 Addressing Architecture", RFC 4291, February 2006, http://www.ietf.org/rfc/rfc4291.txt

[RFC4646] A. Phillips, Ed., and M. Davis, Ed., "Tags for Identifying Languages", BCP 47, RFC 4646, September 2006, http://www.ietf.org/rfc/rfc4646.txt

[RFC4648] Josefsson, S., "The Base16, Base32, and Base64 Data Encodings", RFC 4648, October 2006, http://www.ietf.org/rfc/rfc4648.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/

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

[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.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/

[XSD1.1-1] Gao, S., Sperberg-McQueen, C.M., and Thompson, H.S., Eds., "W3C XML Schema Definition Language (XSD) 1.1 Part 1: Structures", W3C Working Draft, December 2009, http://www.w3.org/TR/2009/WD-xmlschema11-1-20091203/

1.2.2   Informative References

[MS-GLOS] Microsoft Corporation, "Windows Protocols Master Glossary".

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

1.3   Overview

This protocol enables a protocol client to create, modify, and delete objects in a database application on a protocol server. Additionally, this protocol enables a protocol client to:

- Obtain information about a database application on a protocol server or the objects in that application.

- Set some behaviors for a database application on a protocol server.

- Obtain a package that describes the entire database application on a protocol server.

1.4   Relationship to Other Protocols

The Access Application Design Time Protocol uses **SOAP** over **HTTP**, as described in [RFC2616], and SOAP over **HTTPS**, as described in [RFC2818], as shown in the following layering diagram:
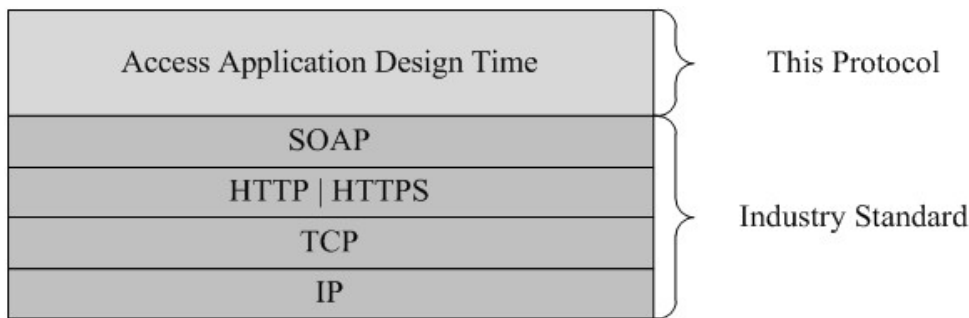
Figure 1: This protocol in relation to other protocols

1.5 Prerequisites/Preconditions

This protocol operates against a **site (2)** that is identified by a URI that is known by protocol clients. The protocol server **endpoint (4)** is formed by appending "/_vti_bin/accsvc/ApplicationDesignService.asmx " to the **URI** of the site (2), for example:

http://www.example.com/Repository/_vti_bin/accsvc/ApplicationDesignService.asmx

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

1.6 Applicability Statement

This protocol is applicable in the following scenarios:

- Creation, modification, and deletion of objects in a database application.

- Querying a protocol server for information about a database application or the objects in it.

- Setting some behaviors for a database application.

- Creation of packages that describe a database application.

In all cases, this protocol interacts with database applications that were created using [MS-ASDT].

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 version 1.2 messages, as specified by section 2.1.

- **Protocol Versions:** Some messages in this protocol are versioned. Those messages require a **ProtocolVersion** attribute in the request from the protocol client. If a **ProtocolVersion** attribute is not required by the client request, then the message is not versioned.

- **Capability Negotiation:** When calling **GetApplicationInformation**, the protocol client sends a list of **Access Services Protocol Versions** ([MS-ASDT] section 3.1.1.1) that it supports, as specified by **ProtocolVersionOptions** attribute (section 3.1.4.4.3.1). The protocol server selects a protocol version and communicates this selection back to the client, as specified by **ProtocolVersion** attribute (section 3.1.4.4.3.3). Alternatively, a protocol client retrieves the **Access Services Protocol Versions** that the protocol server supports by calling **GetServerInformation**, as specified by [MS-ASDT] section 3.1.4.3.

1.8   Vendor-Extensible Fields

None.

1.9   Standards Assignments

None.

2 Messages

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

2.1 Transport

Messages MUST be transported by using SOAP version 1.2, as specified in [SOAP1.2/1] and [SOAP1.2/2], over HTTP, as specified in [RFC2616], or HTTPS, as specified in [RFC2818].

2.2 Common Message Syntax

This section contains common definitions used by this protocol. The syntax of the definitions uses **XML schema** as defined in [XMLSCHEMA1] and [XMLSCHEMA2], and **WSDL** as defined in [WSDL].

2.2.1 Namespaces

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

Prefix	Namespace URI	Reference
http	http://schemas.xmlsoap.org/wsdl/http/	[RFC2616]
soap	http://schemas.xmlsoap.org/wsdl/soap/	[SOAP1.1]
soap12	http://schemas.xmlsoap.org/wsdl/soap12/	[SOAP1.2/1] [SOAP1.2/2]
tns	http://schemas.microsoft.com/office/Access/2010/11/Server/WebServices/ApplicationDesignService	
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

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

Complex Type	Description
AccessObject	Specifies information about an object in a database application.
AccessObjectList	Specifies an array of complex type **AccessObject** (section 2.2.4.1) in a database application.
AccessStorageObject	An **AccessObject** (section 2.2.4.1) used by some messages in this protocol.
ApplicationPropertyValue	The **ApplicationPropertyValue** complex type specifies the name and value of a property of a database application.
ConnectivityStatusInformation	This complex type specifies if a login having permissions specified by **Permission** element has been enabled or disabled on the database application.
DataMacro	An **AccessObject** (section 2.2.4.1) used by some messages in this protocol.
FirewallRule	Specifies a **firewall rule** to be added to the database application. Only after the firewall rule has been added, users whose IP address falls within **StartIPAddress** and **EndIPAddress** range, will be able to connect to the database application directly.
Form	An **AccessStorageObject** (section 2.2.4.2) used by some messages in this protocol.
LinkedTable	An **AccessObject** (section 2.2.4.1) used by some messages in this protocol.
Query	An **AccessObject** (section 2.2.4.1) used by some messages in this protocol.
ServiceError	Specifies an error on the protocol server that is not a **SOAP fault**. For more information, see section 2.2.10.2.
ServiceParameters	The base complex type extended by all input messages defined in this protocol.
ServiceResult	The base complex type extended by all response messages defined in this protocol.
ServiceWarning	Specifies additional information as part of a successful response from the protocol server. For more information, see section 2.2.10.3.
Table	An **AccessObject** (section 2.2.4.1) used by some messages in this protocol.
UIMacro	An **AccessStorageObject** (section 2.2.4.2) used by some messages in this protocol.

2.2.4.1 AccessObject

Namespace:
http://schemas.microsoft.com/office/Access/2010/11/Server/WebServices/ApplicationDesignService

Specifies information about an object in a database application.

```
<xs:complexType name="AccessObject" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="1" maxOccurs="1" name="ParentId" nillable="true" type="xs:int"/>
    <xs:element minOccurs="1" maxOccurs="1" name="Definition" nillable="true">
      <xs:complexType mixed="true">
        <xs:sequence>
          <xs:any/>
        </xs:sequence>
      </xs:complexType>
    </xs:element>
  </xs:sequence>
  <xs:attribute name="ID" type="xs:int" use="required"/>
  <xs:attribute name="Name" type="xs:string"/>
  <xs:attribute name="ObjectType" type="tns:AccessObjectType" use="required"/>
  <xs:attribute name="Description" type="xs:string"/>
  <xs:attribute name="ModifiedExternally" type="xs:boolean" use="required"/>
  <xs:attribute name="Version" type="xs:string"/>
  <xs:attribute name="StoragePath" type="xs:string"/>
</xs:complexType>
```

ParentId: An **int** ([XMLSCHEMA2] section 3.3.17) that specifies the identifier of the parent object of this object. If present, MUST be the same value as the **ID** of another object in the database application. MUST be null if the object does not have a parent object.

Definition: An **AccessObjectType** (section 2.2.5.1) element that specifies the definition of the object. The contents of this element MUST correspond to the **ObjectType** of this object, as specified in the following table.

Value of ObjectType attribute	Contents of Definition element
Table	MUST be a **Schema** element, as specified by [MC-CSDL] section 2.1.1. MUST include the annotations specified by [MS-AXL2] section 2.1.1.
Query	MUST be a **Query** element, as specified by [MS-AXL2] section 2.2.1.1.
DataMacro	MUST be a **DataMacro** element, as specified by [MS-AXL2] section 2.2.1.14.
Form	MUST be a **FormDef** element, as specified by [MS-AXL2] section 2.2.1.12.
UIMacro	MUST be a **UserInterfaceMacro** element, as specified by [MS-AXL2] section 2.2.1.5.
LinkedTable	MUST be a **Schema** element, as specified by [MC-CSDL] section 2.1.1. MUST include the annotations specified by [MS-AXL2] section 2.1.1.

ID: An **int** ([XMLSCHEMA2] section 3.3.17) that specifies the identifier of the object. MUST be a unique value among all objects within the database application.

Name: A **string** ([XMLSCHEMA2] section 3.2.1) that specifies the name of the object. MUST conform to **ST_ObjectName** ([MS-AXL2] section 2.2.4.1).

ObjectType: An **AccessObjectType** (section 2.2.5.1) that specifies the type of the object. MUST be one of "**Table**", "**Query**", "**DataMacro**", "**Form**", "**UIMacro**", or "**LinkedTable**".

Description: A **string** ([XMLSCHEMA2] section 3.2.1) that specifies a description of the object.

ModifiedExternally: A **boolean** ([XMLSCHEMA2] section 3.2.2). MUST be "false".

Version: A **string** ([XMLSCHEMA2] section 3.2.1) that specifies the version of the object.

StoragePath: MUST be ignored.

2.2.4.2 AccessStorageObject

Namespace:
http://schemas.microsoft.com/office/Access/2010/11/Server/WebServices/ApplicationDesignService

An **AccessObject** (section 2.2.4.1) used by some messages in this protocol.

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

2.2.4.3 DataMacro

Namespace:
http://schemas.microsoft.com/office/Access/2010/11/Server/WebServices/ApplicationDesignService

An **AccessObject** (section 2.2.4.1) used by some messages in this protocol.

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

2.2.4.4 Form

Namespace:
http://schemas.microsoft.com/office/Access/2010/11/Server/WebServices/ApplicationDesignService

An **AccessStorageObject** (section 2.2.4.2) used by some messages in this protocol.

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

2.2.4.5 LinkedTable

Namespace:
http://schemas.microsoft.com/office/Access/2010/11/Server/WebServices/ApplicationDesignService

An **AccessObject** (section 2.2.4.1) used by some messages in this protocol.

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

2.2.4.6 Query

Namespace:
http://schemas.microsoft.com/office/Access/2010/11/Server/WebServices/ApplicationDesignService

An **AccessObject** (section 2.2.4.1) used by some messages in this protocol.

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

2.2.4.7 ServiceError

Namespace:
http://schemas.microsoft.com/office/Access/2010/11/Server/WebServices/ApplicationDesignService

Specifies an error on the protocol server that is not a SOAP fault. For more information, see section 2.2.10.2.

```
<xs:complexType name="ServiceError" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:attribute name="Code" type="xs:string"/>
  <xs:attribute name="Message" type="xs:string"/>
</xs:complexType>
```

Code: A **string** ([XMLSCHEMA2] section 3.2.1) that specifies an identifier of the error, similar to a **SOAP fault code**. MUST be one of the values specified by section 2.2.10.2.

Message: A **string** ([XMLSCHEMA2] section 3.2.1) that specifies a message that corresponds to the **Code**. The value of this message is implementation-dependent.

2.2.4.8 ServiceParameters

Namespace:
http://schemas.microsoft.com/office/Access/2010/11/Server/WebServices/ApplicationDesignService

The base complex type extended by all input messages defined in this protocol.

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

2.2.4.9 ServiceResult

Namespace:
http://schemas.microsoft.com/office/Access/2010/11/Server/WebServices/ApplicationDesignService

The base complex type extended by all response messages defined in this protocol.

```
<xs:complexType name="ServiceResult" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="1" maxOccurs="1" name="Warning" nillable="true"
type="tns:ServiceWarning"/>
  </xs:sequence>
</xs:complexType>
```

Warning: A **ServiceWarning** (section 2.2.4.16) that specifies additional information that accompanies the response. For more information, see section 2.2.10.3. If there are no warnings, this element MUST be nil ([XSD1.1-1] section 2.7.2).

2.2.4.10 Table

Namespace:
http://schemas.microsoft.com/office/Access/2010/11/Server/WebServices/ApplicationDesignService

An **AccessObject** (section 2.2.4.1) used by some messages in this protocol.

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

2.2.4.11 UIMacro

Namespace:
http://schemas.microsoft.com/office/Access/2010/11/Server/WebServices/ApplicationDesignService

An **AccessStorageObject** (section 2.2.4.2) used by some messages in this protocol.

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

2.2.4.12 AccessObjectList

Namespace:
http://schemas.microsoft.com/office/Access/2010/11/Server/WebServices/ApplicationDesignService

Specifies an array of complex type **AccessObject** (section 2.2.4.1) in a database application.

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

AccessObject: An **AccessObject** (section 2.2.4.1) that specifies an object in a database application.

2.2.4.13   ApplicationPropertyValue

Namespace:
http://schemas.microsoft.com/office/Access/2010/11/Server/WebServices/ApplicationDesignService

The **ApplicationPropertyValue** complex type specifies the name and value of a property of a database application.

```
<xs:complexType name="ApplicationPropertyValue" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:attribute name="Name" type="xs:string"/>
  <xs:attribute name="Value" type="xs:string"/>
</xs:complexType>
```

Name: Specifies the name of a property of a database application.

Value: Specifies the value of the property of a database application whose name is given by the **Name** attribute.

2.2.4.14   ConnectivityStatusInformation

Namespace:
http://schemas.microsoft.com/office/Access/2010/11/Server/WebServices/ApplicationDesignService

This complex type specifies if a login having permissions specified by **Permission** element has been enabled or disabled on the database application.

```
<xs:complexType name="ConnectivityStatusInformation"
xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:attribute name="Permission" type="tns:ConnectivityPermissionLevel" use="required"/>
  <xs:attribute name="IsEnabled" type="xs:boolean" use="required"/>
</xs:complexType>
```

Permission: Specifies the permission level for the logins.

IsEnabled: True if the login with permissions specified by Permission exists on the database application and is enabled. **False** if the login does not exist or is disabled.

2.2.4.15   FirewallRule

Namespace:
http://schemas.microsoft.com/office/Access/2010/11/Server/WebServices/ApplicationDesignService

Specifies a firewall rule to be added to the database application. Only after the firewall rule has been added, users whose IP address falls within **StartIPAddress** and **EndIPAddress** range, will be able to connect to the database application directly.

```
<xs:complexType name="FirewallRule" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:attribute name="StartIPAddress" type="xs:string"/>
  <xs:attribute name="EndIPAddress" type="xs:string"/>
</xs:complexType>
```

StartIPAddress: Starting IP address for the firewall rule range. MUST be of type **IPv4 address in string format**.

EndIPAddress: Ending IP address for the firewall rule range. MUST be of type IPv4 address in string format.

2.2.4.16   ServiceWarning

Namespace:
http://schemas.microsoft.com/office/Access/2010/11/Server/WebServices/ApplicationDesignService

Specifies additional information as part of a successful response from the protocol server. For more information, see section 2.2.10.3.

```
<xs:complexType name="ServiceWarning" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:attribute name="Code" type="xs:string"/>
  <xs:attribute name="Message" type="xs:string"/>
</xs:complexType>
```

Code: A **string** ([XMLSCHEMA2] section 3.2.1) that specifies an identifier of the warning, similar to a SOAP fault code. MUST be one of the values specified by section 2.2.10.3.

Message: A **string** ([XMLSCHEMA2] section 3.2.1) that specifies a message that corresponds to the **Code**. The value of this message is implementation-dependent.

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
AccessObjectType	A string ([XMLSCHEMA2] section 3.2.1) that specifies the type of an object in a database application.
ConnectivityPermissionLevel	Specifies the permission level of a login that is used to connect to the database application directly.
DeleteFirewallRulesOption	Specifies how the **FirewallRules** (section 2.2.4.15) on the database application are deleted.

2.2.5.1 AccessObjectType

Namespace:
http://schemas.microsoft.com/office/Access/2010/11/Server/WebServices/ApplicationDesignService

A string ([XMLSCHEMA2] section 3.2.1) that specifies the type of an object in a database application.

```
<xs:simpleType name="AccessObjectType" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:restriction base="xs:string">
    <xs:enumeration value="Unknown"/>
    <xs:enumeration value="Table"/>
    <xs:enumeration value="Query"/>
    <xs:enumeration value="DataMacro"/>
    <xs:enumeration value="Form"/>
    <xs:enumeration value="UIMacro"/>
    <xs:enumeration value="Report"/>
    <xs:enumeration value="Image"/>
    <xs:enumeration value="NavigationPane"/>
    <xs:enumeration value="AccessProperties"/>
    <xs:enumeration value="ApplicationVersion"/>
    <xs:enumeration value="ApplicationLogic"/>
    <xs:enumeration value="ApplicationStyle"/>
    <xs:enumeration value="LinkedTable"/>
  </xs:restriction>
</xs:simpleType>
```

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

Value	Meaning
Unknown	The object type is not specified.
Table	The object is a table ([MS-AXL2] section 2.1.1).
Query	The object is a query ([MS-AXL2] section 2.1.3).
DataMacro	The object is a data macro ([MS-AXL2] section 2.1.2.2).
Form	The object is a form ([MS-AXL2] section 2.1.2).
UIMacro	The object is a user interface macro ([MS-AXL2] section 2.1.2.1).
Report	This value MUST NOT be used.
Image	This value MUST NOT be used.
NavigationPane	This value MUST NOT be used.
AccessProperties	This value MUST NOT be used.
ApplicationVersion	This value MUST NOT be used.
ApplicationLogic	This value MUST NOT be used.
ApplicationStyle	This value MUST NOT be used.
LinkedTable	The object is a linked table ([MS-AXL2] section 2.1.1.6).

2.2.5.2 ConnectivityPermissionLevel

Namespace:
http://schemas.microsoft.com/office/Access/2010/11/Server/WebServices/ApplicationDesignService

Specifies the permission level of a login that is used to connect to the database application directly.

```
<xs:simpleType name="ConnectivityPermissionLevel"
xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:restriction base="xs:string">
    <xs:enumeration value="Reader"/>
    <xs:enumeration value="Writer"/>
  </xs:restriction>
</xs:simpleType>
```

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

Value	Meaning
Reader	With this permission level, the login has only read permissions to the database application
Writer	With this permission level, the login has read write permissions to the database application.

2.2.5.3 DeleteFirewallRulesOption

Namespace:
http://schemas.microsoft.com/office/Access/2010/11/Server/WebServices/ApplicationDesignService

Specifies how the **FirewallRules** (section 2.2.4.15) on the database application are deleted.

```
<xs:simpleType name="DeleteFirewallRulesOption" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:restriction base="xs:string">
    <xs:enumeration value="Specified"/>
    <xs:enumeration value="All"/>
  </xs:restriction>
</xs:simpleType>
```

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

Value	Meaning
Specified	Only the given firewall rules are deleted from the database application.
All	All the firewall rules are deleted from the database application.

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.

2.2.10 Faults

In the event of an application error, the protocol server MUST either return a **ServiceError** element (section 2.2.4.7) as part of its response to a request from the protocol client, as specified by the operations in section 3.1.4, or return a SOAP fault ([SOAP1.2/1] section 5.4) instead of the response specified by the operation.

2.2.10.1 SOAP Faults

The **Value** element ([SOAP1.2/1] section 5.4.1.3) of the **Subcode** element ([SOAP1.2/1] section 5.4.1.2) of the SOAP fault ([SOAP1.2/1] section 5.4) MUST be one of the fault identifiers specified by [MS-ADR] section 2.2.9.

2.2.10.2 Service Errors

The **Code** attribute of the **ServiceError** element (section 2.2.4.7) MUST be one of the fault identifiers specified by [MS-ADR] section 2.2.9. The **Message** attribute SHOULD contain a meaningful error message, but its actual value is implementation-dependent.

2.2.10.3 Service Warnings

The protocol server MAY return a **ServiceWarning** element (section 2.2.4.16) as part of a response specified by an operation in section 3.1.4.<1> The response MAY contain both a **ServiceWarning** and a **ServiceError** that are not **nil** ([XSD1.1-1] section 2.7.2). The protocol client SHOULD treat responses that contain a nil **ServiceError** element and a non-nil **ServiceWarning** element as successful and MAY take action based on the attributes of the **ServiceWarning**.

3 Protocol Details

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

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 that are made by the higher-layer protocol or application are passed directly to the transport, and the results that are returned by the transport are passed directly to the higher-layer protocol or application.

Except where specified, protocol clients SHOULD interpret Hypertext Transfer Protocol (HTTP) status codes that are 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 otherwise 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 to notify protocol clients of authorization faults by using either HTTP status codes or SOAP faults, as specified previously in this section.

3.1 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.

The protocol server retrieves and updates objects of the database application along with the metadata about the objects and the database application based on the requests from the client.

3.1.2 Timers

None.

3.1.3 Initialization

None.

3.1.4 Message Processing Events and Sequencing Rules

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

Operation	Description
AddFirewallRule	This operation adds a **FirewallRule** (section 2.2.4.15) to the database application. The protocol client MUST call this operation only if the **IsDataConnectivitySupported** and **IsFirewallRestricted** elements of

Operation	Description
	the **GetAppInfoResult** (section 3.1.4.4.3.3) in the response body of a previous call to **GetApplicationInformation** operation (section 3.1.4.4) are "true".
CreateAccessObject	This operation triggers creation of an object in a database application.
CreatePackage	This operation triggers creation of a package that represents a database application, including its objects and data. The package can be retrieved by using the **GetPackage** operation (section 3.1.4.21).
DeleteAccessObject	This operation triggers the deletion of an object in a database application.
DeleteFirewallRules	This operation deletes the **FirewallRules** (section 2.2.4.15) from the database application. These **FirewallRules** MUST be previously added by the **AddFirewallRule** operation (section 3.1.4.10.2.1). The protocol client MUST call this operation only if the **IsDataConnectivitySupported** and **IsFirewallRestricted** elements of the **GetAppInfoResult** (section 3.1.4.4.3.3) in the response body of a previous call to **GetApplicationInformation** operation (section 3.1.4.4) are "true".
GetAccessObject	The **GetAccessObject** operation triggers retrieval of the requested object from a database application.
GetApplicationInformation	This operation retrieves information about a database application from the protocol server.
GetApplicationProperties	This operation retrieves a set of property values that exist in a database application.
GetDataConnectivity	This operation gets information about a login in the database application, which is used to connect to the database application directly. The protocol client MUST call this operation only if the **IsDataConnectivitySupported** element of the **GetAppInfoResult** (section 3.1.4.4.3.3) in the response body of a previous call to **GetApplicationInformation** operation (section 3.1.4.4) is "true".
GetDataConnectivityStatus	This operation gets status information about logins in the database application, which are used to connect to the database application directly. The protocol client MUST call this operation only if the **IsDataConnectivitySupported** element of the **GetAppInfoResult** (section 3.1.4.4.3.3) in the response body of a previous call to **GetApplicationInformation** operation (section 3.1.4.4) is "true".
GetFirewallRules	This operation gets all the **FirewallRules** (section 2.2.4.15) present in the database application. The protocol client MUST call this operation only if the **IsDataConnectivitySupported** and **IsFirewallRestricted** elements of the **GetAppInfoResult** (section 3.1.4.4.3.3) in the response body of a previous call to **GetApplicationInformation** operation (section 3.1.4.4) are "true".
GetLinkedTableInformation	This operation creates a new **linked table** ([MS-AXL2] section 2.1.1.6) in a database application in the protocol server and returns the definition of the created **linked table** ([MS-AXL2] section 2.1.1.6) to the protocol client.
GetPackage	This operation retrieves a package that represents a database application, including its objects and data.

Operation	Description
GetThemeList	This operation retrieves a list of **themes** that can be applied to a database application.
ImportData	The **ImportData** operation triggers importing data into a table in a database application.
RefreshLinkedTableInformation	This operation refreshes an existing **linked table** ([MS-AXL2] section 2.1.1.6) in a database application on the protocol server. The protocol server uses the **ID** attribute in the **RefreshLinkedTableInformationParameters** (section 3.1.4.18.3.1) element to identify the **linked table** ([MS-AXL2] section 2.1.1.6) in the database application, updates its definition from the source of the **linked table** ([MS-AXL2] section 2.1.1.6), and returns the updated definition to the protocol client.
RenameAccessObject	This operation changes the name of an object in a database application.
SetApplicationProperties	This operation sets one or more properties on a database application.
SetDataConnectivityStatus	This operation enables or disables a login in the database application, which is used to connect to the database application directly. The protocol client MUST call this operation only if the **IsDataConnectivitySupported** element of the **GetAppInfoResult** (section 3.1.4.4.3.3) in the response body of a previous call to **GetApplicationInformation** operation (section 3.1.4.4) is "true".
SetDataMacroTracing	This operation sets the data macro ([MS-AXL2] section 2.1.2.2) tracing option in a database application to determine whether the protocol server allows logging the execution of a data macro ([MS-AXL2] section 2.1.2.2)
UpdateAccessObject	This operation updates an object in a database application.

3.1.4.1 CreateAccessObject

This operation triggers creation of an object in a database application.

```
<wsdl:operation name="CreateAccessObject" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input message="tns:CreateAccessObjectSoapIn"/>
  <wsdl:output message="tns:CreateAccessObjectSoapOut"/>
</wsdl:operation>
```

The protocol client sends a **CreateAccessObjectSoapIn** (section 3.1.4.1.1.1) request message and the protocol server responds with a **CreateAccessObjectSoapOut** (section 3.1.4.1.1.2) response message as follows:

- If an error occurs on the protocol server during this operation, the protocol server MUST respond with a SOAP fault, as specified by section 2.2.10.1.

