

[MS-OXSHRMSG]: Sharing Message Attachment Schema

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Revision Summary

Date	Revision History	Revision Class	Comments
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1 Introduction

The Sharing Message Attachment Schema defines the schema for an **XML** document used to establish a sharing relationship between two servers on behalf of client applications. The document contains identification information and encrypted tokens that enable the two servers to authenticate and establish the sharing relationship.

1.1 Glossary

The following terms are defined in [\[MS-OXGLOS\]](#):

XML
XML namespace
XML schema

The following terms are specific to this document:

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

1.2 References

1.2.1 Normative References

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

[MS-OXGLOS] Microsoft Corporation, "[Exchange Server Protocols Master Glossary](#)", June 2008.

[MS-OXWSMSHR] Microsoft Corporation, "[Folder Sharing Web Service Protocol Specification](#)", July 2009.

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

[XMLENC] Eastlake, D., Ed., Reagle, J., Ed., Imamura, T., Dillaway, B., Simon, E., "XML Encryption Syntax and Processing", W3C Recommendation, December 2002, <http://www.w3.org/TR/2002/REC-xmlenc-core-20021210/>.

[XMLNS] World Wide Web Consortium, "Namespaces in XML 1.0 (Second Edition)", August 2006, <http://www.w3.org/TR/REC-xml-names/>.

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

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

1.2.2 Informative References

None.

1.3 Structure Overview (Synopsis)

The sharing message attachment **XML schema** specifies the authentication and identification information required for two servers to set up a sharing relationship on behalf of client applications. The sharing message is composed of three main elements: Type of invitation, e-mail address and name of the initiator, and the sharing invitation.

1.4 Relationship to Protocols and Other Structures

The sharing message attachment XML schema is used by the Folder Sharing Web Service Protocol ([\[MS-OXWSMSHR\]](#)) to provide authentication and identification information when establishing a shared folder relationship between two servers. Operations defined in the Folder Sharing protocol provide the encrypted token and folder information required by the servers to establish the sharing relationship.

Encrypted data elements of the sharing message structure are defined in [\[MS-OXWSMSHR\]](#). The format of the encrypted data contained in the encrypted data elements is defined in [\[XMLENC\]](#).

1.5 Applicability Statement

The XML document defined by the Sharing Message Attachment XML schema enables servers to share information on behalf of client applications with less risk of exposing secrets to those client applications. The encrypted data section of the sharing message is passed between the client applications while the information within the sharing message is protected.

1.6 Versioning and Localization

Structure versions: None

Localization: None

1.7 Vendor-Extensible Fields

None

2 Structures

2.1 Sharing Message Namespace

The elements of the sharing message are defined in the following namespace:

<http://schemas.microsoft.com/exchange/sharing/2008/>

Sharing messages use encryption elements defined by [\[XMLENC\]](#):

<http://www.w3.org/2001/04/xmlenc>

Sharing messages use encryption data elements defined by [\[MS-OXWSMSHR\]](#).

<http://schemas.microsoft.com/exchange/services/2006/types>

2.2 Message Sharing Processing Instructions

The following XML processing instruction tag, as specified in [\[XML\]](#), section 2.6, **MUST** appear in the sharing message file.

```
<?xml version="1.0"?>
```

A formal definition in Augmented Backus-Naur Format (ABNF), as specified in [\[RFC5234\]](#), of the XML processing instructions is as follows.

```
UDC_PI = '<?MicrosoftWindowsSharePointServices ' CONTENT_ID_TYPE '?>' CRLF
```

```
CONTENT_ID_TYPE = 'ContentTypeID="0x010100B4CBD48E029A4AD8B62CB0E41868F2B0"'
```

2.3 Sharing Message Schema

The following sections specify the elements and attributes of the sharing message.