- Otherwise, the protocol server MUST respond with a **CreateAccessObjectSoapOut** response message that contains information about the newly created object, as specified by **CreateResult** (section 3.1.4.1.3.2).

3.1.4.1.1 Messages

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

Message	Description
CreateAccessObjectSoapIn	The request WSDL message for the **CreateAccessObject WSDL operation**.
CreateAccessObjectSoapOut	The response WSDL message for the **CreateAccessObject** WSDL operation.

3.1.4.1.1.1 CreateAccessObjectSoapIn

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

The **SOAP action** value is:

```
http://schemas.microsoft.com/office/Access/2010/11/Server/WebServices/ApplicationDesignServic
e/CreateAccessObject
```

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

3.1.4.1.1.2 CreateAccessObjectSoapOut

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

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

3.1.4.1.2 Elements

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

Element	Description
CreateAccessObject	The input data for the **CreateAccessObject** WSDL operation.
CreateAccessObjectResponse	The result data for the **CreateAccessObject** WSDL operation.

3.1.4.1.2.1 CreateAccessObject

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

```
<xs:element name="CreateAccessObject" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="parameters" type="tns:CreateParameters"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

parameters: A **CreateParameters** element (section 3.1.4.1.3.1) that specifies the information that the protocol server needs to create an object. MUST be present.

3.1.4.1.2.2 CreateAccessObjectResponse

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

```
<xs:element name="CreateAccessObjectResponse" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="CreateAccessObjectResult"
type="tns:CreateResult"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

CreateAccessObjectResult: A **CreateResult** element (section 3.1.4.1.3.2) that specifies information about a newly created object for the protocol client to use. MUST be present.

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
CreateParameters	Specifies an object to create.
CreateResult	Specifies an object.

3.1.4.1.3.1 CreateParameters

Namespace:
http://schemas.microsoft.com/office/Access/2010/11/Server/WebServices/ApplicationDesignService

Specifies the information that the protocol server needs in order to create an object.

```
<xs:complexType name="CreateParameters" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexContent mixed="false">
    <xs:extension base="tns:ServiceParameters">
      <xs:sequence>
        <xs:element minOccurs="0" maxOccurs="1" name="Body">
          <xs:complexType mixed="true">
            <xs:sequence>
              <xs:any/>
            </xs:sequence>
          </xs:complexType>
        </xs:element>
      </xs:sequence>
      <xs:attribute name="ProtocolVersion" type="xs:string"/>
      <xs:attribute name="Name" type="xs:string"/>
      <xs:attribute name="Description" type="xs:string"/>
      <xs:attribute name="ObjectType" type="tns:AccessObjectType" use="required"/>
    </xs:extension>
  </xs:complexContent>
```

```
    </xs:complexType>
```

Body: Specifies the definition of the object to create. The contents of **Body** depend on **ObjectType**, as specified in the following table. MUST be present.

Value of ObjectType Attribute	Contents of Body Element
Table	MUST be a **Schema** element, as specified by [MC-CSDL] section 2.1.1. MUST include the annotations specified by [MS-AXL2] section 2.1.1.
Query	MUST be a **Query** element, as specified by [MS-AXL2] section 2.2.1.1.
Form	MUST be a **FormDef** element, as specified by [MS-AXL2] section 2.2.1.12.
DataMacro	MUST be a **DataMacro** element, as specified by [MS-AXL2] section 2.2.1.14.
UIMacro	MUST be a **UserInterfaceMacro** element, as specified by [MS-AXL2] section 2.2.1.5.

ProtocolVersion: An **Access Services Protocol Version token** ([MS-ASDT] section 3.1.1.1). MUST be the same value that the protocol server returns from a call to **GetApplicationInformation** (section 3.1.4.4) in the **ProtocolVersion** element of the **GetAppInfoResult** (section 3.1.4.4.3.3). MUST be present.

Name: A **string** ([XMLSCHEMA2] section 3.2.1) that specifies the name of the object to create. MUST be present.

Description: A **string** ([XMLSCHEMA2] section 3.2.1) that specifies a description of the object to create.

ObjectType: An **AccessObjectType** (section 2.2.5.1) that specifies the type of object to create. MUST be one of the following values: **Table**, **Query**, **Form**, **DataMacro** or **UIMacro**.

3.1.4.1.3.2 CreateResult

Namespace:
http://schemas.microsoft.com/office/Access/2010/11/Server/WebServices/ApplicationDesignService

Specifies the object and possible dependent object or objects that were created in response to the request from the protocol client.

```
<xs:complexType name="CreateResult" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexContent mixed="false">
    <xs:extension base="tns:ServiceResult">
      <xs:sequence>
        <xs:element minOccurs="0" maxOccurs="1" name="Objects" type="tns:AccessObjectList"/>
        <xs:element minOccurs="1" maxOccurs="1" name="RefreshRequired" type="xs:boolean"/>
      </xs:sequence>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>
```

Objects: An **AccessObjectList** (section 2.2.4.12) element that specifies the object or objects that were created by the protocol server. MUST be present.

RefreshRequired: A **boolean** ([XMLSCHEMA2] section 3.2.2) that specifies whether the protocol client SHOULD refresh its cached definitions of the objects specified by the **Objects** element.

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 CreatePackage

This operation triggers creation of a package that represents a database application, including its objects and data. The package can be retrieved by using the **GetPackage** operation (section 3.1.4.21).

```
<wsdl:operation name="CreatePackage" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input message="tns:CreatePackageSoapIn"/>
  <wsdl:output message="tns:CreatePackageSoapOut"/>
</wsdl:operation>
```

The protocol client sends a **CreatePackageSoapIn** (section 3.1.4.2.1.1) request message and the protocol server responds with a **CreatePackageSoapOut** (section 3.1.4.2.1.2) response message as follows:

- If an error occurs on the protocol server during this operation, the protocol server MUST respond with a SOAP fault, as specified by section 2.2.10.1.

- Otherwise, the protocol server MUST respond with a **CreatePackageSoapOut** response message that contains an identifier that can be used to retrieve the package.

3.1.4.2.1 Messages

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

Message	Description
CreatePackageSoapIn	The request WSDL message for the **CreatePackage** WSDL operation.
CreatePackageSoapOut	The response WSDL message for the **CreatePackage** WSDL operation.

3.1.4.2.1.1 CreatePackageSoapIn

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

The SOAP action value is:

```
http://schemas.microsoft.com/office/Access/2010/11/Server/WebServices/ApplicationDesignServic
e/CreatePackage
```

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

3.1.4.2.1.2   CreatePackageSoapOut

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

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

3.1.4.2.2   Elements

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

Element	Description
CreatePackage	The input data for the **CreatePackage** WSDL operation.
CreatePackageResponse	The result data for the **CreatePackage** WSDL operation.

3.1.4.2.2.1   CreatePackage

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

```
<xs:element name="CreatePackage" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="parameters"
type="tns:CreatePackageParameters"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

parameters: A **CreatePackageParameters** element (section 3.1.4.2.3.1) that specifies the information the protocol server needs in order to create a package. MUST be present.

3.1.4.2.2.2   CreatePackageResponse

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

```
<xs:element name="CreatePackageResponse" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="CreatePackageResult"
type="tns:CreatePackageResult"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

CreatePackageResult: A **CreatePackageResult** element (section 3.1.4.2.3.2) that contains an identifier of a package. MUST be present.

3.1.4.2.3 Complex Types

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

Complex type	Description
CreatePackageParameters	Specifies information about the package.
CreatePackageResult	Contains the requested package.

3.1.4.2.3.1 CreatePackageParameters

Namespace:
http://schemas.microsoft.com/office/Access/2010/11/Server/WebServices/ApplicationDesignService

Specifies the information that the protocol server needs in order to create the package.

```
<xs:complexType name="CreatePackageParameters" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexContent mixed="false">
    <xs:extension base="tns:ServiceParameters">
      <xs:attribute name="ProtocolVersion" type="xs:string"/>
      <xs:attribute name="Title" type="xs:string"/>
      <xs:attribute name="Description" type="xs:string"/>
      <xs:attribute name="Data" type="xs:boolean" use="required"/>
      <xs:attribute name="Preview" type="xs:string"/>
      <xs:attribute name="PreviewType" type="xs:string"/>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>
```

ProtocolVersion: An **Access Services Protocol Version** token ([MS-ASDT] section 3.1.1.1). **ProtocolVersion** MUST be the same value that the protocol server returns from a call to **GetApplicationInformation** (section 3.1.4.4) in the **ProtocolVersion** element of the **GetAppInfoResult** element (section 3.1.4.4.3.3). MUST be present.

Title: A **string** ([XMLSCHEMA2] section 3.2.1) that specifies the title of the package. MUST be present.

Description: A **string** ([XMLSCHEMA2] section 3.2.1) that specifies a description of the package.

Data: A **boolean** ([XMLSCHEMA2] section 3.2.2) that specifies whether to include the data of the database application in the package.

Preview: A **string** ([XMLSCHEMA2] section 3.2.1) that specifies an image file encoded with **base64 encoding**, as specified by [RFC4648] section 4. **Preview** MUST be of the type specified by the **PreviewType** attribute. If this attribute is present, then **PreviewType** MUST also be present.

PreviewType: A **string** ([XMLSCHEMA2] section 3.2.1) that specifies the type of the image in the **Preview** element. **PreviewType** MUST be one of the following values: "png", "jpg", "jpeg", "gif", or "bmp".

3.1.4.2.3.2 CreatePackageResult

Namespace:
http://schemas.microsoft.com/office/Access/2010/11/Server/WebServices/ApplicationDesignService

Specifies an identifier that the protocol client can use with the **GetPackage** operation (section 3.1.4.21) to poll the protocol server and retrieve the created package.

```
<xs:complexType name="CreatePackageResult" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexContent mixed="false">
    <xs:extension base="tns:ServiceResult">
      <xs:sequence>
        <xs:element minOccurs="0" maxOccurs="1" name="PackageId" type="xs:string"/>
      </xs:sequence>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>
```

PackageId: A **string** ([XMLSCHEMA2] section 3.2.1) that specifies the identifier of a package that can be retrieved from the protocol server. MUST be present.

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 GetAccessObject

The **GetAccessObject** operation triggers retrieval of the requested object from a database application.

```
<wsdl:operation name="GetAccessObject" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input message="tns:GetAccessObjectSoapIn"/>
  <wsdl:output message="tns:GetAccessObjectSoapOut"/>
</wsdl:operation>
```

The protocol client sends a **GetAccessObjectSoapIn** (section 3.1.4.3.1.1) request message and the protocol server responds with a **GetAccessObjectSoapOut** (section 3.1.4.3.1.2) response message as follows:

▪ If an error occurs on the protocol server during this operation, the protocol server MUST respond with a SOAP fault, as specified in section 2.2.10.1.

▪ Otherwise, the protocol server MUST respond with a **GetAccessObjectSoapOut** response message that contains information about the requested object.

3.1.4.3.1 Messages

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

Message	Description
GetAccessObjectSoapIn	The request WSDL message for the **GetAccessObject** WSDL operation.
GetAccessObjectSoapOut	The response WSDL message for the **GetAccessObject** WSDL operation.

3.1.4.3.1.1 GetAccessObjectSoapIn

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

The SOAP action value is:

```
http://schemas.microsoft.com/office/Access/2010/11/Server/WebServices/ApplicationDesignServic
e/GetAccessObject
```

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

3.1.4.3.1.2 GetAccessObjectSoapOut

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

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

3.1.4.3.2 Elements

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

Element	Description
GetAccessObject	The input data for the **GetAccessObject** WSDL operation.
GetAccessObjectResponse	The result data for the **GetAccessObject** WSDL operation.

3.1.4.3.2.1 GetAccessObject

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

```
<xs:element name="GetAccessObject" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="parameters" type="tns:GetParameters"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

parameters: A **GetParameters** element (section 3.1.4.3.3.1) that specifies the information that the protocol server needs to retreive an object. MUST be present.

3.1.4.3.2.2 GetAccessObjectResponse

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

```
<xs:element name="GetAccessObjectResponse" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="GetAccessObjectResult"
type="tns:GetResult"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

GetAccessObjectResult: A **GetAccessObjectResult** element (section 3.1.4.3.3.2) that specifies information about the requested object for the protocol client to use. MUST be present.

3.1.4.3.3 Complex Types

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

Complex type	Description
GetParameters	Specifies an object to retrieve.
GetResult	Specifies an object.

3.1.4.3.3.1 GetParameters

Namespace:
http://schemas.microsoft.com/office/Access/2010/11/Server/WebServices/ApplicationDesignService

Specifies information that the protocol server needs in order to retreive an object.

```
<xs:complexType name="GetParameters" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexContent mixed="false">
    <xs:extension base="tns:ServiceParameters">
      <xs:attribute name="ProtocolVersion" type="xs:string"/>
      <xs:attribute name="ID" type="xs:int" use="required"/>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>
```

ProtocolVersion: An **Access Services Protocol Version** token ([MS-ASDT] section 3.1.1.1). **ProtocolVersion** MUST be the same value that the protocol server returns from a call to **GetApplicationInformation** (section 3.1.4.4) in the **ProtocolVersion** element of the **GetAppInfoResult** element (section 3.1.4.4.3.3). MUST be present.

ID: An **int** ([XMLSCHEMA2] section 3.3.17) attribute that specifies the identifier of the object to be retreived. **ID** MUST be the same value as the **ID** attribute of one of the **AccessObject** elements

returned by the protocol server for a call to **GetApplicationInformation** (section 3.1.4.4) in the **NewObjects** or **UpdatedObjects** elements of the **GetAppInfoResult** element.

3.1.4.3.3.2 GetResult

Namespace:
http://schemas.microsoft.com/office/Access/2010/11/Server/WebServices/ApplicationDesignService

The **GetResult** complex type specifies information about the requested object and possible dependent objects in the database application.

```
<xs:complexType name="GetResult" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexContent mixed="false">
    <xs:extension base="tns:ServiceResult">
      <xs:sequence>
        <xs:element minOccurs="0" maxOccurs="1" name="Objects" type="tns:AccessObjectList"/>
      </xs:sequence>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>
```

Objects: An **AccessObjectList** (section 2.2.4.12) element that specifies information about one or more objects in the database application. MUST be present.

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 GetApplicationInformation

This operation retrieves information about a database application from the protocol server.

```
<wsdl:operation name="GetApplicationInformation"
xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input message="tns:GetApplicationInformationSoapIn"/>
  <wsdl:output message="tns:GetApplicationInformationSoapOut"/>
</wsdl:operation>
```

The protocol client sends a **GetApplicationInformationSoapIn** (section 3.1.4.4.1.1) request message and the protocol server responds with a **GetApplicationInformationSoapOut** (section 3.1.4.4.1.2) response message as follows:

▪ If an error occurs on the protocol server during this operation, the protocol server MUST respond with a SOAP fault, as specified by section 2.2.10.1.

▪ Otherwise, the protocol server MUST respond with a **GetApplicationInformationSoapOut** response message that contains information about the requested database application.

3.1.4.4.1 Messages

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

Message	Description
GetApplicationInformationSoapIn	The request WSDL message for the **GetApplicationInformation** WSDL operation.
GetApplicationInformationSoapOut	The response WSDL message for the **GetApplicationInformation** WSDL operation.

3.1.4.4.1.1 GetApplicationInformationSoapIn

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

The SOAP action value is:

```
http://schemas.microsoft.com/office/Access/2010/11/Server/WebServices/ApplicationDesignService
/GetApplicationInformation
```

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

3.1.4.4.1.2 GetApplicationInformationSoapOut

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

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

3.1.4.4.2 Elements

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

Element	Description
GetApplicationInformation	The input data for the **GetApplicationInformation** WSDL operation.
GetApplicationInformationResponse	The result data for the **GetApplicationInformation** WSDL operation.

3.1.4.4.2.1 GetApplicationInformation

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

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

```
    <xs:complexType>
      <xs:sequence>
        <xs:element minOccurs="0" maxOccurs="1" name="parameters"
 type="tns:GetApplicationInformationParameters"/>
      </xs:sequence>
    </xs:complexType>
</xs:element>
```

parameters: A **GetApplicationInformationParameters** element (section 3.1.4.4.3.1) that specifies the information that the protocol server needs to identify and retrieve a database application. MUST be present.

3.1.4.4.2.2 GetApplicationInformationResponse

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

```
<xs:element name="GetApplicationInformationResponse"
xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="GetApplicationInformationResult"
type="tns:GetAppInfoResult"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

GetApplicationInformationResult: A **GetAppInfoResult** element (section 3.1.4.4.3.3) that specifies information about the requested database application. MUST be present.

3.1.4.4.3 Complex Types

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

Complex type	Description
GetApplicationInformationParameters	Specifies the application about which the protocol client is requesting information.
ProtocolVersionList	Specifies a list of protocol versions.
ObjectIdentityList	Specifies a list of objects.
AccessObjectIdentity	Specifies an object in an application and its version.
GetAppInfoResult	Specifies information about the requested application.
Collation	Specifies **collation** information about the backend database.
IDList	Specifies a list of objects in an application.

3.1.4.4.3.1 GetApplicationInformationParameters

Namespace:
http://schemas.microsoft.com/office/Access/2010/11/Server/WebServices/ApplicationDesignService

Specifies information that the protocol server uses to form its response.

```
<xs:complexType name="GetApplicationInformationParameters"
xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexContent mixed="false">
    <xs:extension base="tns:ServiceParameters">
      <xs:sequence>
        <xs:element minOccurs="0" maxOccurs="1" name="ProtocolVersionOptions"
type="tns:ProtocolVersionList"/>
        <xs:element minOccurs="0" maxOccurs="1" name="KnownObjects"
type="tns:ObjectIdentityList"/>
      </xs:sequence>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>
```

ProtocolVersionOptions: A **ProtocolVersionList** (section 3.1.4.4.3.5) that specifies all protocol versions that the protocol client will accept. MUST be present.

KnownObjects: An **ObjectIdentityList** (section 3.1.4.4.3.6) that specifies all objects in the database application about which the protocol client has already retrieved information. MUST be present. If the protocol client has not retrieved information about any objects, then this element MUST NOT have any child elements. The **Version** attribute of each **AccessObjectIdentity** element that is a child of **KnownObjects** contains the most recent version token for that object that was received by the protocol client from a call to **GetApplicationInformation** (section 3.1.4.4), **CreateAccessObject** (section 3.1.4.1), or **UpdateAccessObject** (section 3.1.4.8).

3.1.4.4.3.2   AccessObjectIdentity

Namespace:
http://schemas.microsoft.com/office/Access/2010/11/Server/WebServices/ApplicationDesignService

Specifies information that is used by a protocol server to identify a specific object in a database application.

```
<xs:complexType name="AccessObjectIdentity" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:attribute name="ID" type="xs:int" use="required"/>
  <xs:attribute name="Version" type="xs:string"/>
</xs:complexType>
```

ID: An **int** ([XMLSCHEMA2] section 3.3.17) that specifies the unique identifier of an object.

Version: A **string** ([XMLSCHEMA2] section 3.2.1) attribute that specifies the latest version of the object that the protocol client has cached. MUST be present. The protocol server MUST return an error unless this is the same value as the **ObjectVersion** attribute of the **AccessObject** (section 2.2.4.1) element that would be returned from a call to **GetApplicationInformation** (section 3.1.4.4) in the **NewObjects** or **UpdatedObjects** elements of the **GetAppInfoResult** element, where the **ID** of the **AccessObject** is the same as the **ID** of this element.

3.1.4.4.3.3   GetAppInfoResult

Namespace:
http://schemas.microsoft.com/office/Access/2010/11/Server/WebServices/ApplicationDesignService

Specifies information about a database application.

```
<xs:complexType name="GetAppInfoResult" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexContent mixed="false">
    <xs:extension base="tns:ServiceResult">
      <xs:sequence>
        <xs:element minOccurs="0" maxOccurs="1" name="Collation" type="tns:Collation"/>
        <xs:element minOccurs="0" maxOccurs="1" name="NewObjects"
type="tns:AccessObjectList"/>
        <xs:element minOccurs="0" maxOccurs="1" name="UpdatedObjects"
type="tns:AccessObjectList"/>
        <xs:element minOccurs="0" maxOccurs="1" name="DeletedObjects" type="tns:IDList"/>
      </xs:sequence>
      <xs:attribute name="ProtocolVersion" type="xs:string"/>
      <xs:attribute name="Name" type="xs:string"/>
      <xs:attribute name="DatabaseName" type="xs:string"/>
      <xs:attribute name="DataServerName" type="xs:string"/>
      <xs:attribute name="ApplicationCulture" type="xs:string"/>
      <xs:attribute name="RequestIPAddress" type="xs:string"/>
      <xs:attribute name="IsDataMacroTracingOn" type="xs:boolean" use="required"/>
      <xs:attribute name="IsFirewallRestricted" type="xs:boolean" use="required"/>
      <xs:attribute name="IsDataConnectivitySupported" type="xs:boolean" use="required"/>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>
```

Collation: A **Collation** (section 3.1.4.4.3.4) element that specifies collation information about the backend database specified by **DatabaseName** and **DataServerName**. MUST be present.

NewObjects: An **AccessObjectList** (section 2.2.4.12) element that fully specifies a set of objects. MUST be present. This list MUST include all objects in the application that were not present in the **KnownObjects** element of the **GetApplicationInformationParameters** that was sent in the request from the protocol client. If there are no objects in the application that were not present in **KnownObjects**, then this element MUST NOT have child elements.

UpdatedObjects: An **AccessObjectList** (section 2.2.4.12) element that fully specifies a set of objects. MUST be present. This list MUST include all objects in the application that were present in the **KnownObjects** of the **GetApplicationInformationParameters** that was sent in the request from the protocol client, but which had a different version than the protocol client specified in the **Version** attribute of the **ObjectIdentity** element that had the same **ID**. If there are no objects in the application that were present in **KnownObjects** but now have a different version, then this element MUST NOT have child elements.

DeletedObjects: An **IDList** (section 3.1.4.4.3.7) element that specifies a set of objects. MUST be present. This list MUST include all objects that were present in the **KnownObjects** of the **GetApplicationInformationParameters** (section 3.1.4.4.3.1) that was sent in the request from the protocol client, but which are not present in the protocol server. If all objects in the application that were present in **KnownObjects** are also present in the protocol server, then this element MUST NOT have child elements.

ProtocolVersion: An **Access Services Protocol Version** ([MS-ASDT] section 3.1.1.1) attribute that specifies the best match between the versions supported by the protocol client and the version of the application on the protocol server, as determined by the protocol server implementation. MUST be one of the values in the **ProtocolVersionOptions** of the **GetApplicationInformationParameters** that is sent with the request from the protocol client. MUST also be one of the values that would be returned by the protocol server from a call to **GetServerInformation** ([MS-ASDT] section 3.1.4.3) in the **AcceptedProtocolVersions** of a **GetServerInfoResult** ([MS-ASDT] section 3.1.4.3.3.1). MUST be present.

Name: A **string** ([XMLSCHEMA2] section 3.2.1) attribute that specifies the name of the application. MUST be present.

DatabaseName: A **string** ([XMLSCHEMA2] section 3.2.1) attribute that specifies the name of the backend database that contains the application. The database is located on the server specified by **DataServerName**. MUST be present.

DataServerName: A **string** ([XMLSCHEMA2] section 3.2.1) attribute that specifies the name of the server on which the database specified by **DatabaseName** resides. MUST be present.

ApplicationCulture: A **string** ([XMLSCHEMA2] section 3.2.1) attribute that specifies the **culture name** of the application. MUST be formatted as specified by [RFC4646]. MUST be present.

RequestIPAddress: A **string** ([XMLSCHEMA2] section 3.2.1) attribute that specifies the IP address from which the protocol server received the **GetApplicationInformation** request. MUST be either an **IPv6 address in string format** ([RFC4291] section 2.2) or an IPv4 address in string format ([RFC1123] section 2.1). MUST be present.

IsDataMacroTracingOn: A **boolean** ([XMLSCHEMA2] section 3.2.2) attribute that specifies whether data macro tracing (section 3.1.4.7) is enabled in the application. MUST be present.

IsFirewallRestricted: A **boolean** ([XMLSCHEMA2] section 3.2.2) attribute that specifies whether connections to the application are restricted by a firewall on the server. MUST be present.

IsDataConnectivitySupported: A **boolean** ([XMLSCHEMA2] section 3.2.2) attribute that specifies whether external connections to the application are enabled. MUST be present.

3.1.4.4.3.4   Collation

Namespace:
http://schemas.microsoft.com/office/Access/2010/11/Server/WebServices/ApplicationDesignService

Specified by [MS-ASDT] section 3.1.4.1.3.2.

```
<xs:complexType name="Collation" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:attribute name="Culture" type="xs:string"/>
  <xs:attribute name="CaseSensitive" type="xs:boolean" use="required"/>
  <xs:attribute name="AccentSensitive" type="xs:boolean" use="required"/>
  <xs:attribute name="KanaSensitive" type="xs:boolean" use="required"/>
  <xs:attribute name="WidthSensitive" type="xs:boolean" use="required"/>
  <xs:attribute name="UseSupplementaryCharacters" type="xs:boolean" use="required"/>
</xs:complexType>
```

Culture: A **string** ([XMLSCHEMA2] section 3.2.1) that specifies the culture name of the collation. MUST be formatted as specified by [RFC4646]. MUST be present.

CaseSensitive: A **boolean** ([XMLSCHEMA2] section 3.2.2) that specifies whether the collation distinguishes between uppercase and lowercase letters.

AccentSensitive: A **boolean** ([XMLSCHEMA2] section 3.2.2) that specifies whether the collation distinguishes between characters with accents and those without.

KanaSensitive: A **boolean** ([XMLSCHEMA2] section 3.2.2) that specifies whether the collation distinguishes between the two types of Japanese kana characters: hiragana and katakana.

WidthSensitive: A **boolean** ([XMLSCHEMA2] section 3.2.2) that specifies whether the collation distinguishes between single-byte characters and the same characters when they are represented as double-byte characters.

UseSupplementaryCharacters: A **boolean** ([XMLSCHEMA2] section 3.2.2) that specifies whether the collation uses **surrogate pairs**.

3.1.4.4.3.5   ProtocolVersionList

Namespace:
http://schemas.microsoft.com/office/Access/2010/11/Server/WebServices/ApplicationDesignService

A sequence of **Access Services Protocol Version** elements ([MS-ASDT] section 3.1.1.1).

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

ProtocolVersion: A **string** ([XMLSCHEMA2] section 3.2.1) that specifies an **Access Services Protocol Version** ([MS-ASDT] section 3.1.1.1). MUST be present.

3.1.4.4.3.6   ObjectIdentityList

Namespace:
http://schemas.microsoft.com/office/Access/2010/11/Server/WebServices/ApplicationDesignService

A sequence of **AccessObjectIdentity** elements.

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

ObjectIdentity: An **AccessObjectIdentity** (section 3.1.4.4.3.2) that specifies an object in the database application.

3.1.4.4.3.7   IDList

Namespace:
http://schemas.microsoft.com/office/Access/2010/11/Server/WebServices/ApplicationDesignService

A sequence of object identifiers.

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

ID: An **int** ([XMLSCHEMA2] section 3.3.17) that specifies the unique identifier of an object.

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 GetLinkedTableInformation

This operation creates a new **linked table** ([MS-AXL2] section 2.1.1.6) in a database application in the protocol server and returns the definition of the created **linked table** ([MS-AXL2] section 2.1.1.6) to the protocol client.

```
<wsdl:operation name="GetLinkedTableInformation"
xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
   <wsdl:input message="tns:GetLinkedTableInformationSoapIn"/>
   <wsdl:output message="tns:GetLinkedTableInformationSoapOut"/>
</wsdl:operation>
```

The protocol client sends a **GetLinkedTableInformationSoapIn** (section 3.1.4.5.1.1) request message and the protocol server responds with a **GetLinkedTableInformationSoapOut** (section 3.1.4.5.1.2) response message as follows:

- If an error occurs on the protocol server during this operation, the protocol server MUST respond with a SOAP fault, as specified by section 2.2.10.1.

- Otherwise, the protocol server MUST respond with a **GetLinkedTableInformationSoapOut** response message that contains information about the requested **linked table** ([MS-AXL2] section 2.1.1.6).

3.1.4.5.1 Messages

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

Message	Description
GetLinkedTableInformationSoapIn	The request WSDL message for the **GetLinkedTableInformation** WSDL operation.
GetLinkedTableInformationSoapOut	The response WSDL message for the **GetLinkedTableInformation** WSDL operation.

3.1.4.5.1.1 GetLinkedTableInformationSoapIn

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

The SOAP action value is:

```
http://schemas.microsoft.com/office/Access/2010/11/Server/WebServices/ApplicationDesignServic
e/GetLinkedTableInformation
```

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

3.1.4.5.1.2 GetLinkedTableInformationSoapOut

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

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

3.1.4.5.2 Elements

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

Element	Description
GetLinkedTableInformation	The input data for the **GetLinkedTableInformation** WSDL operation.
GetLinkedTableInformationResponse	The result data for the **GetLinkedTableInformation** WSDL operation.

3.1.4.5.2.1 GetLinkedTableInformation

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

```
<xs:element name="GetLinkedTableInformation" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="parameters"
type="tns:GetLinkedTableInformationParameters"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

parameters: A **GetLinkedTableInformationParameters** (section 3.1.4.5.3.1) element that specifies the source of the **linked table** ([MS-AXL2] section 2.1.1.6). MUST be present.

3.1.4.5.2.2 GetLinkedTableInformationResponse

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

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

```
              <xs:element minOccurs="0" maxOccurs="1" name="GetLinkedTableInformationResult"
      type="tns:GetLinkedTableInformationResult"/>
          </xs:sequence>
        </xs:complexType>
      </xs:element>
```

GetLinkedTableInformationResult: A **GetLinkedTableInformationResult** (section 3.1.4.5.3.2) element that specifies information about the created **linked table** ([MS-AXL2] section 2.1.1.6). MUST be present.

3.1.4.5.3 Complex Types

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

Complex type	Description
GetLinkedTableInformationParameters	Specifies a table about which to retrieve information.
GetLinkedTableInformationResult	Specifies information about a table

3.1.4.5.3.1 GetLinkedTableInformationParameters

Namespace:
http://schemas.microsoft.com/office/Access/2010/11/Server/WebServices/ApplicationDesignService

Specifies information about the source of the **linked table** ([MS-AXL2] section 2.1.1.6) that needs to be created in the database application.

```
      <xs:complexType name="GetLinkedTableInformationParameters"
      xmlns:xs="http://www.w3.org/2001/XMLSchema">
        <xs:complexContent mixed="false">
          <xs:extension base="tns:ServiceParameters">
            <xs:attribute name="ProtocolVersion" type="xs:string"/>
            <xs:attribute name="Name" type="xs:string"/>
            <xs:attribute name="SiteUrl" type="xs:string"/>
          </xs:extension>
        </xs:complexContent>
      </xs:complexType>
```

ProtocolVersion: An **Access Services Protocol Version** token ([MS-ASDT] section 3.1.1.1). MUST be the same value that the protocol server returns from a call to **GetApplicationInformation** (section 3.1.4.4) in the **ProtocolVersion** element of the **GetAppInfoResult** (section 3.1.4.4.3.3). MUST be present.

Name: A **string** ([XMLSCHEMA2] section 3.2.1) that specifies the name of the **linked table** ([MS-AXL2] section 2.1.1.6). MUST be same as the name of a **linked table** ([MS-AXL2] section 2.1.1.6) present in the mentioned **SiteUrl** attribute. MUST be present.

SiteUrl: A **string** ([XMLSCHEMA2] section 3.2.1) that specifies the URL of the site on which the specified **linked table** ([MS-AXL2] section 2.1.1.6) is located. MUST be present.

3.1.4.5.3.2 GetLinkedTableInformationResult

Namespace:
http://schemas.microsoft.com/office/Access/2010/11/Server/WebServices/ApplicationDesignService

Specifies the **linked table** ([MS-AXL2] section 2.1.1.6) created on the protocol server.

```
<xs:complexType name="GetLinkedTableInformationResult"
xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexContent mixed="false">
    <xs:extension base="tns:ServiceResult">
      <xs:sequence>
        <xs:element minOccurs="0" maxOccurs="1" name="Objects" type="tns:AccessObjectList"/>
      </xs:sequence>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>
```

Objects: An **AccessObjectList** (section 2.2.4.12) that contains the **linked table** ([MS-AXL2] section 2.1.1.6). MUST be present. MUST contain exactly one **AccessObject** element, and the **ObjectType** of that element MUST be "LinkedTable".

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 RenameAccessObject

This operation changes the name of an object in a database application.

```
<wsdl:operation name="RenameAccessObject" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input message="tns:RenameAccessObjectSoapIn"/>
  <wsdl:output message="tns:RenameAccessObjectSoapOut"/>
</wsdl:operation>
```

The protocol client sends a **RenameAccessObjectSoapIn** (section 3.1.4.6.1.1) request message and the protocol server responds with a **RenameAccessObjectSoapOut** (section 3.1.4.6.1.2) response message as follows:

▪ If the **ObjectVersion** attribute specified in the **RenameParameters** element (section 3.1.4.6.3.1) does not match the version token on the protocol server for the object being renamed, the protocol server MUST NOT rename the object and MUST respond with a

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RenameAccessObjectSoapOut response message that contains the current definition of the object and a **ServiceError** element as specified by section 2.2.10.2.

- If an error occurs on the protocol server during this operation, the protocol server MUST send a SOAP fault, as specified by section 2.2.10.1.

- Otherwise, the protocol server MUST respond with a **RenameAccessObjectSoapOut** (section 3.1.4.6.1.2) response message that contains the specified information about the renamed object.

3.1.4.6.1 Messages

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

Message	Description
RenameAccessObjectSoapIn	The request WSDL message for the **RenameAccessObject** WSDL operation.
RenameAccessObjectSoapOut	The response WSDL message for the **RenameAccessObject** WSDL operation.

3.1.4.6.1.1 RenameAccessObjectSoapIn

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

The SOAP action value is:

```
http://schemas.microsoft.com/office/Access/2010/11/Server/WebServices/ApplicationDesignServic
e/RenameAccessObject
```

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

3.1.4.6.1.2 RenameAccessObjectSoapOut

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

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

3.1.4.6.2 Elements

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

Element	Description
RenameAccessObject	The input data for the **RenameAccessObject** WSDL operation.
RenameAccessObjectResponse	The result data for the **RenameAccessObject** WSDL operation.

3.1.4.6.2.1 RenameAccessObject

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

```
<xs:element name="RenameAccessObject" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="parameters" type="tns:RenameParameters"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

parameters: A **RenameParameters** element (section 3.1.4.6.3.1) that specifies the information that the protocol server needs to rename an object. MUST be present.

3.1.4.6.2.2   RenameAccessObjectResponse

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

```
<xs:element name="RenameAccessObjectResponse" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="RenameAccessObjectResult"
type="tns:RenameResult"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

RenameAccessObjectResult: A **RenameResult** element (section 3.1.4.6.3.2) that specifies information about the object that was requested to be renamed by the protocol client. MUST be present.

3.1.4.6.3   Complex Types

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

Complex type	Description
RenameParameters	Specifies the object to rename and its new name.
RenameResult	Specifies the renamed object.

3.1.4.6.3.1   RenameParameters

Namespace:
http://schemas.microsoft.com/office/Access/2010/11/Server/WebServices/ApplicationDesignService

Specifies the information that the protocol server needs in order to rename an object.

```
<xs:complexType name="RenameParameters" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexContent mixed="false">
    <xs:extension base="tns:ServiceParameters">
      <xs:attribute name="ProtocolVersion" type="xs:string"/>
      <xs:attribute name="ID" type="xs:int" use="required"/>
      <xs:attribute name="ObjectVersion" type="xs:string"/>
      <xs:attribute name="Name" type="xs:string"/>
    </xs:extension>
```

```
      </xs:complexContent>
    </xs:complexType>
```

ProtocolVersion: An **Access Services Protocol Version** token ([MS-ASDT] section 3.1.1.1).
ProtocolVersion MUST be the same value that the protocol server returns from a call to
GetApplicationInformation (section 3.1.4.4) in the **ProtocolVersion** element of the
GetAppInfoResult element (section 3.1.4.4.3.3). MUST be present.

ID: An **int** ([XMLSCHEMA2] section 3.3.17) attribute that specifies the identifier of the object to be
renamed. **ID** MUST be the same value as the **ID** attribute of one of the **AccessObject** elements
that would be returned from a call to **GetApplicationInformation** (section 3.1.4.4) in the
NewObjects or **UpdatedObjects** elements of the **GetAppInfoResult** element.

ObjectVersion: A **string** ([XMLSCHEMA2] section 3.2.1) attribute that specifies the latest version
of the object that the protocol client has cached. MUST be present. The protocol server MUST return
an error unless this is the same value as the **ObjectVersion** attribute of the **AccessObject** (section
2.2.4.1) element that would be returned from a call to **GetApplicationInformation** (section
3.1.4.4) in the **NewObjects** or **UpdatedObjects** elements of the **GetAppInfoResult** element,
where the **ID** of the **AccessObject** is the same as the **ID** of this element.

Name: A **string** ([XMLSCHEMA2] section 3.2.1) attribute that specifies the new name of the object
to be renamed. MUST be present.

3.1.4.6.3.2   RenameResult

Namespace:
http://schemas.microsoft.com/office/Access/2010/11/Server/WebServices/ApplicationDesignService

Specifies information about the object that was requested to be renamed by the protocol client.

```
  <xs:complexType name="RenameResult" xmlns:xs="http://www.w3.org/2001/XMLSchema">
    <xs:complexContent mixed="false">
      <xs:extension base="tns:ServiceResult">
        <xs:sequence>
          <xs:element minOccurs="0" maxOccurs="1" name="AccessObject" type="tns:AccessObject"/>
          <xs:element minOccurs="1" maxOccurs="1" name="Error" nillable="true"
  type="tns:ServiceError"/>
        </xs:sequence>
      </xs:extension>
    </xs:complexContent>
  </xs:complexType>
```

AccessObject: If the rename operation succeeded, this element specifies an **AccessObject**
element (section 2.2.4.1) that is the object that has been renamed. If the rename operation failed
because the **ObjectVersion** attribute specified in the **RenameParameters** element (section
3.1.4.6.3.1) does not match the version token on the protocol server, this element specifies an
AccessObject element (section 2.2.4.1) that contains the current definition of the indicated object
on the protocol server. This element MUST be present.

Error: A **ServiceError** element (section 2.2.4.7) that, if not nil ([XSD1.1-1] section 2.7.2),
specifies an error that occurred on the protocol server. If the rename operation succeeded, this
element MUST be nil.

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.

3.1.4.7 SetDataMacroTracing

This operation sets the data macro ([MS-AXL2] section 2.1.2.2) tracing option in a database application to determine whether the protocol server allows logging the execution of a data macro ([MS-AXL2] section 2.1.2.2)

```
<wsdl:operation name="SetDataMacroTracing" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input message="tns:SetDataMacroTracingSoapIn"/>
  <wsdl:output message="tns:SetDataMacroTracingSoapOut"/>
</wsdl:operation>
```

The protocol client sends a **SetDataMacroTracingSoapIn** (section 3.1.4.7.1.1) request message and the protocol server responds with a **SetDataMacroTracingSoapOut** (section 3.1.4.7.1.2) response message as follows:

- If an error occurs on the protocol server during this operation, the protocol server MUST respond with a SOAP fault, as specified in section 2.2.10.1.

- Otherwise, the protocol server MUST respond with a **SetDataMacroTracingSoapOut** response message that contains the information about the data macro tracing option.

3.1.4.7.1 Messages

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

Message	Description
SetDataMacroTracingSoapIn	The request WSDL message for the **SetDataMacroTracing** WSDL operation.
SetDataMacroTracingSoapOut	The response WSDL message for the **SetDataMacroTracing** WSDL operation.

3.1.4.7.1.1 SetDataMacroTracingSoapIn

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

The SOAP action value is:

```
http://schemas.microsoft.com/office/Access/2010/11/Server/WebServices/ApplicationDesignServic
e/SetDataMacroTracing
```

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

3.1.4.7.1.2 SetDataMacroTracingSoapOut

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

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

3.1.4.7.2 Elements

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

Element	Description
SetDataMacroTracing	The input data for the **SetDataMacroTracing** WSDL operation.
SetDataMacroTracingResponse	The result data for the **SetDataMacroTracing** WSDL operation.

3.1.4.7.2.1 SetDataMacroTracing

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

```
<xs:element name="SetDataMacroTracing" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="parameters"
type="tns:SetDataMacroTracingParameters"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

parameters: A **SetDataMacroTracingParameters** element (section 3.1.4.7.3.1) that specifies the information that the protocol server needs to set the data macro tracing option. MUST be present.

3.1.4.7.2.2 SetDataMacroTracingResponse

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

```
<xs:element name="SetDataMacroTracingResponse" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="SetDataMacroTracingResult"
type="tns:SetDataMacroTracingResult"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

SetDataMacroTracingResult: A **SetDataMacroTracingResult** element (section 3.1.4.7.3.2) that specifies the data macro tracing option. MUST be present.

3.1.4.7.3 Complex Types

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

Complex type	Description
SetDataMacroTracingParameters	Specifies the data macro tracing option to set.
SetDataMacroTracingResult	Indicates whether the data macro tracing option is on or off.

3.1.4.7.3.1 SetDataMacroTracingParameters

Namespace:
http://schemas.microsoft.com/office/Access/2010/11/Server/WebServices/ApplicationDesignService

Specifies the information that the protocol server needs in order to set the data macro tracing option.

```
<xs:complexType name="SetDataMacroTracingParameters"
xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexContent mixed="false">
    <xs:extension base="tns:ServiceParameters">
      <xs:attribute name="ProtocolVersion" type="xs:string"/>
      <xs:attribute name="TurnTracingOn" type="xs:boolean" use="required"/>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>
```

ProtocolVersion: An **Access Services Protocol Version** (**[MS-ASDT]** section 3.1.1.1). MUST be the same value that the protocol server returns from a call to **GetApplicationInformation** (section 3.1.4.4) in the **ProtocolVersion** element of the **GetAppInfoResult** (section 3.1.4.4.3.3). MUST be present.

TurnTracingOn: A **boolean** ([XMLSCHEMA2] section 3.2.2) that specifies whether to turn on data macro tracing option.

3.1.4.7.3.2 SetDataMacroTracingResult

Namespace:
http://schemas.microsoft.com/office/Access/2010/11/Server/WebServices/ApplicationDesignService

Contains the current data macro tracing option after the request from the protocol client is made.

```
<xs:complexType name="SetDataMacroTracingResult" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexContent mixed="false">
    <xs:extension base="tns:ServiceResult">
      <xs:attribute name="IsTracingOn" type="xs:boolean" use="required"/>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>
```

IsTracingOn: A **boolean** ([XMLSCHEMA2] section 3.2.2) that specifies whether the data macro tracing option is on.

3.1.4.7.4 Simple Types

None.

3.1.4.7.5 Attributes

None.

3.1.4.7.6 Groups

None.

3.1.4.7.7 Attribute Groups

None.

3.1.4.8 UpdateAccessObject

This operation updates an object in a database application.

```
<wsdl:operation name="UpdateAccessObject" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input message="tns:UpdateAccessObjectSoapIn"/>
  <wsdl:output message="tns:UpdateAccessObjectSoapOut"/>
</wsdl:operation>
```

The protocol client sends an **UpdateAccessObjectSoapIn** (section 3.1.4.8.1.1) request message and the protocol server responds with an **UpdateAccessObjectSoapOut** (section 3.1.4.8.1.2) response message as follows:

- If the **ObjectVersion** attribute specified in the **UpdateParameters** element (section 3.1.4.8.3.1) does not match the version token on the protocol server for the object being updated, the protocol server MUST NOT update the object and MUST respond with a **UpdateAccessObjectSoapOut** response message that contains the current definition of the object and a **ServiceError** element (section 2.2.10.2).

- If an error occurs on the protocol server during this operation, the protocol server MUST respond with either a SOAP fault, as specified by section 2.2.10.1, or a **Service Error**, as specified by section 2.2.10.2.

- Otherwise, the protocol server MUST respond with an **UpdateAccessObjectSoapOut** response message that contains information about the newly created object, as specified by **UpdateResult** (section 3.1.4.8.3.2).

3.1.4.8.1 Messages

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

Message	Description
UpdateAccessObjectSoapIn	The request WSDL message for the **UpdateAccessObject** WSDL

Message	Description
	operation.
UpdateAccessObjectSoapOut	The response WSDL message for the **UpdateAccessObject** WSDL operation.

3.1.4.8.1.1 UpdateAccessObjectSoapIn

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

The SOAP action value is:

```
http://schemas.microsoft.com/office/Access/2010/11/Server/WebServices/ApplicationDesignServic
e/UpdateAccessObject
```

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

3.1.4.8.1.2 UpdateAccessObjectSoapOut

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

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

3.1.4.8.2 Elements

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

Element	Description
UpdateAccessObject	The input data for the **UpdateAccessObject** WSDL operation.
UpdateAccessObjectResponse	The result data for the **UpdateAccessObject** WSDL operation.

3.1.4.8.2.1 UpdateAccessObject

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

```
<xs:element name="UpdateAccessObject" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="parameters" type="tns:UpdateParameters"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

parameters: An **UpdateParameters** (section 3.1.4.8.3.1) element that specifies information needed by the protocol server to update an object. MUST be present.

3.1.4.8.2.2 UpdateAccessObjectResponse

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

```
<xs:element name="UpdateAccessObjectResponse" xmlns:xs="http://www.w3.org/2001/XMLSchema">
   <xs:complexType>
      <xs:sequence>
         <xs:element minOccurs="0" maxOccurs="1" name="UpdateAccessObjectResult"
type="tns:UpdateResult"/>
      </xs:sequence>
   </xs:complexType>
</xs:element>
```

UpdateAccessObjectResult: An **UpdateResult** (section 3.1.4.8.3.2) element that specifies information about the updated object. MUST be present.

3.1.4.8.3   Complex Types

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

Complex type	Description
UpdateParameters	Specifies which object the protocol client wants to update and the requested update.
UpdateResult	Specifies information about the updated object.

3.1.4.8.3.1   UpdateParameters

Namespace:
http://schemas.microsoft.com/office/Access/2010/11/Server/WebServices/ApplicationDesignService

Specifies the information that the protocol server needs in order to update an object.

```
<xs:complexType name="UpdateParameters" xmlns:xs="http://www.w3.org/2001/XMLSchema">
   <xs:complexContent mixed="false">
      <xs:extension base="tns:ServiceParameters">
         <xs:sequence>
            <xs:element minOccurs="0" maxOccurs="1" name="Body">
               <xs:complexType mixed="true">
                  <xs:sequence>
                     <xs:any/>
                  </xs:sequence>
               </xs:complexType>
            </xs:element>
         </xs:sequence>
         <xs:attribute name="ProtocolVersion" type="xs:string"/>
         <xs:attribute name="ID" type="xs:int" use="required"/>
         <xs:attribute name="ObjectVersion" type="xs:string"/>
         <xs:attribute name="Description" type="xs:string"/>
      </xs:extension>
   </xs:complexContent>
</xs:complexType>
```

Body: Specifies an updated definition of an object. The contents of **Body** depend on the value of the **ObjectType** attribute of this element, as specified in the following table. MUST be present.

Value of ObjectType Attribute	Contents of Body Element
Table	MUST be a **Schema** element, as specified by [MC-CSDL] section 2.1.1. MUST include the annotations specified by [MS-AXL2] section 2.1.1.
Query	MUST be a **Query** element, as specified by [MS-AXL2] section 2.2.1.1.
Form	MUST be a **FormDef** element, as specified by [MS-AXL2] section 2.2.1.12.
DataMacro	MUST be a **DataMacro** element, as specified by [MS-AXL2] section 2.2.1.14.
UIMacro	MUST be a **UserInterfaceMacro** element, as specified by [MS-AXL2] section 2.2.1.5.

ProtocolVersion: An **Access Services Protocol Version** token ([MS-ASDT] section 3.1.1.1). MUST be the same value that the protocol server returns from a call to **GetApplicationInformation** (section 3.1.4.4) in the **ProtocolVersion** element of the **GetAppInfoResult** (section 3.1.4.4.3.3). MUST be present.

ID: An **int** ([XMLSCHEMA2] section 3.3.17) attribute that specifies the unique identifier of the object to be updated. MUST be the same as the **ID** attribute of one of the **AccessObject** elements that would be returned from a call to **GetApplicationInformation** (section 3.1.4.4) in the **NewObjects** or **UpdatedObjects** elements of the **GetAppInfoResult** element.

ObjectVersion: A **string** ([XMLSCHEMA2] section 3.2.1) attribute that specifies the latest version of the object that the protocol client has cached. MUST be present. The protocol server MUST return an error unless this is the same value as the **ObjectVersion** attribute of the **AccessObject** (section 2.2.4.1) element that would be returned from a call to **GetApplicationInformation** (section 3.1.4.4) in the **NewObjects** or **UpdatedObjects** elements of the **GetAppInfoResult** element, where the **ID** of the **AccessObject** is the same as the **ID** of this element.

Description: A **string** ([XMLSCHEMA2] section 3.2.1) that specifies a description of the object. This description can be different from or the same as the existing description of the object.

3.1.4.8.3.2 UpdateResult

Namespace:
http://schemas.microsoft.com/office/Access/2010/11/Server/WebServices/ApplicationDesignService

Specifies the updated object and possible dependent object or objects that were updated in response to the request from the protocol client.

```
<xs:complexType name="UpdateResult" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexContent mixed="false">
    <xs:extension base="tns:ServiceResult">
      <xs:sequence>
        <xs:element minOccurs="0" maxOccurs="1" name="Objects" type="tns:AccessObjectList"/>
        <xs:element minOccurs="1" maxOccurs="1" name="Error" nillable="true"
type="tns:ServiceError"/>
        <xs:element minOccurs="1" maxOccurs="1" name="RefreshRequired" type="xs:boolean"/>
      </xs:sequence>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>
```

Objects: An **AccessObjectList** (section 2.2.4.12) element that specifies the object or objects that were updated by the protocol server.

Error: A **ServiceError** element (section 2.2.4.7) that specifies an error that occurred on the protocol server. If the update operation succeeded, this element MUST be nil ([XSD1.1-1] section 2.7.2). If this element is not nil, then the **Objects** list MUST contain the latest version of the object specified in the **ID** attribute of the **UpdateParameters** (section 3.1.4.8.3.1) element.

RefreshRequired: A **boolean** ([XMLSCHEMA2] section 3.2.2) that specifies whether the protocol client SHOULD refresh its cached definitions of the objects specified by the **Objects** element.

3.1.4.8.4 Simple Types

None.

3.1.4.8.5 Attributes

None.

3.1.4.8.6 Groups

None.

3.1.4.8.7 Attribute Groups

None.

3.1.4.9 DeleteAccessObject

This operation triggers the deletion of an object in a database application.

```
<wsdl:operation name="DeleteAccessObject" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input message="tns:DeleteAccessObjectSoapIn"/>
  <wsdl:output message="tns:DeleteAccessObjectSoapOut"/>
</wsdl:operation>
```

The protocol client sends a **DeleteAccessObjectSoapIn** (section 3.1.4.9.1.1) request message and the protocol server responds with a **DeleteAccessObjectSoapOut** (section 3.1.4.9.1.2) response message as follows:

▪ If the **ObjectVersion** attribute specified in the **DeleteParameters** element (section 3.1.4.9.3.1) does not match the version token on the protocol server for the object being deleted, the protocol server MUST NOT delete the object and MUST respond with a **DeleteAccessObjectSoapOut** response message that contains the current definition of the object and a **ServiceError** element (section 2.2.10.2).

▪ If an error occurs on the protocol server during this operation, the protocol server MUST respond with a SOAP fault, as specified in section 2.2.10.1.

▪ Otherwise, the protocol server MUST respond with a **DeleteAccessObjectSoapOut** response message that contains information about the deleted object.

3.1.4.9.1 Messages

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

Message	Description
DeleteAccessObjectSoapIn	The request WSDL message for the **DeleteAccessObject** WSDL operation.
DeleteAccessObjectSoapOut	The response WSDL message for the **DeleteAccessObject** WSDL operation.

3.1.4.9.1.1 DeleteAccessObjectSoapIn

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

The SOAP action value is:

```
http://schemas.microsoft.com/office/Access/2010/11/Server/WebServices/ApplicationDesignServic
e/DeleteAccessObject
```

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

3.1.4.9.1.2 DeleteAccessObjectSoapOut

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

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

3.1.4.9.2 Elements

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

Element	Description
DeleteAccessObject	The input data for the **DeleteAccessObject** WSDL operation.
DeleteAccessObjectResponse	The result data for the **DeleteAccessObject** WSDL operation.

3.1.4.9.2.1 DeleteAccessObject

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

```
<xs:element name="DeleteAccessObject" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="parameters" type="tns:DeleteParameters"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

parameters: A **DeleteParameters** element (section 3.1.4.9.3.1) that specifies the object to delete. MUST be present.