2.3.1 DataTypeType Simple Type

The [DataTypeType](#) simple type defines the valid sharing message types.

```
<xs:simpleType name="t:DataTypeType">  
  <xs:restriction  
    base="xs:string"  
  >  
    <xs:enumeration  
      value="calendar"  
    />  
  </xs:restriction>  
</xs:simpleType>
```

Enumeration

The following value is defined by the **t:DataTypeType** simple type:

Value	Description
calendar	The sharing message is for a calendar.

2.3.2 InitiatorType Complex Type

The [InitiatorType](#) complex type specifies the name and e-mail address of the entity initiating the sharing message.

```
<xs:complexType name="InitiatorType">
  <xs:sequence>
    <xs:element name="Name"
      type="xs:string"
    />
    <xs:element name="SmtpAddress"
      type="xs:string"
    />
  </xs:sequence>
</xs:complexType>
```

Child Elements

Element	Type	Description
Name	xs:string	The display name of the entity initiating the sharing message.
SmtpAddress	xs:string	The e-mail address of the entity initiating the sharing message.

2.3.3 InvitationType Complex Type

The [InvitationType](#) complex type contains a list of folders to share and the encrypted information required to set up the shared folders.

```
<xs:complexType name="InvitationType">
  <xs:sequence>
    <xs:element name="Providers"
      type="t:ProvidersType"
    />
  </xs:sequence>
</xs:complexType>
```

Child Elements

Element	Type	Description
Providers	t:ProvidersType	One or more folders to share and the encrypted information required to set up the shared folders.

2.3.4 t:ProviderType Complex Type

The [ProviderType](#) complex type specifies a shared folder name and the encrypted information required to set up the shared folder.

```
<xs:complexType name="ProviderType">
  <xs:sequence>
    <xs:element name="FolderId"
      type="xs:string"
    />
    <xs:element name="EncryptedSharedFolderDataCollection"
      type="t:ArrayOfEncryptedSharedFolderDataType"
    />
  </xs:sequence>
  <xs:attribute name="Type"
    type="xs:string"
  />
  <xs:attribute name="TargetRecipients"
    type="xs:string"
  />
</xs:complexType>
```

Child Elements

Element	Type	Description
FolderId	xs:string	The identifier for the shared folder.
EncryptedSharedFolderDataCollection	t:ArrayOfEncryptedSharedFolderDataType	Encrypted authentication token as specified in [XMLENC] .

Attributes

Name	Type	Description
Type	xs:string	Specifies the sharing provider type. MUST be "ms-exchange-external".
TargetRecipients	xs:string	Specifies a semi-colon delimited list of e-mail addresses that this provider applies to.

2.3.5 t:Providers Complex Type

The [ProvidersType](#) complex type specifies one or more shared folders and the encrypted data required to share the folders.

```
<xs:complexType>
  <xs:sequence>
    <xs:element name="Provider"
      type="t:ProviderType"
      maxOccurs="unbounded"
    />
  </xs:sequence>
</xs:complexType>
```



```

</xs:sequence>
</xs:complexType>

```

Child Elements

Element	Type	Description
Provider	t:ProviderType	One or more shared folder providers.

2.3.6 SharingMesasge Element

The [SharingMessage](#) element provides a container for the sharing message elements.

```

<xs:element name="SharingMesasge">
  <xs:complexType>
    <xs:sequence>
      <xs:element name="DataType"
        type="t:DataTypeType"
      />
      <xs:element name="Initiator"
        type="t:InitiatorType"
      />
      <xs:element name="Invitation"
        type="t:InvitationType"
      />
    </xs:sequence>
  </xs:complexType>
</xs:element>

```

Child Elements

Element	Type	Description
DataType	t:DataTypeType	The type of the sharing message.
Initiator	t:InitiatorType	The name and e-mail address of the sender of the sharing message.
Invitation	t:InvitationType	The details of the sharing invitation.

3 Structure Examples

The following is complete XML schema for the [MS-OXSHRMSG] XML document.