3.1.4.9.2.2 DeleteAccessObjectResponse

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

```
<xs:element name="DeleteAccessObjectResponse" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="DeleteAccessObjectResult"
type="tns:DeleteResult"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

DeleteAccessObjectResult: A **DeleteResult** element (section 3.1.4.9.3.2) that specifies the result of the delete operation. MUST be present.

3.1.4.9.3 Complex Types

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

Complex type	Description
DeleteParameters	Specifies the object to delete.
DeleteResult	Specifies the result of the delete operation.

3.1.4.9.3.1 DeleteParameters

Namespace:
http://schemas.microsoft.com/office/Access/2010/11/Server/WebServices/ApplicationDesignService

Specifies the information that the protocol server needs in order to delete an object.

```
<xs:complexType name="DeleteParameters" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexContent mixed="false">
    <xs:extension base="tns:ServiceParameters">
      <xs:attribute name="ProtocolVersion" type="xs:string"/>
      <xs:attribute name="ID" type="xs:int" use="required"/>
      <xs:attribute name="ObjectVersion" type="xs:string"/>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>
```

ProtocolVersion: An **Access Services Protocol Version** ([MS-ASDT] section 3.1.1.1). MUST be the same value that the protocol server returns from a call to **GetApplicationInformation** (section 3.1.4.4) in the **ProtocolVersion** element of the **GetAppInfoResult** (section 3.1.4.4.3.3). MUST be present.

ID: An **int** ([XMLSCHEMA2] section 3.3.17) attribute that specifies the unique identifier of the object to be deleted. MUST be the same as the **ID** attribute of one of the **AccessObject** elements that would be returned from a call to **GetApplicationInformation** (section 3.1.4.4) in the **NewObjects** or **UpdatedObjects** elements of the **GetAppInfoResult** element.

ObjectVersion: A **string** ([XMLSCHEMA2] section 3.2.1) attribute that specifies the latest version of the object that the protocol client has cached. MUST be present. The protocol server MUST return an error unless this is the same value as the **ObjectVersion** attribute of the **AccessObject** (section 2.2.4.1) element that would be returned from a call to **GetApplicationInformation** (section 3.1.4.4) in the **NewObjects** or **UpdatedObjects** elements of the **GetAppInfoResult** element, where the **ID** of the **AccessObject** is the same as the **ID** of this element.

3.1.4.9.3.2 DeleteResult

Namespace:
http://schemas.microsoft.com/office/Access/2010/11/Server/WebServices/ApplicationDesignService

Specifies the result of the delete operation.

```
<xs:complexType name="DeleteResult" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexContent mixed="false">
    <xs:extension base="tns:ServiceResult">
      <xs:sequence>
        <xs:element minOccurs="1" maxOccurs="1" name="Error" nillable="true"
type="tns:ServiceError"/>
        <xs:element minOccurs="0" maxOccurs="1" name="AccessObject" type="tns:AccessObject"/>
      </xs:sequence>
      <xs:attribute name="ID" type="xs:int" use="required"/>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>
```

Error: A **ServiceError** element (section 2.2.4.7) that specifies an error that occurred on the protocol server. If the delete operation succeeded, this element MUST be nil ([XSD1.1-1] section 2.7.2) and the **AccessObject** element MUST NOT be present. If this element is not nil, then the **Objects** list MUST contain the latest version of the object specified in the **ID** attribute of the **DeleteParameters** (section 3.1.4.9.3.1) element..

AccessObject: An **AccessObject** element (section 2.2.4.1) that specifies an object.

ID: An **int** ([XMLSCHEMA2] section 3.3.17) attribute that specifies the identifier of the object. MUST be the same as the **ID** attribute of the **DeleteParameters** element from the request.

3.1.4.9.4 Simple Types

None.

3.1.4.9.5 Attributes

None.

3.1.4.9.6 Groups

None.

3.1.4.9.7 Attribute Groups

None.

3.1.4.10 AddFirewallRule

This operation adds a **FirewallRule** (section 2.2.4.15) to the database application. The protocol client MUST call this operation only if the **IsDataConnectivitySupported** and **IsFirewallRestricted** elements of the **GetAppInfoResult** (section 3.1.4.4.3.3) in the response body of a previous call to **GetApplicationInformation** operation (section 3.1.4.4) are "true".

```
<wsdl:operation name="AddFirewallRule" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input message="tns:AddFirewallRuleSoapIn"/>
  <wsdl:output message="tns:AddFirewallRuleSoapOut"/>
</wsdl:operation>
```

The protocol client sends a **AddFirewallRuleSoapIn** (section 3.1.4.10.1.1) request message and the protocol server responds with a **AddFirewallRuleSoapOut** (section 3.1.4.10.1.2) response message as follows:

▪ If an error occurs on the protocol server during this operation, the protocol server MUST respond with a SOAP fault, as specified in section 2.2.10.1.

Otherwise, the protocol server MUST respond with a **AddFirewallRuleSoapOut** response message that contains information about the **FirewallRule** (section 2.2.4.15) which was added to the database application.

3.1.4.10.1 Messages

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

Message	Description
AddFirewallRuleSoapIn	The request WSDL message for the **AddFirewallRule** WSDL operation.
AddFirewallRuleSoapOut	The response WSDL message for the **AddFirewallRule** WSDL operation.

3.1.4.10.1.1 AddFirewallRuleSoapIn

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

The SOAP action value is:

```
http://schemas.microsoft.com/office/Access/2010/11/Server/WebServices/ApplicationDesignServic
e/AddFirewallRule
```

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

3.1.4.10.1.2 AddFirewallRuleSoapOut

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

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

3.1.4.10.2 Elements

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

Element	Description
AddFirewallRule	The input data for the **AddFirewallRule** WSDL operation.
AddFirewallRuleResponse	The result data for the **AddFirewallRule** WSDL operation.

3.1.4.10.2.1 AddFirewallRule

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

```
<xs:element name="AddFirewallRule" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="parameters"
type="tns:AddFirewallRuleParameters"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

parameters: An **AddFirewallRuleParameters** complex type, as specified in section 3.1.4.10.3.1. MUST be present.

3.1.4.10.2.2 AddFirewallRuleResponse

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

```
<xs:element name="AddFirewallRuleResponse" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="AddFirewallRuleResult"
type="tns:AddFirewallRuleResult"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

AddFirewallRuleResult: An **AddFirewallRuleResult** complex type, as specified in section 3.1.4.10.3.2. MUST be present.

3.1.4.10.3 Complex Types

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

Complex type	Description
AddFirewallRuleParameters	See section 3.1.4.10.3.1.
AddFirewallRuleResult	See section 3.1.4.10.3.2.

3.1.4.10.3.1 AddFirewallRuleParameters

Namespace:
http://schemas.microsoft.com/office/Access/2010/11/Server/WebServices/ApplicationDesignService

This complex type specifies the input data for the **AddFirewallRule** protocol operation.

```
<xs:complexType name="AddFirewallRuleParameters" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexContent mixed="false">
    <xs:extension base="tns:ServiceParameters">
      <xs:attribute name="ProtocolVersion" type="xs:string"/>
      <xs:attribute name="StartIPAddress" type="xs:string"/>
      <xs:attribute name="EndIPAddress" type="xs:string"/>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>
```

ProtocolVersion: An **Access Services Protocol Version** ([MS-ASDT] section 3.1.1.1). MUST be the same value that the protocol server returns from a call to **GetApplicationInformation** (section 3.1.4.4) in the **ProtocolVersion** element of the **GetAppInfoResult** (section 3.1.4.4.3.3).

StartIPAddress: The starting IP address as specified in **StartIPAddress** element of **FirewallRule** (section 2.2.4.15).

EndIPAddress: The ending IP address as specified in **EndIPAddress** element of **FirewallRule** (section 2.2.4.15).

3.1.4.10.3.2 AddFirewallRuleResult

Namespace:
http://schemas.microsoft.com/office/Access/2010/11/Server/WebServices/ApplicationDesignService

This complex type specifies the result data of the **AddFirewallRule** protocol operation.

```
<xs:complexType name="AddFirewallRuleResult" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexContent mixed="false">
    <xs:extension base="tns:ServiceResult">
      <xs:sequence>
        <xs:element minOccurs="1" maxOccurs="1" name="Error" nillable="true"
type="tns:ServiceError"/>
      </xs:sequence>
      <xs:attribute name="RuleName" type="xs:string"/>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>
```

Error: A **ServiceError** element (section 2.2.4.7) that, if not nil ([XSD1.1-1] section 2.7.2), specifies an error that occurred on the protocol server. If the protocol operation succeeded, this element MUST be nil.

RuleName: A unique name generated by the protocol server for the **FirewallRule** (section 2.2.4.15) which was added to the database application.

3.1.4.10.4 Simple Types

None.

3.1.4.10.5 Attributes

None.

3.1.4.10.6 Groups

None.

3.1.4.10.7 Attribute Groups

None.

3.1.4.11 DeleteFirewallRules

This operation deletes the **FirewallRules** (section 2.2.4.15) from the database application. These **FirewallRules** MUST be previously added by the **AddFirewallRule** operation (section 3.1.4.10.2.1). The protocol client MUST call this operation only if the **IsDataConnectivitySupported** and **IsFirewallRestricted** elements of the **GetAppInfoResult** (section 3.1.4.4.3.3) in the response body of a previous call to **GetApplicationInformation** operation (section 3.1.4.4) are "true".

```
<wsdl:operation name="DeleteFirewallRules" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input message="tns:DeleteFirewallRulesSoapIn"/>
  <wsdl:output message="tns:DeleteFirewallRulesSoapOut"/>
</wsdl:operation>
```

The protocol client sends a **DeleteFirewallRulesSoapIn** (section 3.1.4.11.1.1) request message and the protocol server responds with a **DeleteFirewallRulesSoapOut** (section 3.1.4.11.1.2) response message as follows:

- If an error occurs on the protocol server during this operation, the protocol server MUST respond with a SOAP fault, as specified in section 2.2.10.1.

- Otherwise, the protocol server MUST respond with a **DeleteFirewallRulesSoapOut** response message.

3.1.4.11.1 Messages

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

Message	Description
DeleteFirewallRulesSoapIn	The request WSDL message for the **DeleteFirewallRules** WSDL operation.
DeleteFirewallRulesSoapOut	The response WSDL message for the **DeleteFirewallRules** WSDL operation.

3.1.4.11.1.1 DeleteFirewallRulesSoapIn

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

The SOAP action value is:

```
http://schemas.microsoft.com/office/Access/2010/11/Server/WebServices/ApplicationDesignServic
e/DeleteFirewallRules
```

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

3.1.4.11.1.2 DeleteFirewallRulesSoapOut

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

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

3.1.4.11.2 Elements

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

Element	Description
DeleteFirewallRules	The input data for the **DeleteFirewallRules** WSDL operation.
DeleteFirewallRulesResponse	The result data for the **DeleteFirewallRules** WSDL operation.

3.1.4.11.2.1 DeleteFirewallRules

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

```
<xs:element name="DeleteFirewallRules" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="parameters"
type="tns:DeleteFirewallRulesParameters"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

parameters: A **DeleteFirewallRulesParameters**, as specified in section 3.1.4.11.3.1. MUST be present.

3.1.4.11.2.2 DeleteFirewallRulesResponse

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

```
<xs:element name="DeleteFirewallRulesResponse" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="DeleteFirewallRulesResult"
type="tns:DeleteFirewallRulesResult"/>
    </xs:sequence>
```

```
      </xs:complexType>
    </xs:element>
```

DeleteFirewallRulesResult: A **DeleteFirewallRulesResult**, as specified in section 3.1.4.11.3.3.
MUST be present.

3.1.4.11.3 Complex Types

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

Complex type	Description
DeleteFirewallRulesParameters	See section 3.1.4.11.3.1.
FirewallRulesList	See section 3.1.4.11.3.2.
DeleteFirewallRulesResult	See section 3.1.4.11.3.3.

3.1.4.11.3.1 DeleteFirewallRulesParameters

Namespace:
http://schemas.microsoft.com/office/Access/2010/11/Server/WebServices/ApplicationDesignService

This complex type specifies the input data for the **DeleteFirewallRules** protocol operation.

```
<xs:complexType name="DeleteFirewallRulesParameters"
xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexContent mixed="false">
    <xs:extension base="tns:ServiceParameters">
      <xs:sequence>
        <xs:element minOccurs="0" maxOccurs="1" name="SpecifiedFirewallRules"
type="tns:FirewallRulesList"/>
      </xs:sequence>
      <xs:attribute name="ProtocolVersion" type="xs:string"/>
      <xs:attribute name="DeleteOption" type="tns:DeleteFirewallRulesOption" use="required"/>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>
```

SpecifiedFirewallRules: A **FirewallRulesList**, as specified in section 3.1.4.11.3.2. MUST be present if the **DeleteOption** element's value is **Specified**, as specified in **DeleteFirewallRulesOption** (section 2.2.5.3).

ProtocolVersion: ProtocolVersion: An **Access Services Protocol Version** ([MS-ASDT] section 3.1.1.1). MUST be the same value that the protocol server returns from a call to **GetApplicationInformation** (section 3.1.4.4) in the **ProtocolVersion** element of the **GetAppInfoResult** (section 3.1.4.4.3.3).

DeleteOption: A **DeleteFirewallRulesOption**, as specified in section 2.2.5.3.

If the **DeleteOption** is **Specified**, then all the **FirewallRules** in the **SpecifiedFirewallRules** are deleted from the database application. If the **DeleteOption** is **All**, then all the **FirewallRules** are deleted from the database application.

3.1.4.11.3.2 FirewallRulesList

Namespace:
http://schemas.microsoft.com/office/Access/2010/11/Server/WebServices/ApplicationDesignService

This complex type specifies a collection of **FirewallRules** (section 2.2.4.15).

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

FirewallRule: A **FirewallRule**, as specified in section 2.2.4.15.

3.1.4.11.3.3 DeleteFirewallRulesResult

Namespace:
http://schemas.microsoft.com/office/Access/2010/11/Server/WebServices/ApplicationDesignService

This complex type specifies the result data of the **DeleteFirewallRules** protocol operation.

```
<xs:complexType name="DeleteFirewallRulesResult" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexContent mixed="false">
    <xs:extension base="tns:ServiceResult">
      <xs:sequence>
        <xs:element minOccurs="1" maxOccurs="1" name="Error" nillable="true"
type="tns:ServiceError"/>
      </xs:sequence>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>
```

Error: A **ServiceError** element (section 2.2.4.7) that, if not nil ([XSD1.1-1] section 2.7.2),
specifies an error that occurred on the protocol server. If the protocol operation succeeded, this
element MUST be nil.

3.1.4.11.4 Simple Types

None.

3.1.4.11.5 Attributes

None.

3.1.4.11.6 Groups

None.

3.1.4.11.7 Attribute Groups

None.

3.1.4.12 GetApplicationProperties

This operation retrieves a set of property values that exist in a database application.

```
<wsdl:operation name="GetApplicationProperties"
xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input message="tns:GetApplicationPropertiesSoapIn"/>
  <wsdl:output message="tns:GetApplicationPropertiesSoapOut"/>
</wsdl:operation>
```

The protocol client sends a **GetApplicationPropertiesSoapIn** (section 3.1.4.12.1.1) request message and the protocol server responds with a **GetApplicationPropertiesSoapOut** (section 3.1.4.12.1.2) response message as follows:

- If an error occurs on the protocol server during this operation, the protocol server MUST respond with a SOAP fault, as specified in section 2.2.10.1.

- Otherwise, the protocol server MUST respond with a **GetApplicationPropertiesSoapOut** response message that contains a set of property values, as specified in section 3.1.4.12.3.4. The returned set of property values MUST contain a value as specified by **ApplicationPropertyValue** (section 2.2.4.13) for each property requested by the protocol client in the **Name** attribute of the **ApplicationPropertyName** element (section 3.1.4.12.3.2).

3.1.4.12.1 Messages

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

Message	Description
GetApplicationPropertiesSoapIn	The request WSDL message for the **GetApplicationProperties** WSDL operation.
GetApplicationPropertiesSoapOut	The response WSDL message for the **GetApplicationProperties** WSDL operation.

3.1.4.12.1.1 GetApplicationPropertiesSoapIn

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

The SOAP action value is:

```
http://schemas.microsoft.com/office/Access/2010/11/Server/WebServices/ApplicationDesignServic
e/GetApplicationProperties
```

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

3.1.4.12.1.2 GetApplicationPropertiesSoapOut

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

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

3.1.4.12.2 Elements

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

Element	Description
GetApplicationProperties	The input data for the **GetApplicationProperties** WSDL operation.
GetApplicationPropertiesResponse	The result data for the **GetApplicationProperties** WSDL operation.

3.1.4.12.2.1 GetApplicationProperties

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

```
<xs:element name="GetApplicationProperties" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="parameters"
type="tns:GetApplicationPropertiesParameters"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

parameters: A **GetApplicationPropertiesParameters** element (section 3.1.4.12.3.1) that specifies the properties to retrieve. MUST be present.

3.1.4.12.2.2 GetApplicationPropertiesResponse

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

```
<xs:element name="GetApplicationPropertiesResponse"
xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="GetApplicationPropertiesResult"
type="tns:GetApplicationPropertiesResult"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

GetApplicationPropertiesResult: A **GetApplicationPropertiesResult** element (section 3.1.4.12.3.3) that specifies the values of each requested property. MUST be present.

3.1.4.12.3 Complex Types

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

Complex type	Description
GetApplicationPropertiesParameters	Specifies a list of names of properties whose values are to be retrieved.

Complex type	Description
ApplicationPropertyName	Specifies the name of a property whose value is to be retrieved.
GetApplicationPropertiesResult	Specifies an array of retrieved property values.
ArrayOfApplicationPropertyValue	Specifies the names and values of retrieved properties.

3.1.4.12.3.1 GetApplicationPropertiesParameters

Namespace:
http://schemas.microsoft.com/office/Access/2010/11/Server/WebServices/ApplicationDesignService

This element contains a set of **ApplicationPropertyName** elements (section 3.1.4.12.3.2) that specify the names of properties whose values are to be retrieved.

```
<xs:complexType name="GetApplicationPropertiesParameters"
xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexContent mixed="false">
    <xs:extension base="tns:ServiceParameters">
      <xs:sequence>
        <xs:element minOccurs="0" maxOccurs="unbounded" name="ApplicationProperty"
type="tns:ApplicationPropertyName"/>
      </xs:sequence>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>
```

ApplicationProperty: An **ApplicationPropertyName** element (section 3.1.4.12.3.2) that specifies the name of a property whose value is to be retrieved. MUST be present.

3.1.4.12.3.2 ApplicationPropertyName

Namespace:
http://schemas.microsoft.com/office/Access/2010/11/Server/WebServices/ApplicationDesignService

This element specifies the name of a property whose value is to be retrieved.

```
<xs:complexType name="ApplicationPropertyName" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:attribute name="Name" type="xs:string"/>
</xs:complexType>
```

Name: A **string** ([XMLSCHEMA2] section 3.2.1) attribute that specifies the name of the property whose value is to be retrieved. MUST be present.

3.1.4.12.3.3 GetApplicationPropertiesResult

Namespace:
http://schemas.microsoft.com/office/Access/2010/11/Server/WebServices/ApplicationDesignService

This element specifies the result of a **GetApplicationProperities** (section 3.1.4.12.2.1) operation.

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

```
      <xs:complexContent mixed="false">
        <xs:extension base="tns:ServiceResult">
          <xs:sequence>
            <xs:element minOccurs="1" maxOccurs="1" name="Error" nillable="true"
  type="tns:ServiceError"/>
            <xs:element minOccurs="0" maxOccurs="1" name="ApplicationProperties"
  type="tns:ArrayOfApplicationPropertyValue"/>
          </xs:sequence>
        </xs:extension>
      </xs:complexContent>
  </xs:complexType>
```

Error: A **ServiceError** element (section 2.2.4.7) that, if not nil ([XSD1.1-1] section 2.7.2), specifies an error that occurred on the protocol server. If all property values were successfully retrieved, this value MUST be nil.

ApplicationProperties: An **ArrayOfApplicationPropertyValue** element (section 3.1.4.12.3.4) that specifies the set of property values retrieved from the protocol server. MUST be present.

3.1.4.12.3.4   ArrayOfApplicationPropertyValue

Namespace:
http://schemas.microsoft.com/office/Access/2010/11/Server/WebServices/ApplicationDesignService

This element specifies a set of property values retrieved from the protocol server.

```
  <xs:complexType name="ArrayOfApplicationPropertyValue"
  xmlns:xs="http://www.w3.org/2001/XMLSchema">
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="unbounded" name="ApplicationPropertyValue"
  nillable="true" type="tns:ApplicationPropertyValue"/>
    </xs:sequence>
  </xs:complexType>
```

ApplicationPropertyValue: An **ApplicationPropertyValue** element (section 2.2.4.13) that specifies the name and value of a property retrieved from the protocol server. MUST be present.

3.1.4.12.4   Simple Types

None.

3.1.4.12.5   Attributes

None.

3.1.4.12.6   Groups

None.

3.1.4.12.7   Attribute Groups

None.

3.1.4.13 GetDataConnectivity

This operation gets information about a login in the database application, which is used to connect to the database application directly. The protocol client MUST call this operation only if the **IsDataConnectivitySupported** element of the **GetAppInfoResult** (section 3.1.4.4.3.3) in the response body of a previous call to **GetApplicationInformation** operation (section 3.1.4.4) is "true".

```
<wsdl:operation name="GetDataConnectivity" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input message="tns:GetDataConnectivitySoapIn"/>
  <wsdl:output message="tns:GetDataConnectivitySoapOut"/>
</wsdl:operation>
```

The protocol client sends a **GetDataConnectivitySoapIn** (section 3.1.4.13.1.1) request message and the protocol server responds with a **GetDataConnectivitySoapOut** (section 3.1.4.13.1.2) response message as follows:

- If an error occurs on the protocol server during this operation, the protocol server MUST respond with a SOAP fault, as specified in section 2.2.10.1.

- Otherwise, the protocol server MUST respond with a **GetDataConnectivitySoapOut** response message that contains information about the requested login in the database application.

3.1.4.13.1 Messages

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

Message	Description
GetDataConnectivitySoapIn	The request WSDL message for the **GetDataConnectivity** WSDL operation.
GetDataConnectivitySoapOut	The response WSDL message for the **GetDataConnectivity** WSDL operation.

3.1.4.13.1.1 GetDataConnectivitySoapIn

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

The SOAP action value is:

```
http://schemas.microsoft.com/office/Access/2010/11/Server/WebServices/ApplicationDesignServic
e/GetDataConnectivity
```

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

3.1.4.13.1.2 GetDataConnectivitySoapOut

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

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

3.1.4.13.2 Elements

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

Element	Description
GetDataConnectivity	The input data for the **GetDataConnectivity** WSDL operation.
GetDataConnectivityResponse	The result data for the **GetDataConnectivity** WSDL operation.

3.1.4.13.2.1 GetDataConnectivity

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

```
<xs:element name="GetDataConnectivity" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="parameters"
type="tns:GetDataConnectivityParameters"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

parameters: A **GetDataConnectivityParameter**, as specified by section 3.1.4.13.3.1.

3.1.4.13.2.2 GetDataConnectivityResponse

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

```
<xs:element name="GetDataConnectivityResponse" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="GetDataConnectivityResult"
type="tns:GetDataConnectivityResult"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

GetDataConnectivityResult: A **GetDataConnectivityResult**, as specified by section 3.1.4.13.3.2

3.1.4.13.3 Complex Types

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

Complex type	Description
GetDataConnectivityParameters	See section 3.1.4.14.3.1.
GetDataConnectivityResult	See section 3.1.4.14.3.2.

3.1.4.13.3.1 GetDataConnectivityParameters

Namespace:
http://schemas.microsoft.com/office/Access/2010/11/Server/WebServices/ApplicationDesignService

This complex type specifies the input data for the **GetDataConnectivity** protocol operation.

```
<xs:complexType name="GetDataConnectivityParameters"
xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexContent mixed="false">
    <xs:extension base="tns:ServiceParameters">
      <xs:attribute name="ProtocolVersion" type="xs:string"/>
      <xs:attribute name="Permission" type="tns:ConnectivityPermissionLevel" use="required"/>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>
```

ProtocolVersion: An **Access Services Protocol Version** ([MS-ASDT] section 3.1.1.1). MUST be
the same value that the protocol server returns from a call to **GetApplicationInformation** (section
3.1.4.4) in the **ProtocolVersion** element of the **GetAppInfoResult** (section 3.1.4.4.3.3).

Permission: A **ConnectivityPermissionLevel**, as specified by section 2.2.5.2. MUST be present.

3.1.4.13.3.2 GetDataConnectivityResult

Namespace:
http://schemas.microsoft.com/office/Access/2010/11/Server/WebServices/ApplicationDesignService

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

```
<xs:complexType name="GetDataConnectivityResult" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexContent mixed="false">
    <xs:extension base="tns:ServiceResult">
      <xs:sequence>
        <xs:element minOccurs="1" maxOccurs="1" name="Error" nillable="true"
type="tns:ServiceError"/>
      </xs:sequence>
      <xs:attribute name="UserName" type="xs:string"/>
      <xs:attribute name="Password" type="xs:string"/>
      <xs:attribute name="Permission" type="tns:ConnectivityPermissionLevel" use="required"/>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>
```

Error: A **ServiceError** element (section 2.2.4.7) that, if not nil ([XSD1.1-1] section 2.7.2),
specifies an error that occurred on the protocol server. If the protocol operation succeeded, this
element MUST be nil.

UserName: Specifies the username for the logging in the database application. MUST be present.

Password: Specifies the password for the username. MUST be present.

Permission: A **ConnectivityPermissionLevel**, as specified by section 2.2.5.2. Specifies the
permission level of the login. MUST be present.

3.1.4.13.4 Simple Types

None.

3.1.4.13.5 Attributes

None.

3.1.4.13.6 Groups

None.

3.1.4.13.7 Attribute Groups

None.

3.1.4.14 GetDataConnectivityStatus

This operation gets status information about logins in the database application, which are used to connect to the database application directly. The protocol client MUST call this operation only if the **IsDataConnectivitySupported** element of the **GetAppInfoResult** (section 3.1.4.4.3.3) in the response body of a previous call to **GetApplicationInformation** operation (section 3.1.4.4) is "true".

```
<wsdl:operation name="GetDataConnectivityStatus"
xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input message="tns:GetDataConnectivityStatusSoapIn"/>
  <wsdl:output message="tns:GetDataConnectivityStatusSoapOut"/>
</wsdl:operation>
```

The protocol client sends a **GetDataConnectivityStatusSoapIn** (section 3.1.4.14.1.1) request message and the protocol server responds with a **GetDataConnectivityStatusSoapOut** (section 3.1.4.14.1.2) response message as follows:

- If an error occurs on the protocol server during this operation, the protocol server MUST respond with a SOAP fault, as specified in section 2.2.10.1.

- Otherwise, the protocol server MUST respond with a **GetDataConnectivityStatusSoapOut** response message that contains status information about logins in the database application.

3.1.4.14.1 Messages

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

Message	Description
GetDataConnectivityStatusSoapIn	The request WSDL message for the **GetDataConnectivityStatus** WSDL operation.
GetDataConnectivityStatusSoapOut	The response WSDL message for the **GetDataConnectivityStatus** WSDL operation.

3.1.4.14.1.1 GetDataConnectivityStatusSoapIn

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

The SOAP action value is:

```
http://schemas.microsoft.com/office/Access/2010/11/Server/WebServices/ApplicationDesignServic
e/GetDataConnectivityStatus
```

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

3.1.4.14.1.2 GetDataConnectivityStatusSoapOut

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

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

3.1.4.14.2 Elements

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

Element	Description
GetDataConnectivityStatus	The input data for the **GetDataConnectivityStatus** WSDL operation.
GetDataConnectivityStatusResponse	The result data for the **GetDataConnectivityStatus** WSDL operation.

3.1.4.14.2.1 GetDataConnectivityStatus

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

```
<xs:element name="GetDataConnectivityStatus" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="parameters"
type="tns:GetDataConnectivityStatusParameters"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

parameters: A **GetDataConnectivityStatusParameters** complex type as specified in section 3.1.4.14.3.1. MUST be present.

3.1.4.14.2.2 GetDataConnectivityStatusResponse

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

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

```
      <xs:element minOccurs="0" maxOccurs="1" name="GetDataConnectivityStatusResult"
 type="tns:GetDataConnectivityStatusResult"/>
     </xs:sequence>
   </xs:complexType>
</xs:element>
```

GetDataConnectivityStatusResult: A **GetDataConnectivityStatusResult** complex type, as
specified in section 3.1.4.14.3.2. MUST be present.

3.1.4.14.3 Complex Types

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

Complex type	Description
GetDataConnectivityStatusParameters	See section 3.1.4.14.3.1.
GetDataConnectivityStatusResult	See section 3.1.4.14.3.2.
ArrayOfConnectivityStatusInformation	See section 3.1.4.14.3.3.

3.1.4.14.3.1 GetDataConnectivityStatusParameters

Namespace:
http://schemas.microsoft.com/office/Access/2010/11/Server/WebServices/ApplicationDesignService

This complex type specifies the input data for the **GetDataConnectivityStatus** protocol operation.

```
<xs:complexType name="GetDataConnectivityStatusParameters"
xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexContent mixed="false">
    <xs:extension base="tns:ServiceParameters">
      <xs:attribute name="ProtocolVersion" type="xs:string"/>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>
```

ProtocolVersion: An **Access Services Protocol Version** ([MS-ASDT] section 3.1.1.1). MUST be
the same value that the protocol server returns from a call to **GetApplicationInformation** (section
3.1.4.4) in the **ProtocolVersion** element of the **GetAppInfoResult** (section 3.1.4.4.3.3). MUST be
present.

3.1.4.14.3.2 GetDataConnectivityStatusResult

Namespace:
http://schemas.microsoft.com/office/Access/2010/11/Server/WebServices/ApplicationDesignService

This complex type specifies the result data of the **GetDataConnectivityStatus** protocol operation.

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

```
      <xs:sequence>
        <xs:element minOccurs="0" maxOccurs="1" name="StatusInformations"
  type="tns:ArrayOfConnectivityStatusInformation"/>
        <xs:element minOccurs="1" maxOccurs="1" name="Error" nillable="true"
  type="tns:ServiceError"/>
      </xs:sequence>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>
```

StatusInformations: An **ArrayOfConnectivityStatusInformation** complex type, as specified by section 3.1.4.14.3.3. MUST be present.

Error: A **ServiceError** element (section 2.2.4.7) that, if not nil ([XSD1.1-1] section 2.7.2), specifies an error that occurred on the protocol server. If the protocol operation succeeded, this element MUST be nil.

3.1.4.14.3.3   ArrayOfConnectivityStatusInformation

Namespace:
http://schemas.microsoft.com/office/Access/2010/11/Server/WebServices/ApplicationDesignService

This complex type is an element of the **GetDataConnectivityStatusResult** (section 3.1.4.14.3.2) complex type, which is result data of the **GetDataConnectivityStatus** protocol operation.

This complex type is a collection of **ConnectivityStatusInformation** (section 2.2.4.14), which specifies the status of a login used to connect to the database application directly.

```
<xs:complexType name="ArrayOfConnectivityStatusInformation"
xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="unbounded" name="ConnectivityStatusInformation"
nillable="true" type="tns:ConnectivityStatusInformation"/>
  </xs:sequence>
</xs:complexType>
```

ConnectivityStatusInformation: A **ConnectivityStatusInformation** complex type, as specified in section 2.2.4.14. MUST be present.

3.1.4.14.4   Simple Types

None.

3.1.4.14.5   Attributes

None.

3.1.4.14.6   Groups

None.

3.1.4.14.7   Attribute Groups

None.

3.1.4.15 GetFirewallRules

This operation gets all the **FirewallRules** (section 2.2.4.15) present in the database application. The protocol client MUST call this operation only if the **IsDataConnectivitySupported** and **IsFirewallRestricted** elements of the **GetAppInfoResult** (section 3.1.4.4.3.3) in the response body of a previous call to **GetApplicationInformation** operation (section 3.1.4.4) are "true".

```
<wsdl:operation name="GetFirewallRules" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input message="tns:GetFirewallRulesSoapIn"/>
  <wsdl:output message="tns:GetFirewallRulesSoapOut"/>
</wsdl:operation>
```

The protocol client sends a **GetFirewallRulesSoapIn** (section 3.1.4.15.1.1) request message and the protocol server responds with a **GetFirewallRulesSoapOut** (section 3.1.4.15.1.2) response message as follows:

- If an error occurs on the protocol server during this operation, the protocol server MUST respond with a SOAP fault, as specified in section 2.2.10.1.

- Otherwise, the protocol server MUST respond with a **GetFirewallRulesSoapOut** response message that contains information about the all the **FirewallRules** (section 2.2.4.15) present in the database application.

3.1.4.15.1 Messages

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

Message	Description
GetFirewallRulesSoapIn	The request WSDL message for the **GetFirewallRules** WSDL operation.
GetFirewallRulesSoapOut	The response WSDL message for the **GetFirewallRules** WSDL operation.

3.1.4.15.1.1 GetFirewallRulesSoapIn

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

The SOAP action value is:

```
http://schemas.microsoft.com/office/Access/2010/11/Server/WebServices/ApplicationDesignServic
e/GetFirewallRules
```

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

3.1.4.15.1.2 GetFirewallRulesSoapOut

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

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

3.1.4.15.2 Elements

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

Element	Description
GetFirewallRules	The input data for the **GetFirewallRules** WSDL operation.
GetFirewallRulesResponse	The result data for the **GetFirewallRules** WSDL operation.

3.1.4.15.2.1 GetFirewallRules

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

```
<xs:element name="GetFirewallRules" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="parameters"
type="tns:GetFirewallRulesParameters"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

parameters: A **GetFirewallRulesParameters**, as specified by section 3.1.4.15.3.1. MUST be present.

3.1.4.15.2.2 GetFirewallRulesResponse

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

```
<xs:element name="GetFirewallRulesResponse" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="GetFirewallRulesResult"
type="tns:GetFirewallRulesResult"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

GetFirewallRulesResult: A **GetFirewallRulesResult**, as specified by section 3.1.4.15.3.2. MUST be present.

3.1.4.15.3 Complex Types

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

Complex type	Description
GetFirewallRulesParameters	See section 3.1.4.15.3.1
GetFirewallRulesResult	See section 3.1.4.15.3.2.

Complex type	Description
ArrayOfFirewallRule	See section 3.1.4.15.3.3.

3.1.4.15.3.1 GetFirewallRulesParameters

Namespace:
http://schemas.microsoft.com/office/Access/2010/11/Server/WebServices/ApplicationDesignService

This complex type specifies the input data for the **GetFirewallRules** protocol operation.

```
<xs:complexType name="GetFirewallRulesParameters"
xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexContent mixed="false">
    <xs:extension base="tns:ServiceParameters">
      <xs:attribute name="ProtocolVersion" type="xs:string"/>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>
```

ProtocolVersion: An **Access Services Protocol Version** ([MS-ASDT] section 3.1.1.1). MUST be the same value that the protocol server returns from a call to **GetApplicationInformation** (section 3.1.4.4) in the **ProtocolVersion** element of the **GetAppInfoResult** (section 3.1.4.4.3.3). MUST be present.

3.1.4.15.3.2 GetFirewallRulesResult

Namespace:
http://schemas.microsoft.com/office/Access/2010/11/Server/WebServices/ApplicationDesignService

This complex type specifies the result data for the **GetFirewallRulesParameters** protocol operation.

The result data specifies the information about all the **FirewallRules** (section 2.2.4.15) present in the database application.

```
<xs:complexType name="GetFirewallRulesResult" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexContent mixed="false">
    <xs:extension base="tns:ServiceResult">
      <xs:sequence>
        <xs:element minOccurs="0" maxOccurs="1" name="FirewallRules"
type="tns:ArrayOfFirewallRule"/>
        <xs:element minOccurs="1" maxOccurs="1" name="Error" nillable="true"
type="tns:ServiceError"/>
      </xs:sequence>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>
```

FirewallRules: An **ArrayOfFirewallRule** complex type, as specified by section 3.1.4.15.3.3.

Error: A **ServiceError** element (section 2.2.4.7) that, if not nil ([XSD1.1-1] section 2.7.2), specifies an error that occurred on the protocol server. If the protocol operation succeeded, this element MUST be nil.

3.1.4.15.3.3   ArrayOfFirewallRule

Namespace:
http://schemas.microsoft.com/office/Access/2010/11/Server/WebServices/ApplicationDesignService

This complex type specifies a collection of **FirewallRules** (section 2.2.4.15).

```
<xs:complexType name="ArrayOfFirewallRule" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="unbounded" name="FirewallRule" nillable="true"
type="tns:FirewallRule"/>
  </xs:sequence>
</xs:complexType>
```

FirewallRule: A **FirewallRule** complex type, as specified by section 2.2.4.15.

3.1.4.15.4   Simple Types

None.

3.1.4.15.5   Attributes

None.

3.1.4.15.6   Groups

None.

3.1.4.15.7   Attribute Groups

None.

3.1.4.16   GetThemeList

This operation retrieves a list of themes that can be applied to a database application.

```
<wsdl:operation name="GetThemeList" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input message="tns:GetThemeListSoapIn"/>
  <wsdl:output message="tns:GetThemeListSoapOut"/>
</wsdl:operation>
```

The protocol client sends a **GetThemeListSoapIn** (section 3.1.4.16.1.1) request message and the protocol server responds with a **GetThemeListSoapOut** (section 3.1.4.16.1.2) response message as follows:

▪ If an error occurs on the protocol server during this operation, the protocol server MUST respond with a SOAP fault, as specified by section 2.2.10.1.

▪ Otherwise, the protocol server MUST respond with a **GetThemeListSoapOut** response message. The response message describes a set of themes that can be applied to a database application, including the theme's name, colors, and location.

3.1.4.16.1 Messages

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

Message	Description
GetThemeListSoapIn	The request WSDL message for the **GetThemeList** WSDL operation.
GetThemeListSoapOut	The response WSDL message for the **GetThemeList** WSDL operation.

3.1.4.16.1.1 GetThemeListSoapIn

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

The SOAP action value is:

```
http://schemas.microsoft.com/office/Access/2010/11/Server/WebServices/ApplicationDesignServic
e/GetThemeList
```

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

3.1.4.16.1.2 GetThemeListSoapOut

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

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

3.1.4.16.2 Elements

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

Element	Description
GetThemeList	The input data for the **GetThemeList** WSDL operation.
GetThemeListResponse	The result data for the **GetThemeList** WSDL operation.

3.1.4.16.2.1 GetThemeList

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

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

3.1.4.16.2.2 GetThemeListResponse

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

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

```
      <xs:sequence>
        <xs:element minOccurs="0" maxOccurs="1" name="GetThemeListResult"
   type="tns:GetThemeListResult"/>
      </xs:sequence>
     </xs:complexType>
  </xs:element>
```

GetThemeListResult: A **GetThemeListResult** element (section 3.1.4.16.3.1) that specifies a list of themes. MUST be present.

3.1.4.16.3 Complex Types

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

Complex type	Description
GetThemeListResult	Specifies the list of themes available on the protocol server.
ArrayOfAccessTheme	Specifies each theme available on the protocol server.
AccessTheme	Specifies a theme, including its name, location, and colors.
AccessThemeColor	Specifies a color used in a theme.

3.1.4.16.3.1 GetThemeListResult

Namespace:
http://schemas.microsoft.com/office/Access/2010/11/Server/WebServices/ApplicationDesignService

This element specifies a list of themes available on the protocol server.

```
<xs:complexType name="GetThemeListResult" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexContent mixed="false">
    <xs:extension base="tns:ServiceResult">
      <xs:sequence>
        <xs:element minOccurs="0" maxOccurs="1" name="ThemeList"
   type="tns:ArrayOfAccessTheme"/>
      </xs:sequence>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>
```

ThemeList: An **ArrayOfAccessTheme** element (section 3.1.4.16.3.2) that specifies a list of themes. MUST be present.

3.1.4.16.3.2 ArrayOfAccessTheme

Namespace:
http://schemas.microsoft.com/office/Access/2010/11/Server/WebServices/ApplicationDesignService

This element specifies each theme available on a protocol server.

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

```
<xs:sequence>
  <xs:element minOccurs="0" maxOccurs="unbounded" name="AccessTheme" nillable="true"
type="tns:AccessTheme"/>
  </xs:sequence>
</xs:complexType>
```

AccessTheme: A set of **AccessTheme** elements (section 3.1.4.16.3.3), each of which describes a theme.

3.1.4.16.3.3   AccessTheme

Namespace:
http://schemas.microsoft.com/office/Access/2010/11/Server/WebServices/ApplicationDesignService

Specifies a theme, including its name, location, and colors.

```
<xs:complexType name="AccessTheme" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="unbounded" name="ThemeColor"
type="tns:AccessThemeColor"/>
  </xs:sequence>
  <xs:attribute name="ServerRelativeUrl" type="xs:string"/>
  <xs:attribute name="ThemeName" type="xs:string"/>
</xs:complexType>
```

ThemeColor: A set of **AccessThemeColor** elements (section 3.1.4.16.3.4) that specify the colors that exist in the theme.

ServerRelativeUrl: A **string** ([XMLSCHEMA2] section 3.2.1) attribute that specifies the location of the theme. This value SHOULD be formatted as a relative URL. This value MUST be unique among the set of **AccessTheme** elements contained in an **ArrayOfAccessTheme** (section 3.1.4.16.3.2) element.

ThemeName: A **string** ([XMLSCHEMA2] section 3.2.1) attribute that specifies the name of the theme.

3.1.4.16.3.4   AccessThemeColor

Namespace:
http://schemas.microsoft.com/office/Access/2010/11/Server/WebServices/ApplicationDesignService

Specifies a color used in a theme.

```
<xs:complexType name="AccessThemeColor" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:attribute name="ColorName" type="xs:string"/>
  <xs:attribute name="Red" type="xs:int" use="required"/>
  <xs:attribute name="Green" type="xs:int" use="required"/>
  <xs:attribute name="Blue" type="xs:int" use="required"/>
  <xs:attribute name="Alpha" type="xs:int" use="required"/>
</xs:complexType>
```

ColorName: A **string** ([XMLSCHEMA2] section 3.2.1) attribute that specifies the name of the color.

Red: An **int** ([XMLSCHEMA2] section 3.3.17) attribute that specifies the red **color level**. This value MUST be in the range 0 – 255, inclusive

Green: An **int** ([XMLSCHEMA2] section 3.3.17) attribute that specifies the green color level. This value MUST be in the range 0 – 255, inclusive.

Blue: An **int** ([XMLSCHEMA2] section 3.3.17) attribute that specifies the blue color level. This value MUST be in the range 0 – 255, inclusive.

Alpha: An **int** ([XMLSCHEMA2] section 3.3.17) attribute that specifies the alpha (opacity) channel of the color. This value MUST be in the range 0 – 255, inclusive.

3.1.4.16.4 Simple Types

None.

3.1.4.16.5 Attributes

None.

3.1.4.16.6 Groups

None.

3.1.4.16.7 Attribute Groups

None.

3.1.4.17 ImportData

The **ImportData** operation triggers importing data into a table in a database application.

```
<wsdl:operation name="ImportData" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input message="tns:ImportDataSoapIn"/>
  <wsdl:output message="tns:ImportDataSoapOut"/>
</wsdl:operation>
```

The protocol client sends an **ImportDataSoapIn** (section 3.1.4.17.1.1) request message and the protocol server responds with an **ImportDataSoapOut** (section 3.1.4.17.1.2) response message as follows:

▪ If an error occurs on the protocol server during this operation, then the protocol server MUST respond with a SOAP fault, as specified in section 2.2.10.1.

▪ Otherwise, the protocol server MUST respond with an **ImportDataSoapOut** response message that contains the number of rows inserted into the specified table.

3.1.4.17.1 Messages

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

Message	Description
ImportDataSoapIn	The request WSDL message for the **ImportData** WSDL operation.
ImportDataSoapOut	The response WSDL message for the **ImportData** WSDL operation.

3.1.4.17.1.1 ImportDataSoapIn

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

The SOAP action value is:

```
http://schemas.microsoft.com/office/Access/2010/11/Server/WebServices/ApplicationDesignServic
e/ImportData
```

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

3.1.4.17.1.2 ImportDataSoapOut

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

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

3.1.4.17.2 Elements

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

Element	Description
ImportData	The input data for the **ImportData** WSDL operation.
ImportDataResponse	The result data for the **ImportData** WSDL operation.

3.1.4.17.2.1 ImportData

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

```
<xs:element name="ImportData" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="parameters"
type="tns:ImportDataParameters"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

parameters: An **ImportDataParameters** element (section 3.1.4.17.3.1) that specifies the information that the protocol server needs to import. This element MUST be present.

3.1.4.17.2.2 ImportDataResponse

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

```
<xs:element name="ImportDataResponse" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="ImportDataResult"
type="tns:ImportDataResult"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

ImportDataResult: An **ImportDataResult** element (section 3.1.4.17.3.2) that specifies the result of the **ImportData** operation. MUST be present.

3.1.4.17.3 Complex Types

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

Complex type	Description
ImportDataParameters	Specifies data to import into a table.
ImportDataResult	Specifies the result of the import operation.

3.1.4.17.3.1 ImportDataParameters

Namespace:
http://schemas.microsoft.com/office/Access/2010/11/Server/WebServices/ApplicationDesignService

Specifies the information that the protocol server needs in order to import data into a table.

```
<xs:complexType name="ImportDataParameters" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexContent mixed="false">
    <xs:extension base="tns:ServiceParameters">
      <xs:sequence>
        <xs:element minOccurs="0" maxOccurs="1" name="Body">
          <xs:complexType mixed="true">
            <xs:sequence>
              <xs:any/>
            </xs:sequence>
          </xs:complexType>
        </xs:element>
      </xs:sequence>
      <xs:attribute name="ProtocolVersion" type="xs:string"/>
      <xs:attribute name="Version" type="xs:string"/>
      <xs:attribute name="TargetObjectID" type="xs:int" use="required"/>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>
```

Body: MUST contain the XML as defined below that contains the full definition of the fields in the table specified by **TargetObjectID** and the data that will be imported into that table. MUST contain one **ColumnSpecification** element and one **Rows** element. See example in section 4.1 for more information. MUST be present.

The **ColumnSpecification** element MUST contain one **Column** element for each field in the table specified by **TargetObjectID**. The **Column** element MUST contain the string attributes **Target**, **Name** and **Type**. The **Target** attribute specifies the name of the field. The **Name** attribute specifies an autogenerated string to refer to that field later and it SHOULD start with "C" postfixed by the number that denotes the order of the field. The **Type** attribute specifies the type of the field and MUST be one of the following values.

Value	Meaning
Text	A **string** value up to 4000 characters in length.
Number	A **floating-point number**.
Yes/No	A **Boolean** value.
Currency	A monetary value.
Date/Time	A **datetime** value.
LongText	A **string** value up to max storage size specified in nvarchar [MSDN-TSQL-Ref] data type.
Integer	An **integer** value.
Hyperlink	A hyperlink value.

The **Rows** element MUST contain one **R** element for each record that will be inserted into the table specified by **TargetObjectID**. The **R** element MUST contain one element for each field value that is not empty. The name of the element that specifies that field value MUST be same as the **Name** attribute of a **Column** element from the **ColumnSpecification** element. The value for this element MUST be the string representation of data in culture invariant format.

ProtocolVersion: An **Access Services Protocol Version** ([MS-ASDT] section 3.1.1.1). MUST be the same value that the protocol server returns from a call to **GetApplicationInformation** (section 3.1.4.4) in the **ProtocolVersion** element of the **GetAppInfoResult** (section 3.1.4.4.3.3). MUST be present.

Version: A **string** ([XMLSCHEMA2] section 3.2.1) attribute that specifies the latest version of the object that the protocol client has cached. MUST be present. The protocol server MUST return an error unless this is the same value as the **ObjectVersion** attribute of the **AccessObject** (section 2.2.4.1) element that would be returned from a call to **GetApplicationInformation** (section 3.1.4.4) in the **NewObjects** or **UpdatedObjects** elements of the **GetAppInfoResult** element, where the **ID** of the **AccessObject** is the same as the **ID** of this element.

TargetObjectID: An **int** ([XMLSCHEMA2] section 3.3.17) attribute that specifies the identifier of the object that we import data into. **TargetObjectID** MUST be the same value as the **ID** attribute of one of the **AccessObject** elements returned by the protocol server for a call to **GetApplicationInformation** (section 3.1.4.4) in the **NewObjects** or **UpdatedObjects** elements of the **GetAppInfoResult** element.

3.1.4.17.3.2 ImportDataResult

Namespace:
http://schemas.microsoft.com/office/Access/2010/11/Server/WebServices/ApplicationDesignService

Specifies the result of the import data operation.

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

```
      <xs:complexContent mixed="false">
        <xs:extension base="tns:ServiceResult">
          <xs:sequence>
            <xs:element minOccurs="1" maxOccurs="1" name="Error" nillable="true"
  type="tns:ServiceError"/>
          </xs:sequence>
          <xs:attribute name="RowsProcessed" type="xs:int" use="required"/>
        </xs:extension>
      </xs:complexContent>
  </xs:complexType>
```

Error: A **ServiceError** element (section 2.2.4.7) that, if not nil ([XSD1.1-1] section 2.7.2), specifies an error that occurred on the protocol server. If the import data operation succeeded, this element MUST be nil.

RowsProcessed: Specifies the number of rows that was imported into table in response to the request from the protocol client.

3.1.4.17.4 Simple Types

None.

3.1.4.17.5 Attributes

None.

3.1.4.17.6 Groups

None.

3.1.4.17.7 Attribute Groups

None.

3.1.4.18 RefreshLinkedTableInformation

This operation refreshes an existing **linked table** ([MS-AXL2] section 2.1.1.6) in a database application on the protocol server. The protocol server uses the **ID** attribute in the **RefreshLinkedTableInformationParameters** (section 3.1.4.18.3.1) element to identify the **linked table** ([MS-AXL2] section 2.1.1.6) in the database application, updates its definition from the source of the **linked table** ([MS-AXL2] section 2.1.1.6), and returns the updated definition to the protocol client.