[XML Schema]

```
<?xml version="1.0" encoding="utf-8"?>
<xs:schema xmlns:t="http://schemas.microsoft.com/exchange/sharing/2008"
xmlns:tns="http://schemas.microsoft.com/exchange/sharing/2008"
xmlns:xs="http://www.w3.org/2001/XMLSchema"
xmlns:xml="http://www.w3.org/XML/1998/namespace"
xmlns:enc="http://www.w3.org/2001/04/xmlenc#"
xmlns:ews="http://schemas.microsoft.com/exchange/services/2006/types"
targetNamespace="http://schemas.microsoft.com/exchange/sharing/2008"
elementFormDefault="qualified" version="Exchange2010" id="types">

  <xs:import namespace="http://www.w3.org/2001/04/xmlenc#" />
  <xs:import namespace="http://schemas.microsoft.com/services/exchange/2006/types" />

  <xs:simpleType name="DataTypeType">
    <xs:restriction base="xs:string">
      <xs:enumeration value="calendar" />
    </xs:restriction>
  </xs:simpleType>

  <xs:complexType name="InitiatorType">
    <xs:sequence>
      <xs:element name="Name" type="xs:string" />
      <xs:element name="SmtpAddress" type="xs:string" />
    </xs:sequence>
  </xs:complexType>

  <xs:complexType name="ProviderType">
    <xs:sequence>
      <xs:element name="FolderId" type="xs:string" />
      <xs:element name="EncryptedSharedFolderDataCollection"
type="ews:ArrayOfEncryptedSharedFolderDataType" />
    </xs:sequence>
    <xs:attribute name="Type" type="xs:string" />
    <xs:attribute name="TargetRecipients" type="xs:string" />
  </xs:complexType>

  <xs:complexType name="ProvidersType">
    <xs:sequence>
      <xs:element name="Provider" type="t:ProviderType" maxOccurs="unbounded" />
    </xs:sequence>
  </xs:complexType>

  <xs:complexType name="InvitationType">
    <xs:sequence>
      <xs:element name="Title" type="xs:string" minOccurs="0" />
      <xs:element name="Providers" type="t:ProvidersType" />
    </xs:sequence>
  </xs:complexType>

  <xs:complexType name="RequestType">
```

```

    <xs:sequence>
      <xs:element name="Providers" type="t:ProvidersType" />
    </xs:sequence>
  </xs:complexType>

  <xs:complexType name="AcceptOfRequestType">
    <xs:sequence>
      <xs:element name="Title" type="xs:string" minOccurs="0" />
      <xs:element name="Providers" type="t:ProvidersType" />
    </xs:sequence>
  </xs:complexType>

  <xs:complexType name="DenyOfRequestType">
    <xs:sequence>
      <xs:element name="Providers" type="t:ProvidersType" />
    </xs:sequence>
  </xs:complexType>

  <xs:element name="SharingMessage">
    <xs:complexType>
      <xs:sequence>
        <xs:element name="DataType" type="t:DataTypeType"/>
        <xs:element name="Initiator" type="t:InitiatorType"/>
        <xs:choice>
          <xs:element name="AcceptOfRequest" type="t:AcceptOfRequestType" />
          <xs:element name="DenyOfRequest" type="t:DenyOfRequestType" />
          <xs:sequence>
            <xs:element name="RequestType" type="t:RequestType" minOccurs="0" />
            <xs:element name="Invitation" type="t:InvitationType" minOccurs="0" />
          </xs:sequence>
        </xs:choice>
      </xs:sequence>
    </xs:complexType>
  </xs:element>
</xs:schema>

```

4 Security Considerations

5 Appendix A: Product Behavior

The information in this specification is applicable to the following product versions. References to product versions include released service packs.

- Windows 2000
- Windows XP
- Windows Server 2003
- Windows Vista
- Windows Server 2008 operating system

Exceptions, if any, are noted below. If a service pack number appears with the product version, behavior changed in that service pack. The new behavior also applies to subsequent service packs of the product unless otherwise specified.

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

6 Change Tracking

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

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