```
  <wsdl:operation name="RefreshLinkedTableInformation"
  xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
     <wsdl:input message="tns:RefreshLinkedTableInformationSoapIn"/>
     <wsdl:output message="tns:RefreshLinkedTableInformationSoapOut"/>
  </wsdl:operation>
```

The protocol client sends a **RefreshLinkedTableInformationSoapIn** (section 3.1.4.18.1.1) request message and the protocol server responds with a **RefreshLinkedTableInformationSoapOut** (section 3.1.4.18.1.2) response message as follows:

- If an error occurs on the protocol server during this operation, the protocol server MUST respond with a SOAP fault, as specified by section 2.2.10.1.

- Otherwise, the protocol server MUST respond with a **RefreshLinkedTableInformationSoapOut** response message that contains information about the requested **linked table** ([MS-AXL2] section 2.1.1.6).

3.1.4.18.1 Messages

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

Message	Description
RefreshLinkedTableInformationSoapIn	The request WSDL message for the **RefreshLinkedTableInformation** WSDL operation.
RefreshLinkedTableInformationSoapOut	The response WSDL message for the **RefreshLinkedTableInformation** WSDL operation.

3.1.4.18.1.1 RefreshLinkedTableInformationSoapIn

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

The SOAP action value is:

```
http://schemas.microsoft.com/office/Access/2010/11/Server/WebServices/ApplicationDesignServic
e/RefreshLinkedTableInformation
```

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

3.1.4.18.1.2 RefreshLinkedTableInformationSoapOut

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

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

3.1.4.18.2 Elements

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

Element	Description
RefreshLinkedTableInformation	The input data for the **RefreshLinkedTableInformation** WSDL operation.
RefreshLinkedTableInformationResponse	The result data for the **RefreshLinkedTableInformation** WSDL operation.

3.1.4.18.2.1 RefreshLinkedTableInformation

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

```
<xs:element name="RefreshLinkedTableInformation" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="parameters"
type="tns:RefreshLinkedTableInformationParameters"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

parameters: A **RefreshLinkedTableInformationParameters** (section 3.1.4.18.3.1) element that specifies the **linked table** ([MS-AXL2] section 2.1.1.6) about which to retrieve information. MUST be present.

3.1.4.18.2.2 RefreshLinkedTableInformationResponse

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

```
<xs:element name="RefreshLinkedTableInformationResponse"
xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="RefreshLinkedTableInformationResult"
type="tns:RefreshLinkedTableInformationResult"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

RefreshLinkedTableInformationResult: A **RefreshLinkedTableInformationResult** (section 3.1.4.18.3.2) element that specifies information about the requested **linked table** ([MS-AXL2] section 2.1.1.6). MUST be present.

3.1.4.18.3 Complex Types

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

Complex type	Description
RefreshLinkedTableInformationParameters	Specifies a table about which to retrieve information.
RefreshLinkedTableInformationResult	Specifies information about a table.

3.1.4.18.3.1 RefreshLinkedTableInformationParameters

Namespace:
http://schemas.microsoft.com/office/Access/2010/11/Server/WebServices/ApplicationDesignService

Specifies information that identifies the **linked table** ([MS-AXL2] section 2.1.1.6) about which the protocol client is requesting information.

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

```
          <xs:attribute name="ProtocolVersion" type="xs:string"/>
          <xs:attribute name="ID" type="xs:int" use="required"/>
        </xs:extension>
    </xs:complexContent>
  </xs:complexType>
```

ProtocolVersion: An **Access Services Protocol Version** token ([MS-ASDT] section 3.1.1.1).
MUST be the same value that the protocol server returns from a call to
GetApplicationInformation (section 3.1.4.4) in the **ProtocolVersion** element of the
GetAppInfoResult (section 3.1.4.4.3.3). MUST be present.

ID: An **int** ([XMLSCHEMA2] section 3.3.17) attribute that specifies the identifier of the **linked table**
([MS-AXL2] section 2.1.1.6) to be retrieved. **ID** MUST be the same value as the **ID** attribute of one
of the **AccessObject** elements with **ObjectType** as "LinkedTable" that would be returned from a
call to **GetApplicationInformation** message (section 3.1.4.4) in the **NewObjects** or
UpdatedObjects elements of the **GetAppInfoResult** element.

3.1.4.18.3.2   RefreshLinkedTableInformationResult

Namespace:
http://schemas.microsoft.com/office/Access/2010/11/Server/WebServices/ApplicationDesignService

Specifies the table about which the protocol client requested information.

```
<xs:complexType name="RefreshLinkedTableInformationResult"
xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexContent mixed="false">
    <xs:extension base="tns:ServiceResult">
      <xs:sequence>
        <xs:element minOccurs="0" maxOccurs="1" name="Objects" type="tns:AccessObjectList"/>
      </xs:sequence>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>
```

Objects: An **AccessObjectList** (section 2.2.4.12) that contains the information about the
requested **linked table** ([MS-AXL2] section 2.1.1.6). MUST be present. MUST contain exactly one
AccessObject element, and the **ObjectType** of that element MUST be "LinkedTable".

3.1.4.18.4   Simple Types

None.

3.1.4.18.5   Attributes

None.

3.1.4.18.6   Groups

None.

3.1.4.18.7   Attribute Groups

None.

3.1.4.19   SetApplicationProperties

This operation sets one or more properties on a database application.

```
<wsdl:operation name="SetApplicationProperties"
xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input message="tns:SetApplicationPropertiesSoapIn"/>
  <wsdl:output message="tns:SetApplicationPropertiesSoapOut"/>
</wsdl:operation>
```

The protocol client sends a **SetApplicationPropertiesSoapIn** (section 3.1.4.19.1.1) request message and the protocol server responds with a **SetApplicationPropertiesSoapOut** (section 3.1.4.19.1.2) response message as follows:

- If an error occurs on the protocol server during this operation, the protocol server MUST respond with a SOAP fault, as specified by section 2.2.10.1.

- Otherwise, the protocol server MUST respond with a **SetApplicationPropertiesSoapOut** response message.

3.1.4.19.1   Messages

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

Message	Description
SetApplicationPropertiesSoapIn	The request WSDL message for the **SetApplicationProperties** WSDL operation.
SetApplicationPropertiesSoapOut	The response WSDL message for the **SetApplicationProperties** WSDL operation.

3.1.4.19.1.1   SetApplicationPropertiesSoapIn

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

The SOAP action value is:

```
http://schemas.microsoft.com/office/Access/2010/11/Server/WebServices/ApplicationDesignServic
e/SetApplicationProperties
```

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

3.1.4.19.1.2   SetApplicationPropertiesSoapOut

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

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

3.1.4.19.2   Elements

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

Element	Description
SetApplicationProperties	The input data for the **SetApplicationProperties** WSDL operation.
SetApplicationPropertiesResponse	The result data for the **SetApplicationProperties** WSDL operation.

3.1.4.19.2.1 SetApplicationProperties

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

```
<xs:element name="SetApplicationProperties" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="parameters"
type="tns:SetApplicationPropertiesParameters"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

parameters: A **SetApplicationPropertiesParameters** element (section 3.1.4.19.3.1) that specifies the properties and values to set. MUST be present.

3.1.4.19.2.2 SetApplicationPropertiesResponse

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

```
<xs:element name="SetApplicationPropertiesResponse"
xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="SetApplicationPropertiesResult"
type="tns:SetApplicationPropertiesResult"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

SetApplicationPropertiesResult: A **SetApplicationPropertiesResult** element (section 3.1.4.19.3.2) that specifies the result of setting the properties on the database application. MUST be present.

3.1.4.19.3 Complex Types

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

Complex type	Description
SetApplicationPropertiesParameters	Specifies the properties to set.
SetApplicationPropertiesResult	Specifies an error that occurred while setting properties, if any.

3.1.4.19.3.1 SetApplicationPropertiesParameters

Namespace:
http://schemas.microsoft.com/office/Access/2010/11/Server/WebServices/ApplicationDesignService

This element specifies a set of properties to be set on a database application.

```
<xs:complexType name="SetApplicationPropertiesParameters"
xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexContent mixed="false">
    <xs:extension base="tns:ServiceParameters">
      <xs:sequence>
        <xs:element minOccurs="0" maxOccurs="unbounded" name="ApplicationProperty"
type="tns:ApplicationPropertyValue"/>
      </xs:sequence>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>
```

ApplicationProperty: An **ApplicationPropertyValue** element (section 2.2.4.13) that specifies the name and value of a property to be set on a database application. MUST be present.

3.1.4.19.3.2 SetApplicationPropertiesResult

Namespace:
http://schemas.microsoft.com/office/Access/2010/11/Server/WebServices/ApplicationDesignService

Specifies the result of setting properties on a database application.

```
<xs:complexType name="SetApplicationPropertiesResult"
xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexContent mixed="false">
    <xs:extension base="tns:ServiceResult">
      <xs:sequence>
        <xs:element minOccurs="1" maxOccurs="1" name="Error" nillable="true"
type="tns:ServiceError"/>
      </xs:sequence>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>
```

Error: A **ServiceError** element (section 2.2.4.7) that, if not nil ([XSD1.1-1] section 2.7.2), specifies an error that occurred on the protocol server. If all property values were successfully set, this value MUST be nil.

3.1.4.19.4 Simple Types

None.

3.1.4.19.5 Attributes

None.

3.1.4.19.6 Groups

None.

3.1.4.19.7 Attribute Groups

None.

3.1.4.20 SetDataConnectivityStatus

This operation enables or disables a login in the database application, which is used to connect to the database application directly. The protocol client MUST call this operation only if the **IsDataConnectivitySupported** element of the **GetAppInfoResult** (section 3.1.4.4.3.3) in the response body of a previous call to **GetApplicationInformation** operation (section 3.1.4.4) is "true".

```
<wsdl:operation name="SetDataConnectivityStatus"
xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input message="tns:SetDataConnectivityStatusSoapIn"/>
  <wsdl:output message="tns:SetDataConnectivityStatusSoapOut"/>
</wsdl:operation>
```

The protocol client sends a **SetDataConnectivityStatusSoapIn** (section 3.1.4.20.1.1) request message and the protocol server responds with a **SetDataConnectivityStatusSoapOut** (section 3.1.4.20.1.2) response message as follows:

- If an error occurs on the protocol server during this operation, the protocol server MUST respond with a SOAP fault, as specified in section 2.2.10.1.

- Otherwise, the protocol server MUST respond with a **SetDataConnectivityStatusSoapOut** response message that contains information about the login which was enabled or disabled by the protocol operation.

3.1.4.20.1 Messages

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

Message	Description
SetDataConnectivityStatusSoapIn	The request WSDL message for the **SetDataConnectivityStatus** WSDL operation.
SetDataConnectivityStatusSoapOut	The response WSDL message for the **SetDataConnectivityStatus** WSDL operation.

3.1.4.20.1.1 SetDataConnectivityStatusSoapIn

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

The SOAP action value is:

```
http://schemas.microsoft.com/office/Access/2010/11/Server/WebServices/ApplicationDesignService/SetDataConnectivityStatus
```

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

3.1.4.20.1.2 SetDataConnectivityStatusSoapOut

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

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

3.1.4.20.2 Elements

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

Element	Description
SetDataConnectivityStatus	The input data for the **SetDataConnectivityStatus** WSDL operation.
SetDataConnectivityStatusResponse	The result data for the **SetDataConnectivityStatus** WSDL operation.

3.1.4.20.2.1 SetDataConnectivityStatus

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

```
<xs:element name="SetDataConnectivityStatus" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="parameters"
type="tns:SetDataConnectivityStatusParameters"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

parameters: A **SetDataConnectivityStatusParameter** (section 3.1.4.19.3.1) that specifies the permission level of a login and whether it is to be enabled or disabled. MUST be present.

3.1.4.20.2.2 SetDataConnectivityStatusResponse

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

```
<xs:element name="SetDataConnectivityStatusResponse"
xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="SetDataConnectivityStatusResult"
type="tns:SetDataConnectivityStatusResult"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

SetDataConnectivityStatusResult: A **SetDataConnectivityStatusResult** (section 3.1.4.19.3.2) that specifies whether enabling or disabling of the login with requested permission level was successful. MUST be present.

3.1.4.20.3 Complex Types

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

Complex type	Description
SetDataConnectivityStatusParameters	See section 3.1.4.20.3.1.
SetDataConnectivityStatusResult	See section 3.1.4.20.3.2.

3.1.4.20.3.1 SetDataConnectivityStatusParameters

Namespace:
http://schemas.microsoft.com/office/Access/2010/11/Server/WebServices/ApplicationDesignService

This complex type specifies the input data for the **SetDataConnectivityStatus** protocol operation.

```
<xs:complexType name="SetDataConnectivityStatusParameters"
xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexContent mixed="false">
    <xs:extension base="tns:ServiceParameters">
      <xs:attribute name="ProtocolVersion" type="xs:string"/>
      <xs:attribute name="Permission" type="tns:ConnectivityPermissionLevel" use="required"/>
      <xs:attribute name="IsEnabled" type="xs:boolean" use="required"/>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>
```

ProtocolVersion: An **Access Services Protocol Version** ([MS-ASDT] section 3.1.1.1). MUST be the same value that the protocol server returns from a call to **GetApplicationInformation** (section 3.1.4.4) in the **ProtocolVersion** element of the **GetAppInfoResult** (section 3.1.4.4.3.3). MUST Be present.

Permission: A **ConnectivityPermissionLevel** (section 2.2.5.2) that specifies the permission level of the logins on the database application. MUST be present

IsEnabled: A **boolean** ([XMLSCHEMA2] section 3.2.2) that specifies whether the login is to be enabled or disabled. If the value of this element is "true", a login with permissions specified by **Permission** is enabled on the database application. If the value is "false", the login is disabled.

3.1.4.20.3.2 SetDataConnectivityStatusResult

Namespace:
http://schemas.microsoft.com/office/Access/2010/11/Server/WebServices/ApplicationDesignService

This complex type specifies the result data for the **SetDataConnectivityStatus** protocol operation.

The result data contains information about the login which is enabled or disabled by the protocol server during the execution of this operation.

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

```
      <xs:sequence>
        <xs:element minOccurs="0" maxOccurs="1" name="ConnectivityStatusInformation"
  type="tns:ConnectivityStatusInformation"/>
        <xs:element minOccurs="1" maxOccurs="1" name="Error" nillable="true"
  type="tns:ServiceError"/>
      </xs:sequence>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>
```

ConnectivityStatusInformation: A **ConnectivityStatusInformation** (section 2.2.4.14) that specifies information about the login, it's permission level and if it is enabled or disabled. MUST be present.

Error: A **ServiceError** element (section 2.2.4.7) that, if not nil ([XSD1.1-1] section 2.7.2), specifies an error that occurred on the protocol server. If the protocol operation succeeded, this element MUST be nil.

3.1.4.20.4   Simple Types

None.

3.1.4.20.5   Attributes

None.

3.1.4.20.6   Groups

None.

3.1.4.20.7   Attribute Groups

None.

3.1.4.21   GetPackage

This operation retrieves a package that represents a database application, including its objects and data.

```
<wsdl:operation name="GetPackage" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input message="tns:GetPackageSoapIn"/>
  <wsdl:output message="tns:GetPackageSoapOut"/>
</wsdl:operation>
```

The protocol client sends a **GetPackageSoapIn** (section 3.1.4.21.1.1) request message and the protocol server responds with a **GetPackageSoapOut** (section 3.1.4.21.1.2) response message as follows:

- If an error occurs on the protocol server during this operation, the protocol server MUST respond with a SOAP fault, as specified by section 2.2.10.1.

- Otherwise, the protocol server MUST respond with a **GetPackageSoapOut** response message that contains the package.

3.1.4.21.1 Messages

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

Message	Description
GetPackageSoapIn	The request WSDL message for the **GetPackage** WSDL operation.
GetPackageSoapOut	The response WSDL message for the **GetPackage** WSDL operation.

3.1.4.21.1.1 GetPackageSoapIn

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

The SOAP action value is:

```
http://schemas.microsoft.com/office/Access/2010/11/Server/WebServices/ApplicationDesignServic
e/GetPackage
```

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

3.1.4.21.1.2 GetPackageSoapOut

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

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

3.1.4.21.2 Elements

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

Element	Description
GetPackage	The input data for the **GetPackage** WSDL operation.
GetPackageResponse	The result data for the **GetPackage** WSDL operation.

3.1.4.21.2.1 GetPackage

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

```
<xs:element name="GetPackage" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="parameters"
type="tns:GetPackageParameters"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

parameters: A **GetPackageParameters** element (section 3.1.4.21.3.1) that specifies the identifier of the package to retrieve. MUST be present.

3.1.4.21.2.2 GetPackageResponse

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

```
<xs:element name="GetPackageResponse" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="GetPackageResult"
type="tns:GetPackageResult"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

GetPackageResult: A **GetPackageResult** element (section 3.1.4.21.3.2) that contains the package. MUST be present.

3.1.4.21.3 Complex Types

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

Complex type	Description
GetPackageParameters	Specifies the identifier of the package that the protocol client is requesting.
GetPackageResult	Specifies the status of the package and contains the created package.

3.1.4.21.3.1 GetPackageParameters

Namespace:
http://schemas.microsoft.com/office/Access/2010/11/Server/WebServices/ApplicationDesignService

Specifies the identifier of the package for the protocol server to retrieve.

```
<xs:complexType name="GetPackageParameters" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexContent mixed="false">
    <xs:extension base="tns:ServiceParameters">
      <xs:attribute name="ProtocolVersion" type="xs:string"/>
      <xs:attribute name="PackageId" type="xs:string"/>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>
```

ProtocolVersion: An **Access Services Protocol Version** token ([MS-ASDT] section 3.1.1.1).
ProtocolVersion MUST be the same value that the protocol server returns from a call to
GetApplicationInformation (section 3.1.4.4) in the **ProtocolVersion** element of the
GetAppInfoResult element (section 3.1.4.4.3.3). MUST be present.

PackageId: A **string** ([XMLSCHEMA2] section 3.2.1) that specifies the identifier of the package
requested by the protocol client. MUST be present.

3.1.4.21.3.2 GetPackageResult

Namespace:
http://schemas.microsoft.com/office/Access/2010/11/Server/WebServices/ApplicationDesignService

Specifies the status of the package specified by the **GetPackageParameters** (section 3.1.4.21.3.1) element in the request from the protocol client and, if the package has been created, contains the package.

```
<xs:complexType name="GetPackageResult" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexContent mixed="false">
    <xs:extension base="tns:ServiceResult">
      <xs:sequence>
        <xs:element minOccurs="1" maxOccurs="1" name="Status" type="tns:PackageStatus"/>
        <xs:element minOccurs="0" maxOccurs="1" name="Data" type="xs:string"/>
      </xs:sequence>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>
```

Status: A **PackageStatus** (section 3.1.4.21.4.1) element that specifies whether the package has been created.

Data: A **string** ([XMLSCHEMA2] section 3.2.1) that specifies the package. MUST NOT be present if the value of **Status** is **Creating**. MUST be present if the value of **Status** is **Created**. If present, MUST be a representation of a ZIP archive encoded with base64 encoding, as specified by [RFC4648] section 4. The ZIP archive, when decoded, MUST conform to the Open Packaging Conventions as specified by [ISO/IEC-29500-2] and the further packaging restrictions specified by [ISO/IEC-29500-1] section 9.

3.1.4.21.4 Simple Types

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

Simple type	Description
PackageStatus	Specifies the status of a package that was requested by a protocol client.

3.1.4.21.4.1 PackageStatus

Namespace:
http://schemas.microsoft.com/office/Access/2010/11/Server/WebServices/ApplicationDesignService

Specifies the status of a package that was requested by a protocol client.

```
<xs:simpleType name="PackageStatus" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:restriction base="xs:string">
    <xs:enumeration value="Creating"/>
    <xs:enumeration value="Created"/>
  </xs:restriction>
</xs:simpleType>
```

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

Value	Meaning
Creating	The protocol server is still creating the package.
Created	The protocol server has finished creating the package.

3.1.4.21.5   Attributes

None.

3.1.4.21.6   Groups

None.

3.1.4.21.7   Attribute Groups

None.

3.1.5   Timer Events

None.

3.1.6   Other Local Events

None.

4 Protocol Examples

4.1 Use CreateAccessObject to create a Table in a database application

This example describes how to use **CreateAccessObject,** as described in section 3.1.4.1, to create a Table in a database application.

The protocol client sends the following message to the protocol server using an HTTP POST to http://www.example.com/exampleapplication/_vti_bin/accsvc/ApplicationDesignService.asmx to create a table. In this example, the protocol client requests the creation of a table called "Contacts" with an "ID" field, a "First Name" field, a "Last Name" field and a "Phone" field. The **Body** element, as defined in section 3.1.4.1.3.1, contains the schema for the table.

```
<?xml version="1.0" encoding="UTF-8"?>
<soap12:Envelope xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:xsd="http://www.w3.org/2001/XMLSchema" xmlns:soap12="http://www.w3.org/2003/05/soap-
envelope">
  <soap12:Body>
    <CreateAccessObject
xmlns="http://schemas.microsoft.com/office/Access/2010/11/Server/WebServices/ApplicationDesig
nService">
      <parameters ProtocolVersion="15.0.3.0" Name="Contacts" Description=""
ObjectType="Table">
        <Body>
          <Schema Namespace="Access.Store"
xmlns="http://schemas.microsoft.com/ado/2008/09/edm"
xmlns:axl="http://schemas.microsoft.com/office/accessservices/2010/12/application">
            <EntityContainer Name="AccessStoreContainer">
              <EntitySet Name="Contacts" EntityType="Access.Store.Contacts"/>
            </EntityContainer>
            <EntityType Name="Contacts">
              <Key>
                <PropertyRef Name="ID"/>
              </Key>
              <Property Name="ID" Type="Int32" axl:StoreGeneratedPattern="Identity"
Nullable="false"/>
              <Property Name="First Name" Type="String" Unicode="true"
axl:TextType="SingleLine" MaxLength="220"/>
              <Property Name="Last Name" Type="String" Unicode="true"
axl:TextType="SingleLine" MaxLength="220"/>
              <Property Name="Phone" Type="String" Unicode="true" axl:TextType="SingleLine"
MaxLength="220"/>
              <axl:EventDataMacro>
                <axl:DataMacro Event="AfterInsert"/>
              </axl:EventDataMacro>
              <axl:EventDataMacro>
                <axl:DataMacro Event="AfterUpdate"/>
              </axl:EventDataMacro>
              <axl:EventDataMacro>
                <axl:DataMacro Event="AfterDelete"/>
              </axl:EventDataMacro>
            </EntityType>
          </Schema>
        </Body>
      </parameters>
    </CreateAccessObject>
  </soap12:Body>
</soap12:Envelope>
```

The protocol server responds with the following message:

```xml
<?xml version="1.0" encoding="utf-8"?>
<soap:Envelope xmlns:soap="http://www.w3.org/2003/05/soap-envelope"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:xsd="http://www.w3.org/2001/XMLSchema">
  <soap:Body>
    <CreateAccessObjectResponse
xmlns="http://schemas.microsoft.com/office/Access/2010/11/Server/WebServices/ApplicationDesig
nService">
      <CreateAccessObjectResult>
        <Warning xsi:nil="true" />
        <Objects>
          <AccessObject xsi:type="Table" ID="2" Name="Contacts" ObjectType="Table"
Description="" ModifiedExternally="false" Version="2011-11-17T02:18:56.4500000">
            <ParentId xsi:nil="true" />
            <Definition>
              <Schema Namespace="Access.Store"
xmlns="http://schemas.microsoft.com/ado/2008/09/edm"
xmlns:axl="http://schemas.microsoft.com/office/accessservices/2010/12/application">
                <EntityContainer Name="AccessStoreContainer">
                  <EntitySet Name="Contacts" EntityType="Access.Store.Contacts"/>
                </EntityContainer>
                <EntityType Name="Contacts">
                  <Key>
                    <PropertyRef Name="ID"/>
                  </Key>
                  <Property Name="ID" Type="Int32" axl:ObjectId="ID" Nullable="false"
axl:StoreGeneratedPattern="Identity"/>
                  <Property Name="First Name" Type="String" axl:ObjectId="First Name"
Unicode="true" axl:TextType="SingleLine" MaxLength="220"/>
                  <Property Name="Last Name" Type="String" axl:ObjectId="Last Name"
Unicode="true" axl:TextType="SingleLine" MaxLength="220"/>
                  <Property Name="Phone" Type="String" axl:ObjectId="Phone" Unicode="true"
axl:TextType="SingleLine" MaxLength="220"/>
                  <axl:EventDataMacro>
                    <axl:DataMacro Event="AfterInsert"/>
                  </axl:EventDataMacro>
                  <axl:EventDataMacro>
                    <axl:DataMacro Event="AfterUpdate"/>
                  </axl:EventDataMacro>
                  <axl:EventDataMacro>
                    <axl:DataMacro Event="AfterDelete"/>
                  </axl:EventDataMacro>
                </EntityType>
              </Schema>
            </Definition>
          </AccessObject>
        </Objects>
        <RefreshRequired>false</RefreshRequired>
      </CreateAccessObjectResult>
    </CreateAccessObjectResponse>
  </soap:Body>
</soap:Envelope>
```

In this example, the protocol server responds with an **AccessObject**, as defined in section 2.2.4.1.
The **ID** attribute uniquely identifies this object within the database application. The **Version**
attribute uniquely identifies this version of the object. The **Definition** element contains the schema
for the table that was created by the protocol server. The **ID** and **Version** are used by the protocol

client when it sends an **UpdateAccessObject** request, as described in section 3.1.4.8. See section 4.2 for example of **UpdateAccessObject.**

4.2   Use UpdateAccessObject to update a Table in a database application

This example describes how to use **UpdateAccessObject,** as described in section 3.1.4.8, to update a Table in a database application.

The protocol client sends the following message to the protocol server using an HTTP POST to http://www.example.com/exampleapplication/_vti_bin/accsvc/ApplicationDesignService.asmx to update the table. In this example, the protocol client requests the update of a table named "Contacts". The protocol client is adding a "Birthday" field to the Contacts table.

The **ID** attribute equals the "2" which is the identity of this object on the protocol server. The **ObjectVersion** attribute contains the version of this object. **ID** and **ObjectVersion** are returned by the protocol server as part of the response to requests such as **CreateAccessObject, GetAccessObject** or **GetApplicationInformation**. An example of **CreateAccessObject** can be found in section 4.1.

The element **Body**, as defined in section 3.1.4.8.3.1, contains the schema for the table including the new "Birthday" field. The **axl:ObjectId** attribute is used to uniquely identify the fields within this table. Existing fields such as "First Name" include an **axl:ObjectId** attribute and new fields such as "Birthday" do not. The **axl:ObjectId** attribute is returned as part of the response to requests such as **CreateAccessObject, GetAccessObject** or **GetApplicationInformation**.

```
<?xml version="1.0" encoding="UTF-8"?>
<soap12:Envelope xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:xsd="http://www.w3.org/2001/XMLSchema" xmlns:soap12="http://www.w3.org/2003/05/soap-
envelope">
  <soap12:Body>
    <UpdateAccessObject
xmlns="http://schemas.microsoft.com/office/Access/2010/11/Server/WebServices/ApplicationDesig
nService">
      <parameters ProtocolVersion="15.0.3.0" ID="2" ObjectVersion="2011-11-
17T02:18:56.4500000" Name="Contacts" Description="">
        <Body>
          <Schema Namespace="Access.Store"
xmlns="http://schemas.microsoft.com/ado/2008/09/edm"
xmlns:axl="http://schemas.microsoft.com/office/accessservices/2010/12/application">
            <EntityContainer Name="AccessStoreContainer">
              <EntitySet Name="Contacts" EntityType="Access.Store.Contacts"/>
            </EntityContainer>
            <EntityType Name="Contacts">
              <Key>
                <PropertyRef Name="ID"/>
              </Key>
              <Property Name="ID" Type="Int32" axl:StoreGeneratedPattern="Identity"
axl:ObjectId="ID" Nullable="false"/>
              <Property Name="First Name" Type="String" Unicode="true"
axl:TextType="SingleLine" axl:ObjectId="First Name" MaxLength="220"/>
              <Property Name="Last Name" Type="String" Unicode="true"
axl:TextType="SingleLine" axl:ObjectId="Last Name" MaxLength="220"/>
              <Property Name="Phone" Type="String" Unicode="true" axl:TextType="SingleLine"
axl:ObjectId="Phone" MaxLength="220"/>
              <Property Name="Birthday" Type="DateTime" axl:UnderlyingType="Date"
axl:Format="Short Date"/>
              <axl:EventDataMacro>
                <axl:DataMacro Event="AfterInsert"/>
              </axl:EventDataMacro>
```

```
              <axl:EventDataMacro>
                <axl:DataMacro Event="AfterUpdate"/>
              </axl:EventDataMacro>
              <axl:EventDataMacro>
                <axl:DataMacro Event="AfterDelete"/>
              </axl:EventDataMacro>
            </EntityType>
          </Schema>
        </Body>
      </parameters>
    </UpdateAccessObject>
  </soap12:Body>
</soap12:Envelope>
```

The protocol server responds with the following message:

```
<?xml version="1.0" encoding="utf-8"?>
<soap:Envelope xmlns:soap="http://www.w3.org/2003/05/soap-envelope"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:xsd="http://www.w3.org/2001/XMLSchema">
  <soap:Body>
    <UpdateAccessObjectResponse
xmlns="http://schemas.microsoft.com/office/Access/2010/11/Server/WebServices/ApplicationDesig
nService">
      <UpdateAccessObjectResult>
        <Warning xsi:nil="true" />
        <Objects>
          <AccessObject xsi:type="Table" ID="2" Name="Contacts" ObjectType="Table"
Description="" ModifiedExternally="false" Version="2011-11-17T02:28:41.7300000">
            <ParentId xsi:nil="true" />
            <Definition>
              <Schema Namespace="Access.Store"
xmlns="http://schemas.microsoft.com/ado/2008/09/edm"
xmlns:axl="http://schemas.microsoft.com/office/accessservices/2010/12/application">
                <EntityContainer Name="AccessStoreContainer">
                  <EntitySet Name="Contacts" EntityType="Access.Store.Contacts"/>
                </EntityContainer>
                <EntityType Name="Contacts">
                  <Key>
                    <PropertyRef Name="ID"/>
                  </Key>
                  <Property Name="ID" Type="Int32" axl:ObjectId="ID" Nullable="false"
axl:StoreGeneratedPattern="Identity"/>
                  <Property Name="First Name" Type="String" axl:ObjectId="First Name"
Unicode="true" axl:TextType="SingleLine" MaxLength="220"/>
                  <Property Name="Last Name" Type="String" axl:ObjectId="Last Name"
Unicode="true" axl:TextType="SingleLine" MaxLength="220"/>
                  <Property Name="Phone" Type="String" axl:ObjectId="Phone" Unicode="true"
axl:TextType="SingleLine" MaxLength="220"/>
                  <Property Name="Birthday" Type="DateTime" axl:ObjectId="Birthday"
axl:UnderlyingType="Date" axl:Format="Short Date"/>
                  <axl:EventDataMacro>
                    <axl:DataMacro Event="AfterInsert"/>
                  </axl:EventDataMacro>
                  <axl:EventDataMacro>
                    <axl:DataMacro Event="AfterUpdate"/>
                  </axl:EventDataMacro>
                  <axl:EventDataMacro>
                    <axl:DataMacro Event="AfterDelete"/>
```

```
                </axl:EventDataMacro>
              </EntityType>
            </Schema>
          </Definition>
        </AccessObject>
      </Objects>
      <Error xsi:nil="true" />
      <RefreshRequired>false</RefreshRequired>
    </UpdateAccessObjectResult>
  </UpdateAccessObjectResponse>
  </soap:Body>
</soap:Envelope>
```

In this example, the protocol server responds with an **AccessObject**, as defined in section 2.2.4.1. The **Version** attribute is updated to reflect the latest version of the object. The **Definition** element contains the updated schema for the table. Notice that the Birthday field now has an **axl:ObjectId** attribute.

4.3   Use GetApplicationInformation to retrieve information about a database application from the protocol server

This example describes how to use **GetApplicationInformation,** as described in section 3.1.4.4, to retrieve the information about a database application from the protocol server.

The protocol client sends the following message to the protocol server using an HTTP POST to http://www.example.com/exampleapplication/_vti_bin/accsvc/ApplicationDesignService.asmx to retrieve information about the database application. In this example, the protocol client has previously retrieved information about the database application and so the **KnownObjects** element in the message includes the list of objects that have previously been retrieved. For each of these objects, an **ObjectIdentity** element with an **ID** and **Version** attribute are included in the message. **ID** and **Version** are returned by the protocol server as part of the response to requests such as **CreateAccessObject, GetAccessObject** or **GetApplicationInformation**.

```
<?xml version="1.0" encoding="UTF-8"?>
<soap12:Envelope xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:xsd="http://www.w3.org/2001/XMLSchema" xmlns:soap12="http://www.w3.org/2003/05/soap-
envelope">
  <soap12:Body>
    <GetApplicationInformation
xmlns="http://schemas.microsoft.com/office/Access/2010/11/Server/WebServices/ApplicationDesig
nService">
      <parameters>
        <ProtocolVersionOptions>
          <ProtocolVersion>15.0.3.0</ProtocolVersion>
        </ProtocolVersionOptions>
        <KnownObjects>
          <ObjectIdentity ID="2" Version="2011-11-17T06:08:49.4330000" />
          <ObjectIdentity ID="1" Version="2011-11-17T06:08:11.2030000" />
          <ObjectIdentity ID="4" Version="2011-11-17T06:10:46.6058200" />
          <ObjectIdentity ID="3" Version="2011-11-17T06:10:45.5433200" />
        </KnownObjects>
      </parameters>
    </GetApplicationInformation>
  </soap12:Body>
</soap12:Envelope>
```

The protocol server responds with the following message:

```xml
<?xml version="1.0" encoding="utf-8"?><soap:Envelope
xmlns:soap="http://www.w3.org/2003/05/soap-envelope"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:xsd="http://www.w3.org/2001/XMLSchema">
  <soap:Body>
    <GetApplicationInformationResponse
xmlns="http://schemas.microsoft.com/office/Access/2010/11/Server/WebServices/ApplicationDesig
nService">
      <GetApplicationInformationResult ProtocolVersion="15.0.3.0" Name="exampleapplication"
DatabaseName="ACCESS_EF43A3CE7B8F4250824F39A2E0DBF3C5" DataServerName="example.com"
ApplicationCulture="en-US" RequestIPAddress="2001:4898:0:fff:0:5efe:172.18.168.80"
IsDataMacroTracingOn="false" IsFirewallRestricted="true" IsDataConnectivitySupported="false">
        <Warning xsi:nil="true" />
        <Collation Culture="en-US" CaseSensitive="false" AccentSensitive="true"
KanaSensitive="true" WidthSensitive="true" UseSupplementaryCharacters="true" />
        <NewObjects>
          <AccessObject xsi:type="Form" ID="5" Name="Contacts PreviewDatasheet"
ObjectType="Form" Description="" ModifiedExternally="false" Version="2011-11-
17T06:10:47.6526950" StoragePath="Forms/Contacts PreviewDatasheet.html">
            <ParentId xsi:nil="true" />
            <Definition>
              <FormDef
xmlns="http://schemas.microsoft.com/office/accessservices/2010/12/application">
                <Html>
                  &lt;?xml version="1.0" encoding="UTF-8"?&gt;

                  . . . . . content omitted from the example . . . . .

                  &lt;/html&gt;
                </Html>
              </FormDef>
            </Definition>
          </AccessObject>
          <AccessObject xsi:type="Form" ID="6" Name="_AppHomeForm" ObjectType="Form"
Description="" ModifiedExternally="false" Version="2011-11-17T06:11:54.6683200"
StoragePath="Forms/_AppHomeForm.html">
            <ParentId xsi:nil="true" />
            <Definition>
              <FormDef
xmlns="http://schemas.microsoft.com/office/accessservices/2010/12/application">
                <Html>
                  &lt;?xml version="1.0" encoding="UTF-8"?&gt;

                  . . . . . content omitted from the example . . . . .

                  &lt;/html&gt;
                </Html>
              </FormDef>
            </Definition>
          </AccessObject>
        </NewObjects>
        <UpdatedObjects />
        <DeletedObjects />
      </GetApplicationInformationResult>
    </GetApplicationInformationResponse>
  </soap:Body>
</soap:Envelope>
```

In this example, the protocol server responds with additional information about the application. There are two Forms that the protocol client had not retrieved information about previously and so the **NewObjects** element contains an **AccessObject** element (as defined in section 2.2.4.1) for each of those Form objects. The **Definition** element of each **AccessObject** element contains the definition of the form (In the preceding example SOAP message the declaration of each form has been omitted to aid the clarity of the example).

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 is provided in this appendix.

```
<?xml version="1.0"?>
<wsdl:definitions
xmlns:tns="http://schemas.microsoft.com/office/Access/2010/11/Server/WebServices/ApplicationD
esignService" xmlns:soap12="http://schemas.xmlsoap.org/wsdl/soap12/"
xmlns:soap="http://schemas.xmlsoap.org/wsdl/soap/"
xmlns:xs="http://www.w3.org/2001/XMLSchema"
xmlns:http="http://schemas.xmlsoap.org/wsdl/http/"
targetNamespace="http://schemas.microsoft.com/office/Access/2010/11/Server/WebServices/Applic
ationDesignService" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:types>
    <xs:schema elementFormDefault="qualified"
targetNamespace="http://schemas.microsoft.com/office/Access/2010/11/Server/WebServices/Applic
ationDesignService">
      <xs:element name="GetApplicationInformation">
        <xs:complexType>
          <xs:sequence>
            <xs:element minOccurs="0" maxOccurs="1" name="parameters"
type="tns:GetApplicationInformationParameters"/>
          </xs:sequence>
        </xs:complexType>
      </xs:element>
      <xs:complexType name="GetApplicationInformationParameters">
        <xs:complexContent mixed="false">
          <xs:extension base="tns:ServiceParameters">
            <xs:sequence>
              <xs:element minOccurs="0" maxOccurs="1" name="ProtocolVersionOptions"
type="tns:ProtocolVersionList"/>
              <xs:element minOccurs="0" maxOccurs="1" name="KnownObjects"
type="tns:ObjectIdentityList"/>
            </xs:sequence>
          </xs:extension>
        </xs:complexContent>
      </xs:complexType>
      <xs:complexType name="ServiceParameters"/>
      <xs:complexType name="ProtocolVersionList">
        <xs:sequence>
          <xs:element minOccurs="0" maxOccurs="unbounded" name="ProtocolVersion"
type="xs:string"/>
        </xs:sequence>
      </xs:complexType>
      <xs:complexType name="ObjectIdentityList">
        <xs:sequence>
          <xs:element minOccurs="0" maxOccurs="unbounded" name="ObjectIdentity"
type="tns:AccessObjectIdentity"/>
        </xs:sequence>
      </xs:complexType>
      <xs:complexType name="AccessObjectIdentity">
        <xs:attribute name="ID" type="xs:int" use="required"/>
        <xs:attribute name="Version" type="xs:string"/>
      </xs:complexType>
      <xs:element name="GetApplicationInformationResponse">
        <xs:complexType>
          <xs:sequence>
            <xs:element minOccurs="0" maxOccurs="1" name="GetApplicationInformationResult"
type="tns:GetAppInfoResult"/>
          </xs:sequence>
```

```xml
                    </xs:complexType>
                </xs:element>
                <xs:complexType name="GetAppInfoResult">
                    <xs:complexContent mixed="false">
                        <xs:extension base="tns:ServiceResult">
                            <xs:sequence>
                                <xs:element minOccurs="0" maxOccurs="1" name="Collation" type="tns:Collation"/>
                                <xs:element minOccurs="0" maxOccurs="1" name="NewObjects"
type="tns:AccessObjectList"/>
                                <xs:element minOccurs="0" maxOccurs="1" name="UpdatedObjects"
type="tns:AccessObjectList"/>
                                <xs:element minOccurs="0" maxOccurs="1" name="DeletedObjects"
type="tns:IDList"/>
                            </xs:sequence>
                            <xs:attribute name="ProtocolVersion" type="xs:string"/>
                            <xs:attribute name="Name" type="xs:string"/>
                            <xs:attribute name="DatabaseName" type="xs:string"/>
                            <xs:attribute name="DataServerName" type="xs:string"/>
                            <xs:attribute name="ApplicationCulture" type="xs:string"/>
                            <xs:attribute name="RequestIPAddress" type="xs:string"/>
                            <xs:attribute name="IsDataMacroTracingOn" type="xs:boolean" use="required"/>
                            <xs:attribute name="IsFirewallRestricted" type="xs:boolean" use="required"/>
                            <xs:attribute name="IsDataConnectivitySupported" type="xs:boolean"
use="required"/>
                        </xs:extension>
                    </xs:complexContent>
                </xs:complexType>
                <xs:complexType name="ServiceResult">
                    <xs:sequence>
                        <xs:element minOccurs="1" maxOccurs="1" name="Warning" nillable="true"
type="tns:ServiceWarning"/>
                    </xs:sequence>
                </xs:complexType>
                <xs:complexType name="ServiceWarning">
                    <xs:attribute name="Code" type="xs:string"/>
                    <xs:attribute name="Message" type="xs:string"/>
                </xs:complexType>
                <xs:complexType name="Collation">
                    <xs:attribute name="Culture" type="xs:string"/>
                    <xs:attribute name="CaseSensitive" type="xs:boolean" use="required"/>
                    <xs:attribute name="AccentSensitive" type="xs:boolean" use="required"/>
                    <xs:attribute name="KanaSensitive" type="xs:boolean" use="required"/>
                    <xs:attribute name="WidthSensitive" type="xs:boolean" use="required"/>
                    <xs:attribute name="UseSupplementaryCharacters" type="xs:boolean" use="required"/>
                </xs:complexType>
                <xs:complexType name="AccessObjectList">
                    <xs:sequence>
                        <xs:element minOccurs="0" maxOccurs="unbounded" name="AccessObject"
type="tns:AccessObject"/>
                    </xs:sequence>
                </xs:complexType>
                <xs:complexType name="AccessObject">
                    <xs:sequence>
                        <xs:element minOccurs="1" maxOccurs="1" name="ParentId" nillable="true"
type="xs:int"/>
                        <xs:element minOccurs="1" maxOccurs="1" name="Definition" nillable="true">
                            <xs:complexType mixed="true">
                                <xs:sequence>
                                    <xs:any/>
```

```
            </xs:sequence>
          </xs:complexType>
        </xs:element>
      </xs:sequence>
      <xs:attribute name="ID" type="xs:int" use="required"/>
      <xs:attribute name="Name" type="xs:string"/>
      <xs:attribute name="ObjectType" type="tns:AccessObjectType" use="required"/>
      <xs:attribute name="Description" type="xs:string"/>
      <xs:attribute name="ModifiedExternally" type="xs:boolean" use="required"/>
      <xs:attribute name="Version" type="xs:string"/>
      <xs:attribute name="StoragePath" type="xs:string"/>
    </xs:complexType>
    <xs:simpleType name="AccessObjectType">
      <xs:restriction base="xs:string">
        <xs:enumeration value="Unknown"/>
        <xs:enumeration value="Table"/>
        <xs:enumeration value="Query"/>
        <xs:enumeration value="DataMacro"/>
        <xs:enumeration value="Form"/>
        <xs:enumeration value="UIMacro"/>
        <xs:enumeration value="Report"/>
        <xs:enumeration value="Image"/>
        <xs:enumeration value="NavigationPane"/>
        <xs:enumeration value="AccessProperties"/>
        <xs:enumeration value="ApplicationVersion"/>
        <xs:enumeration value="ApplicationLogic"/>
        <xs:enumeration value="ApplicationStyle"/>
        <xs:enumeration value="LinkedTable"/>
      </xs:restriction>
    </xs:simpleType>
    <xs:complexType name="LinkedTable">
      <xs:complexContent mixed="false">
        <xs:extension base="tns:AccessObject"/>
      </xs:complexContent>
    </xs:complexType>
    <xs:complexType name="AccessStorageObject" abstract="true">
      <xs:complexContent mixed="false">
        <xs:extension base="tns:AccessObject"/>
      </xs:complexContent>
    </xs:complexType>
    <xs:complexType name="UIMacro">
      <xs:complexContent mixed="false">
        <xs:extension base="tns:AccessStorageObject"/>
      </xs:complexContent>
    </xs:complexType>
    <xs:complexType name="Form">
      <xs:complexContent mixed="false">
        <xs:extension base="tns:AccessStorageObject"/>
      </xs:complexContent>
    </xs:complexType>
    <xs:complexType name="Table">
      <xs:complexContent mixed="false">
        <xs:extension base="tns:AccessObject"/>
      </xs:complexContent>
    </xs:complexType>
    <xs:complexType name="DataMacro">
      <xs:complexContent mixed="false">
        <xs:extension base="tns:AccessObject"/>
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type="tns:ServiceError"/>
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```
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```
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            <xs:simpleType name="PackageStatus">
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```

[MS-AADT] — v20120122
Access Application Design Time Protocol Specification

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Release: Sunday, January 22, 2012

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              <xs:enumeration value="Created"/>
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```

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    <xs:enumeration value="Writer"/>
  </xs:restriction>
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type="tns:ConnectivityStatusInformation"/>
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type="tns:ServiceError"/>
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```xml
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    </xs:element>
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```

```
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  type="tns:ServiceError"/>
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          </xs:extension>
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      </xs:complexType>
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          <xs:sequence>
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  type="tns:GetApplicationPropertiesParameters"/>
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        </xs:complexType>
      </xs:element>
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        <xs:complexContent mixed="false">
          <xs:extension base="tns:ServiceParameters">
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  type="tns:ApplicationPropertyName"/>
            </xs:sequence>
          </xs:extension>
        </xs:complexContent>
      </xs:complexType>
      <xs:complexType name="ApplicationPropertyName">
        <xs:attribute name="Name" type="xs:string"/>
      </xs:complexType>
      <xs:element name="GetApplicationPropertiesResponse">
        <xs:complexType>
          <xs:sequence>
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  type="tns:GetApplicationPropertiesResult"/>
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        </xs:complexType>
      </xs:element>
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        <xs:complexContent mixed="false">
          <xs:extension base="tns:ServiceResult">
            <xs:sequence>
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  type="tns:ServiceError"/>
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  type="tns:ArrayOfApplicationPropertyValue"/>
            </xs:sequence>
          </xs:extension>
        </xs:complexContent>
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  nillable="true" type="tns:ApplicationPropertyValue"/>
        </xs:sequence>
      </xs:complexType>
      <xs:element name="GetFirewallRules">
        <xs:complexType>
          <xs:sequence>
            <xs:element minOccurs="0" maxOccurs="1" name="parameters"
  type="tns:GetFirewallRulesParameters"/>
```

```
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        </xs:complexType>
      </xs:element>
      <xs:complexType name="GetFirewallRulesParameters">
        <xs:complexContent mixed="false">
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        </xs:complexContent>
      </xs:complexType>
      <xs:element name="GetFirewallRulesResponse">
        <xs:complexType>
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        </xs:complexType>
      </xs:element>
      <xs:complexType name="GetFirewallRulesResult">
        <xs:complexContent mixed="false">
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type="tns:ArrayOfFirewallRule"/>
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type="tns:ServiceError"/>
            </xs:sequence>
          </xs:extension>
        </xs:complexContent>
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type="tns:FirewallRule"/>
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      <xs:complexType name="FirewallRule">
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        <xs:attribute name="EndIPAddress" type="xs:string"/>
      </xs:complexType>
      <xs:element name="AddFirewallRule">
        <xs:complexType>
          <xs:sequence>
            <xs:element minOccurs="0" maxOccurs="1" name="parameters"
type="tns:AddFirewallRuleParameters"/>
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        </xs:complexType>
      </xs:element>
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        <xs:complexContent mixed="false">
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            <xs:attribute name="EndIPAddress" type="xs:string"/>
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      </xs:complexType>
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type="tns:AddFirewallRuleResult"/>
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type="tns:ServiceError"/>
            </xs:sequence>
            <xs:attribute name="RuleName" type="xs:string"/>
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      </xs:complexType>
      <xs:element name="DeleteFirewallRules">
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          <xs:sequence>
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type="tns:DeleteFirewallRulesParameters"/>
          </xs:sequence>
        </xs:complexType>
      </xs:element>
      <xs:complexType name="DeleteFirewallRulesParameters">
        <xs:complexContent mixed="false">
          <xs:extension base="tns:ServiceParameters">
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              <xs:element minOccurs="0" maxOccurs="1" name="SpecifiedFirewallRules"
type="tns:FirewallRulesList"/>
            </xs:sequence>
            <xs:attribute name="ProtocolVersion" type="xs:string"/>
            <xs:attribute name="DeleteOption" type="tns:DeleteFirewallRulesOption"
use="required"/>
          </xs:extension>
        </xs:complexContent>
      </xs:complexType>
      <xs:complexType name="FirewallRulesList">
        <xs:sequence>
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type="tns:FirewallRule"/>
        </xs:sequence>
      </xs:complexType>
      <xs:simpleType name="DeleteFirewallRulesOption">
        <xs:restriction base="xs:string">
          <xs:enumeration value="Specified"/>
          <xs:enumeration value="All"/>
        </xs:restriction>
      </xs:simpleType>
      <xs:element name="DeleteFirewallRulesResponse">
        <xs:complexType>
          <xs:sequence>
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type="tns:DeleteFirewallRulesResult"/>
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        </xs:complexType>
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```

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  type="tns:ServiceError"/>
            </xs:sequence>
          </xs:extension>
        </xs:complexContent>
      </xs:complexType>
    </xs:schema>
  </wsdl:types>
  <wsdl:message name="GetApplicationInformationSoapIn">
    <wsdl:part name="parameters" element="tns:GetApplicationInformation"/>
  </wsdl:message>
  <wsdl:message name="GetApplicationInformationSoapOut">
    <wsdl:part name="parameters" element="tns:GetApplicationInformationResponse"/>
  </wsdl:message>
  <wsdl:message name="GetAccessObjectSoapIn">
    <wsdl:part name="parameters" element="tns:GetAccessObject"/>
  </wsdl:message>
  <wsdl:message name="GetAccessObjectSoapOut">
    <wsdl:part name="parameters" element="tns:GetAccessObjectResponse"/>
  </wsdl:message>
  <wsdl:message name="CreateAccessObjectSoapIn">
    <wsdl:part name="parameters" element="tns:CreateAccessObject"/>
  </wsdl:message>
  <wsdl:message name="CreateAccessObjectSoapOut">
    <wsdl:part name="parameters" element="tns:CreateAccessObjectResponse"/>
  </wsdl:message>
  <wsdl:message name="RenameAccessObjectSoapIn">
    <wsdl:part name="parameters" element="tns:RenameAccessObject"/>
  </wsdl:message>
  <wsdl:message name="RenameAccessObjectSoapOut">
    <wsdl:part name="parameters" element="tns:RenameAccessObjectResponse"/>
  </wsdl:message>
  <wsdl:message name="UpdateAccessObjectSoapIn">
    <wsdl:part name="parameters" element="tns:UpdateAccessObject"/>
  </wsdl:message>
  <wsdl:message name="UpdateAccessObjectSoapOut">
    <wsdl:part name="parameters" element="tns:UpdateAccessObjectResponse"/>
  </wsdl:message>
  <wsdl:message name="DeleteAccessObjectSoapIn">
    <wsdl:part name="parameters" element="tns:DeleteAccessObject"/>
  </wsdl:message>
  <wsdl:message name="DeleteAccessObjectSoapOut">
    <wsdl:part name="parameters" element="tns:DeleteAccessObjectResponse"/>
  </wsdl:message>
  <wsdl:message name="CreatePackageSoapIn">
    <wsdl:part name="parameters" element="tns:CreatePackage"/>
  </wsdl:message>
  <wsdl:message name="CreatePackageSoapOut">
    <wsdl:part name="parameters" element="tns:CreatePackageResponse"/>
  </wsdl:message>
  <wsdl:message name="GetPackageSoapIn">
    <wsdl:part name="parameters" element="tns:GetPackage"/>
  </wsdl:message>
  <wsdl:message name="GetPackageSoapOut">
    <wsdl:part name="parameters" element="tns:GetPackageResponse"/>
  </wsdl:message>
```

```
<wsdl:message name="SetDataMacroTracingSoapIn">
  <wsdl:part name="parameters" element="tns:SetDataMacroTracing"/>
</wsdl:message>
<wsdl:message name="SetDataMacroTracingSoapOut">
  <wsdl:part name="parameters" element="tns:SetDataMacroTracingResponse"/>
</wsdl:message>
<wsdl:message name="GetLinkedTableInformationSoapIn">
  <wsdl:part name="parameters" element="tns:GetLinkedTableInformation"/>
</wsdl:message>
<wsdl:message name="GetLinkedTableInformationSoapOut">
  <wsdl:part name="parameters" element="tns:GetLinkedTableInformationResponse"/>
</wsdl:message>
<wsdl:message name="RefreshLinkedTableInformationSoapIn">
  <wsdl:part name="parameters" element="tns:RefreshLinkedTableInformation"/>
</wsdl:message>
<wsdl:message name="RefreshLinkedTableInformationSoapOut">
  <wsdl:part name="parameters" element="tns:RefreshLinkedTableInformationResponse"/>
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  <wsdl:part name="parameters" element="tns:ImportData"/>
</wsdl:message>
<wsdl:message name="ImportDataSoapOut">
  <wsdl:part name="parameters" element="tns:ImportDataResponse"/>
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<wsdl:message name="SetDataConnectivityStatusSoapIn">
  <wsdl:part name="parameters" element="tns:SetDataConnectivityStatus"/>
</wsdl:message>
<wsdl:message name="SetDataConnectivityStatusSoapOut">
  <wsdl:part name="parameters" element="tns:SetDataConnectivityStatusResponse"/>
</wsdl:message>
<wsdl:message name="GetDataConnectivityStatusSoapIn">
  <wsdl:part name="parameters" element="tns:GetDataConnectivityStatus"/>
</wsdl:message>
<wsdl:message name="GetDataConnectivityStatusSoapOut">
  <wsdl:part name="parameters" element="tns:GetDataConnectivityStatusResponse"/>
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  <wsdl:part name="parameters" element="tns:GetDataConnectivity"/>
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<wsdl:message name="GetDataConnectivitySoapOut">
  <wsdl:part name="parameters" element="tns:GetDataConnectivityResponse"/>
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<wsdl:message name="GetThemeListSoapIn">
  <wsdl:part name="parameters" element="tns:GetThemeList"/>
</wsdl:message>
<wsdl:message name="GetThemeListSoapOut">
  <wsdl:part name="parameters" element="tns:GetThemeListResponse"/>
</wsdl:message>
<wsdl:message name="SetApplicationPropertiesSoapIn">
  <wsdl:part name="parameters" element="tns:SetApplicationProperties"/>
</wsdl:message>
<wsdl:message name="SetApplicationPropertiesSoapOut">
  <wsdl:part name="parameters" element="tns:SetApplicationPropertiesResponse"/>
</wsdl:message>
<wsdl:message name="GetApplicationPropertiesSoapIn">
  <wsdl:part name="parameters" element="tns:GetApplicationProperties"/>
</wsdl:message>
<wsdl:message name="GetApplicationPropertiesSoapOut">
  <wsdl:part name="parameters" element="tns:GetApplicationPropertiesResponse"/>
```

```
      </wsdl:message>
      <wsdl:message name="GetFirewallRulesSoapIn">
        <wsdl:part name="parameters" element="tns:GetFirewallRules"/>
      </wsdl:message>
      <wsdl:message name="GetFirewallRulesSoapOut">
        <wsdl:part name="parameters" element="tns:GetFirewallRulesResponse"/>
      </wsdl:message>
      <wsdl:message name="AddFirewallRuleSoapIn">
        <wsdl:part name="parameters" element="tns:AddFirewallRule"/>
      </wsdl:message>
      <wsdl:message name="AddFirewallRuleSoapOut">
        <wsdl:part name="parameters" element="tns:AddFirewallRuleResponse"/>
      </wsdl:message>
      <wsdl:message name="DeleteFirewallRulesSoapIn">
        <wsdl:part name="parameters" element="tns:DeleteFirewallRules"/>
      </wsdl:message>
      <wsdl:message name="DeleteFirewallRulesSoapOut">
        <wsdl:part name="parameters" element="tns:DeleteFirewallRulesResponse"/>
      </wsdl:message>
      <wsdl:portType name="ApplicationDesignServiceSoap">
        <wsdl:operation name="GetApplicationInformation">
          <wsdl:input message="tns:GetApplicationInformationSoapIn"/>
          <wsdl:output message="tns:GetApplicationInformationSoapOut"/>
        </wsdl:operation>
        <wsdl:operation name="GetAccessObject">
          <wsdl:input message="tns:GetAccessObjectSoapIn"/>
          <wsdl:output message="tns:GetAccessObjectSoapOut"/>
        </wsdl:operation>
        <wsdl:operation name="CreateAccessObject">
          <wsdl:input message="tns:CreateAccessObjectSoapIn"/>
          <wsdl:output message="tns:CreateAccessObjectSoapOut"/>
        </wsdl:operation>
        <wsdl:operation name="RenameAccessObject">
          <wsdl:input message="tns:RenameAccessObjectSoapIn"/>
          <wsdl:output message="tns:RenameAccessObjectSoapOut"/>
        </wsdl:operation>
        <wsdl:operation name="UpdateAccessObject">
          <wsdl:input message="tns:UpdateAccessObjectSoapIn"/>
          <wsdl:output message="tns:UpdateAccessObjectSoapOut"/>
        </wsdl:operation>
        <wsdl:operation name="DeleteAccessObject">
          <wsdl:input message="tns:DeleteAccessObjectSoapIn"/>
          <wsdl:output message="tns:DeleteAccessObjectSoapOut"/>
        </wsdl:operation>
        <wsdl:operation name="CreatePackage">
          <wsdl:input message="tns:CreatePackageSoapIn"/>
          <wsdl:output message="tns:CreatePackageSoapOut"/>
        </wsdl:operation>
        <wsdl:operation name="GetPackage">
          <wsdl:input message="tns:GetPackageSoapIn"/>
          <wsdl:output message="tns:GetPackageSoapOut"/>
        </wsdl:operation>
        <wsdl:operation name="SetDataMacroTracing">
          <wsdl:input message="tns:SetDataMacroTracingSoapIn"/>
          <wsdl:output message="tns:SetDataMacroTracingSoapOut"/>
        </wsdl:operation>
        <wsdl:operation name="GetLinkedTableInformation">
          <wsdl:input message="tns:GetLinkedTableInformationSoapIn"/>
          <wsdl:output message="tns:GetLinkedTableInformationSoapOut"/>
```

```
      </wsdl:operation>
      <wsdl:operation name="RefreshLinkedTableInformation">
        <wsdl:input message="tns:RefreshLinkedTableInformationSoapIn"/>
        <wsdl:output message="tns:RefreshLinkedTableInformationSoapOut"/>
      </wsdl:operation>
      <wsdl:operation name="ImportData">
        <wsdl:input message="tns:ImportDataSoapIn"/>
        <wsdl:output message="tns:ImportDataSoapOut"/>
      </wsdl:operation>
      <wsdl:operation name="SetDataConnectivityStatus">
        <wsdl:input message="tns:SetDataConnectivityStatusSoapIn"/>
        <wsdl:output message="tns:SetDataConnectivityStatusSoapOut"/>
      </wsdl:operation>
      <wsdl:operation name="GetDataConnectivityStatus">
        <wsdl:input message="tns:GetDataConnectivityStatusSoapIn"/>
        <wsdl:output message="tns:GetDataConnectivityStatusSoapOut"/>
      </wsdl:operation>
      <wsdl:operation name="GetDataConnectivity">
        <wsdl:input message="tns:GetDataConnectivitySoapIn"/>
        <wsdl:output message="tns:GetDataConnectivitySoapOut"/>
      </wsdl:operation>
      <wsdl:operation name="GetThemeList">
        <wsdl:input message="tns:GetThemeListSoapIn"/>
        <wsdl:output message="tns:GetThemeListSoapOut"/>
      </wsdl:operation>
      <wsdl:operation name="SetApplicationProperties">
        <wsdl:input message="tns:SetApplicationPropertiesSoapIn"/>
        <wsdl:output message="tns:SetApplicationPropertiesSoapOut"/>
      </wsdl:operation>
      <wsdl:operation name="GetApplicationProperties">
        <wsdl:input message="tns:GetApplicationPropertiesSoapIn"/>
        <wsdl:output message="tns:GetApplicationPropertiesSoapOut"/>
      </wsdl:operation>
      <wsdl:operation name="GetFirewallRules">
        <wsdl:input message="tns:GetFirewallRulesSoapIn"/>
        <wsdl:output message="tns:GetFirewallRulesSoapOut"/>
      </wsdl:operation>
      <wsdl:operation name="AddFirewallRule">
        <wsdl:input message="tns:AddFirewallRuleSoapIn"/>
        <wsdl:output message="tns:AddFirewallRuleSoapOut"/>
      </wsdl:operation>
      <wsdl:operation name="DeleteFirewallRules">
        <wsdl:input message="tns:DeleteFirewallRulesSoapIn"/>
        <wsdl:output message="tns:DeleteFirewallRulesSoapOut"/>
      </wsdl:operation>
    </wsdl:portType>
    <wsdl:binding name="ApplicationDesignServiceSoap" type="tns:ApplicationDesignServiceSoap">
      <soap:binding transport="http://schemas.xmlsoap.org/soap/http"/>
      <wsdl:operation name="GetApplicationInformation">
        <soap:operation
soapAction="http://schemas.microsoft.com/office/Access/2010/11/Server/WebServices/Application
DesignService/GetApplicationInformation" style="document"/>
        <wsdl:input>
          <soap:body use="literal"/>
        </wsdl:input>
        <wsdl:output>
          <soap:body use="literal"/>
        </wsdl:output>
      </wsdl:operation>
```

```
      <wsdl:operation name="GetAccessObject">
        <soap:operation
soapAction="http://schemas.microsoft.com/office/Access/2010/11/Server/WebServices/Application
DesignService/GetAccessObject" style="document"/>
        <wsdl:input>
          <soap:body use="literal"/>
        </wsdl:input>
        <wsdl:output>
          <soap:body use="literal"/>
        </wsdl:output>
      </wsdl:operation>
      <wsdl:operation name="CreateAccessObject">
        <soap:operation
soapAction="http://schemas.microsoft.com/office/Access/2010/11/Server/WebServices/Application
DesignService/CreateAccessObject" style="document"/>
        <wsdl:input>
          <soap:body use="literal"/>
        </wsdl:input>
        <wsdl:output>
          <soap:body use="literal"/>
        </wsdl:output>
      </wsdl:operation>
      <wsdl:operation name="RenameAccessObject">
        <soap:operation
soapAction="http://schemas.microsoft.com/office/Access/2010/11/Server/WebServices/Application
DesignService/RenameAccessObject" style="document"/>
        <wsdl:input>
          <soap:body use="literal"/>
        </wsdl:input>
        <wsdl:output>
          <soap:body use="literal"/>
        </wsdl:output>
      </wsdl:operation>
      <wsdl:operation name="UpdateAccessObject">
        <soap:operation
soapAction="http://schemas.microsoft.com/office/Access/2010/11/Server/WebServices/Application
DesignService/UpdateAccessObject" style="document"/>
        <wsdl:input>
          <soap:body use="literal"/>
        </wsdl:input>
        <wsdl:output>
          <soap:body use="literal"/>
        </wsdl:output>
      </wsdl:operation>
      <wsdl:operation name="DeleteAccessObject">
        <soap:operation
soapAction="http://schemas.microsoft.com/office/Access/2010/11/Server/WebServices/Application
DesignService/DeleteAccessObject" style="document"/>
        <wsdl:input>
          <soap:body use="literal"/>
        </wsdl:input>
        <wsdl:output>
          <soap:body use="literal"/>
        </wsdl:output>
      </wsdl:operation>
      <wsdl:operation name="CreatePackage">
        <soap:operation
soapAction="http://schemas.microsoft.com/office/Access/2010/11/Server/WebServices/Application
DesignService/CreatePackage" style="document"/>
        <wsdl:input>
```

```
          <soap:body use="literal"/>
        </wsdl:input>
        <wsdl:output>
          <soap:body use="literal"/>
        </wsdl:output>
      </wsdl:operation>
      <wsdl:operation name="GetPackage">
        <soap:operation
soapAction="http://schemas.microsoft.com/office/Access/2010/11/Server/WebServices/Application
DesignService/GetPackage" style="document"/>
        <wsdl:input>
          <soap:body use="literal"/>
        </wsdl:input>
        <wsdl:output>
          <soap:body use="literal"/>
        </wsdl:output>
      </wsdl:operation>
      <wsdl:operation name="SetDataMacroTracing">
        <soap:operation
soapAction="http://schemas.microsoft.com/office/Access/2010/11/Server/WebServices/Application
DesignService/SetDataMacroTracing" style="document"/>
        <wsdl:input>
          <soap:body use="literal"/>
        </wsdl:input>
        <wsdl:output>
          <soap:body use="literal"/>
        </wsdl:output>
      </wsdl:operation>
      <wsdl:operation name="GetLinkedTableInformation">
        <soap:operation
soapAction="http://schemas.microsoft.com/office/Access/2010/11/Server/WebServices/Application
DesignService/GetLinkedTableInformation" style="document"/>
        <wsdl:input>
          <soap:body use="literal"/>
        </wsdl:input>
        <wsdl:output>
          <soap:body use="literal"/>
        </wsdl:output>
      </wsdl:operation>
      <wsdl:operation name="RefreshLinkedTableInformation">
        <soap:operation
soapAction="http://schemas.microsoft.com/office/Access/2010/11/Server/WebServices/Application
DesignService/RefreshLinkedTableInformation" style="document"/>
        <wsdl:input>
          <soap:body use="literal"/>
        </wsdl:input>
        <wsdl:output>
          <soap:body use="literal"/>
        </wsdl:output>
      </wsdl:operation>
      <wsdl:operation name="ImportData">
        <soap:operation
soapAction="http://schemas.microsoft.com/office/Access/2010/11/Server/WebServices/Application
DesignService/ImportData" style="document"/>
        <wsdl:input>
          <soap:body use="literal"/>
        </wsdl:input>
        <wsdl:output>
          <soap:body use="literal"/>
        </wsdl:output>
```

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      </wsdl:operation>
      <wsdl:operation name="SetDataConnectivityStatus">
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soapAction="http://schemas.microsoft.com/office/Access/2010/11/Server/WebServices/Application
DesignService/SetDataConnectivityStatus" style="document"/>
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          <soap:body use="literal"/>
        </wsdl:input>
        <wsdl:output>
          <soap:body use="literal"/>
        </wsdl:output>
      </wsdl:operation>
      <wsdl:operation name="GetDataConnectivityStatus">
        <soap:operation
soapAction="http://schemas.microsoft.com/office/Access/2010/11/Server/WebServices/Application
DesignService/GetDataConnectivityStatus" style="document"/>
        <wsdl:input>
          <soap:body use="literal"/>
        </wsdl:input>
        <wsdl:output>
          <soap:body use="literal"/>
        </wsdl:output>
      </wsdl:operation>
      <wsdl:operation name="GetDataConnectivity">
        <soap:operation
soapAction="http://schemas.microsoft.com/office/Access/2010/11/Server/WebServices/Application
DesignService/GetDataConnectivity" style="document"/>
        <wsdl:input>
          <soap:body use="literal"/>
        </wsdl:input>
        <wsdl:output>
          <soap:body use="literal"/>
        </wsdl:output>
      </wsdl:operation>
      <wsdl:operation name="GetThemeList">
        <soap:operation
soapAction="http://schemas.microsoft.com/office/Access/2010/11/Server/WebServices/Application
DesignService/GetThemeList" style="document"/>
        <wsdl:input>
          <soap:body use="literal"/>
        </wsdl:input>
        <wsdl:output>
          <soap:body use="literal"/>
        </wsdl:output>
      </wsdl:operation>
      <wsdl:operation name="SetApplicationProperties">
        <soap:operation
soapAction="http://schemas.microsoft.com/office/Access/2010/11/Server/WebServices/Application
DesignService/SetApplicationProperties" style="document"/>
        <wsdl:input>
          <soap:body use="literal"/>
        </wsdl:input>
        <wsdl:output>
          <soap:body use="literal"/>
        </wsdl:output>
      </wsdl:operation>
      <wsdl:operation name="GetApplicationProperties">
        <soap:operation
soapAction="http://schemas.microsoft.com/office/Access/2010/11/Server/WebServices/Application
DesignService/GetApplicationProperties" style="document"/>
```

```
        <wsdl:input>
          <soap:body use="literal"/>
        </wsdl:input>
        <wsdl:output>
          <soap:body use="literal"/>
        </wsdl:output>
      </wsdl:operation>
      <wsdl:operation name="GetFirewallRules">
        <soap:operation
soapAction="http://schemas.microsoft.com/office/Access/2010/11/Server/WebServices/Application
DesignService/GetFirewallRules" style="document"/>
        <wsdl:input>
          <soap:body use="literal"/>
        </wsdl:input>
        <wsdl:output>
          <soap:body use="literal"/>
        </wsdl:output>
      </wsdl:operation>
      <wsdl:operation name="AddFirewallRule">
        <soap:operation
soapAction="http://schemas.microsoft.com/office/Access/2010/11/Server/WebServices/Application
DesignService/AddFirewallRule" style="document"/>
        <wsdl:input>
          <soap:body use="literal"/>
        </wsdl:input>
        <wsdl:output>
          <soap:body use="literal"/>
        </wsdl:output>
      </wsdl:operation>
      <wsdl:operation name="DeleteFirewallRules">
        <soap:operation
soapAction="http://schemas.microsoft.com/office/Access/2010/11/Server/WebServices/Application
DesignService/DeleteFirewallRules" 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="ApplicationDesignServiceSoap12"
type="tns:ApplicationDesignServiceSoap">
      <soap12:binding transport="http://schemas.xmlsoap.org/soap/http"/>
      <wsdl:operation name="GetApplicationInformation">
        <soap12:operation
soapAction="http://schemas.microsoft.com/office/Access/2010/11/Server/WebServices/Application
DesignService/GetApplicationInformation" style="document"/>
        <wsdl:input>
          <soap12:body use="literal"/>
        </wsdl:input>
        <wsdl:output>
          <soap12:body use="literal"/>
        </wsdl:output>
      </wsdl:operation>
      <wsdl:operation name="GetAccessObject">
        <soap12:operation
soapAction="http://schemas.microsoft.com/office/Access/2010/11/Server/WebServices/Application
DesignService/GetAccessObject" style="document"/>
        <wsdl:input>
```

```
          <soap12:body use="literal"/>
        </wsdl:input>
        <wsdl:output>
          <soap12:body use="literal"/>
        </wsdl:output>
      </wsdl:operation>
      <wsdl:operation name="CreateAccessObject">
        <soap12:operation
soapAction="http://schemas.microsoft.com/office/Access/2010/11/Server/WebServices/Application
DesignService/CreateAccessObject" style="document"/>
        <wsdl:input>
          <soap12:body use="literal"/>
        </wsdl:input>
        <wsdl:output>
          <soap12:body use="literal"/>
        </wsdl:output>
      </wsdl:operation>
      <wsdl:operation name="RenameAccessObject">
        <soap12:operation
soapAction="http://schemas.microsoft.com/office/Access/2010/11/Server/WebServices/Application
DesignService/RenameAccessObject" style="document"/>
        <wsdl:input>
          <soap12:body use="literal"/>
        </wsdl:input>
        <wsdl:output>
          <soap12:body use="literal"/>
        </wsdl:output>
      </wsdl:operation>
      <wsdl:operation name="UpdateAccessObject">
        <soap12:operation
soapAction="http://schemas.microsoft.com/office/Access/2010/11/Server/WebServices/Application
DesignService/UpdateAccessObject" style="document"/>
        <wsdl:input>
          <soap12:body use="literal"/>
        </wsdl:input>
        <wsdl:output>
          <soap12:body use="literal"/>
        </wsdl:output>
      </wsdl:operation>
      <wsdl:operation name="DeleteAccessObject">
        <soap12:operation
soapAction="http://schemas.microsoft.com/office/Access/2010/11/Server/WebServices/Application
DesignService/DeleteAccessObject" style="document"/>
        <wsdl:input>
          <soap12:body use="literal"/>
        </wsdl:input>
        <wsdl:output>
          <soap12:body use="literal"/>
        </wsdl:output>
      </wsdl:operation>
      <wsdl:operation name="CreatePackage">
        <soap12:operation
soapAction="http://schemas.microsoft.com/office/Access/2010/11/Server/WebServices/Application
DesignService/CreatePackage" style="document"/>
        <wsdl:input>
          <soap12:body use="literal"/>
        </wsdl:input>
        <wsdl:output>
          <soap12:body use="literal"/>
        </wsdl:output>
```

```
      </wsdl:operation>
      <wsdl:operation name="GetPackage">
        <soap12:operation
soapAction="http://schemas.microsoft.com/office/Access/2010/11/Server/WebServices/Application
DesignService/GetPackage" style="document"/>
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        </wsdl:input>
        <wsdl:output>
          <soap12:body use="literal"/>
        </wsdl:output>
      </wsdl:operation>
      <wsdl:operation name="SetDataMacroTracing">
        <soap12:operation
soapAction="http://schemas.microsoft.com/office/Access/2010/11/Server/WebServices/Application
DesignService/SetDataMacroTracing" style="document"/>
        <wsdl:input>
          <soap12:body use="literal"/>
        </wsdl:input>
        <wsdl:output>
          <soap12:body use="literal"/>
        </wsdl:output>
      </wsdl:operation>
      <wsdl:operation name="GetLinkedTableInformation">
        <soap12:operation
soapAction="http://schemas.microsoft.com/office/Access/2010/11/Server/WebServices/Application
DesignService/GetLinkedTableInformation" style="document"/>
        <wsdl:input>
          <soap12:body use="literal"/>
        </wsdl:input>
        <wsdl:output>
          <soap12:body use="literal"/>
        </wsdl:output>
      </wsdl:operation>
      <wsdl:operation name="RefreshLinkedTableInformation">
        <soap12:operation
soapAction="http://schemas.microsoft.com/office/Access/2010/11/Server/WebServices/Application
DesignService/RefreshLinkedTableInformation" style="document"/>
        <wsdl:input>
          <soap12:body use="literal"/>
        </wsdl:input>
        <wsdl:output>
          <soap12:body use="literal"/>
        </wsdl:output>
      </wsdl:operation>
      <wsdl:operation name="ImportData">
        <soap12:operation
soapAction="http://schemas.microsoft.com/office/Access/2010/11/Server/WebServices/Application
DesignService/ImportData" style="document"/>
        <wsdl:input>
          <soap12:body use="literal"/>
        </wsdl:input>
        <wsdl:output>
          <soap12:body use="literal"/>
        </wsdl:output>
      </wsdl:operation>
      <wsdl:operation name="SetDataConnectivityStatus">
        <soap12:operation
soapAction="http://schemas.microsoft.com/office/Access/2010/11/Server/WebServices/Application
DesignService/SetDataConnectivityStatus" style="document"/>
```

```
      <wsdl:input>
        <soap12:body use="literal"/>
      </wsdl:input>
      <wsdl:output>
        <soap12:body use="literal"/>
      </wsdl:output>
    </wsdl:operation>
    <wsdl:operation name="GetDataConnectivityStatus">
      <soap12:operation
soapAction="http://schemas.microsoft.com/office/Access/2010/11/Server/WebServices/Application
DesignService/GetDataConnectivityStatus" style="document"/>
      <wsdl:input>
        <soap12:body use="literal"/>
      </wsdl:input>
      <wsdl:output>
        <soap12:body use="literal"/>
      </wsdl:output>
    </wsdl:operation>
    <wsdl:operation name="GetDataConnectivity">
      <soap12:operation
soapAction="http://schemas.microsoft.com/office/Access/2010/11/Server/WebServices/Application
DesignService/GetDataConnectivity" style="document"/>
      <wsdl:input>
        <soap12:body use="literal"/>
      </wsdl:input>
      <wsdl:output>
        <soap12:body use="literal"/>
      </wsdl:output>
    </wsdl:operation>
    <wsdl:operation name="GetThemeList">
      <soap12:operation
soapAction="http://schemas.microsoft.com/office/Access/2010/11/Server/WebServices/Application
DesignService/GetThemeList" style="document"/>
      <wsdl:input>
        <soap12:body use="literal"/>
      </wsdl:input>
      <wsdl:output>
        <soap12:body use="literal"/>
      </wsdl:output>
    </wsdl:operation>
    <wsdl:operation name="SetApplicationProperties">
      <soap12:operation
soapAction="http://schemas.microsoft.com/office/Access/2010/11/Server/WebServices/Application
DesignService/SetApplicationProperties" style="document"/>
      <wsdl:input>
        <soap12:body use="literal"/>
      </wsdl:input>
      <wsdl:output>
        <soap12:body use="literal"/>
      </wsdl:output>
    </wsdl:operation>
    <wsdl:operation name="GetApplicationProperties">
      <soap12:operation
soapAction="http://schemas.microsoft.com/office/Access/2010/11/Server/WebServices/Application
DesignService/GetApplicationProperties" style="document"/>
      <wsdl:input>
        <soap12:body use="literal"/>
      </wsdl:input>
      <wsdl:output>
        <soap12:body use="literal"/>
```

```
        </wsdl:output>
      </wsdl:operation>
      <wsdl:operation name="GetFirewallRules">
        <soap12:operation
soapAction="http://schemas.microsoft.com/office/Access/2010/11/Server/WebServices/Application
DesignService/GetFirewallRules" style="document"/>
        <wsdl:input>
          <soap12:body use="literal"/>
        </wsdl:input>
        <wsdl:output>
          <soap12:body use="literal"/>
        </wsdl:output>
      </wsdl:operation>
      <wsdl:operation name="AddFirewallRule">
        <soap12:operation
soapAction="http://schemas.microsoft.com/office/Access/2010/11/Server/WebServices/Application
DesignService/AddFirewallRule" style="document"/>
        <wsdl:input>
          <soap12:body use="literal"/>
        </wsdl:input>
        <wsdl:output>
          <soap12:body use="literal"/>
        </wsdl:output>
      </wsdl:operation>
      <wsdl:operation name="DeleteFirewallRules">
        <soap12:operation
soapAction="http://schemas.microsoft.com/office/Access/2010/11/Server/WebServices/Application
DesignService/DeleteFirewallRules" 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: Full XML 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® Access® 15 Technical Preview

- Microsoft® SharePoint® Server 15 Technical 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.

<1> Section 2.2.10.3: Access Services does not specify Service Warnings.

9   Change Tracking

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

10 Index