[MS-STSSYN]:
StsSync Data Structure

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Revision Summary

Date	Revision History	Revision Class	Comments
04/04/2008	0.1		Initial Availability
06/27/2008	1.0	Major	Revised and edited the technical content
12/12/2008	1.01	Editorial	Revised and edited the technical content
07/13/2009	1.02	Major	Changes made for template compliance
08/28/2009	1.03	Editorial	Revised and edited the technical content
11/06/2009	1.04	Editorial	Revised and edited the technical content
02/19/2010	2.0	Editorial	Revised and edited the technical content
03/31/2010	2.01	Editorial	Revised and edited the technical content
04/30/2010	2.02	Editorial	Revised and edited the technical content
06/07/2010	2.03	Editorial	Revised and edited the technical content
06/29/2010	2.04	Minor	Clarified the meaning of the technical content.
07/23/2010	2.04	No change	No changes to the meaning, language, or formatting of the technical content.
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10/08/2012	2.5	No change	No changes to the meaning, language, or formatting of the technical content.

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Table of Contents

1   Introduction

This document specifies the StsSync Data Structure, which is a compact string format used to encode parameters necessary to connect to a remote list.

Sections 1.7 and 2 of this specification are normative and can contain the terms MAY, SHOULD, MUST, MUST NOT, and SHOULD NOT as defined in RFC 2119. All other sections and examples in this specification are informative.

1.1   Glossary

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

> **ASCII**
> **GUID**
> **Unicode**

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

> **item identifier**
> **Uniform Resource Identifier (URI)**
> **Uniform Resource Locator (URL)**
> **user identifier**

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

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

1.2.1   Normative References

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

[MS-LISTSWS] Microsoft Corporation, "Lists Web Service Protocol Specification".

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

[RFC3986] Berners-Lee, T., Fielding, R., and Masinter, L., "Uniform Resource Identifier (URI): Generic Syntax", STD 66, RFC 3986, January 2005, http://www.ietf.org/rfc/rfc3986.txt

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

1.2.2 Informative References

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

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

[MS-OSALER] Microsoft Corporation, "Alerts Interoperability Protocol Specification".

[MS-OUTSPS] Microsoft Corporation, "Lists Client Sync Protocol Specification".

1.3 Overview

The StsSync structure provides a syntax for the "stssync" scheme of **URIs**. This structure encapsulates the parameters required to use the Lists Web Service Protocol, as described in [MS-LISTSWS]) to access data from a remote list residing on a server. The server can produce an StsSync structure URI for a list and transmit this URI to clients. When a client processes the URI it has all the information required to communicate with the server via the Lists Web Service Protocol. This structure extends URI generic syntax, as described in [RFC3986].

1.4 Relationship to Protocols and Other Structures

This structure provides a means to encapsulate the parameters necessary to access a list using the Lists Web Service Protocol, as described in [MS-LISTSWS]. This structure is also used to configure the relationship for the Lists Client Sync Protocol, as described in [MS-OUTSPS] and in an optional header in the Alerts Interoperability Protocol, as described in [MS-OSALER].

1.5 Applicability Statement

This structure is implemented by servers and clients that implement the Lists Web Service Protocol, as described in [MS-LISTSWS].

1.6 Versioning and Localization

None.

1.7 Vendor-Extensible Fields

None.

2 Structures

2.1 StsSync Data Structure

This structure specifies the syntax for the "stssync" URI scheme. This structure MUST be able to be represented as an **ASCII** string.

The scheme specific-part is a series of field-value pairs as follows:

```
stssync://sts/?ver=version&type=folder-type&cmd=command-name&base-url=sts-url&guid=the-
guid&site-name=site-friendly-name&list-name=list-friendly-name&list-url=list-url&user-
id=uid&folder-url=relative-url&folder-id=id
```

The fields specify properties about a remote list accessible via the [MS-LISTSWS] protocol. Fields can appear in any order and have no specific length restrictions unless otherwise noted. Valid fields are as follows:<1>

ver: The version number of this structure in the format **x.y**. The values x and y MUST be numbers. x MUST NOT begin with zero, and y MUST be either zero or a sequence of digits that does not begin with zero. The **ver** field SHOULD<2> have a valid value, and x and y SHOULD NOT<3> be longer than two digits each.

type: A string that represents the content type of the remote list. MUST be "calendar", "contacts", "discussions", "documents", or "tasks". For definitions of these types of lists, see [MS-OUTSPS] section 3.2.1. This field is not case-sensitive.

cmd: The action the client takes in response to processing this URI. MUST be "add-folder", which means the client will add a folder.

base-url: The **URL** to the site that contains the remote list. SHOULD NOT end in a "/" character.

guid: The **GUID** which uniquely identifies the remote list. MUST be of the format "{*XXXXXXXX-XXXX-XXXX-XXXX-XXXXXXXXXXXX*}", where *X* represents a hexadecimal character.

site-name: Display name of the site where the remote list is located.

list-name: Display name of the remote list.

list-url: A string that when concatenated with the **base-url** MUST produce the full URL to the list. SHOULD begin with a "/".

user-id (optional): The **user identifier** to be used to filter the items in the list. MUST be a number greater than zero and MUST be less than eight digits.

folder-url (optional): The relative path to a subfolder within the remote list. MUST begin with a "/" and MUST NOT end with a "/".<4>

folder-id (optional): The **item identifier** of a subfolder within the remote list. MUST be a positive decimal number of no more than eight digits.<5>

2.2 Special Character Escaping

Encoding of characters in this structure MUST be represented consistently with the URI specification ([RFC3986], Section 2).

Some characters MUST be specially escaped before the structure is percent-encoded as follows.

If any of the characters "&", "\", "[", "]", or "|" are part of the value of the **base-url**, **site-name**, **list-name**, **list-url**, or **folder-url** field, they MUST be preceded by a "|" character.

The **base-url**, **site-name**, **list-name**, **list-url**, and **folder-url** fields can contain **Unicode** characters. Unicode characters MUST be encoded as the 4-digit hexadecimal representation of the character in square brackets "[ ]". Groups of consecutive Unicode characters MUST concatenate the groups and use one set of brackets to enclose all the hexadecimal characters.

The syntax of the StsSync Data Structure, including character escaping, is defined by the following Augmented Backus-Naur form (ABNF) ([RFC5234]) rules:

```
stssyncuri  = scheme ":" schemepart
scheme      = "stssync"
schemepart  = "//sts/?" [ params ]
params      = param *("&" param)
param       = key "=" value
key         = *( ALPHA / "-" )
value       = *uchar
uchar       = escape / unreserved
unreserved  = ALPHA / DIGIT / punctuation
punctuation = "(" / ")" / "_" / "/" / "[" / "]" / "|" / "." / "-"
escape      = "%" 2HEXDIG
```

3   Structure Examples

3.1   Personal Contacts List

This URI represents the "Personal" contacts list located at the "Example Lists" site at "http://contoso.com/lists/example/" with a list GUID of "{01f4e13-34e2-49e0-a05e-98e7b8cc3dc}".

```
stssync://sts/?ver=1.1&type=contacts&cmd=add-folder&base-url=http%3A%2F%2Fcontoso.com&list-
url=%2Flists%2Fexample%2F&guid=%7B01f4e13e%2D34e2%2D49e0%2Da05e%2D98e7b8cc3dc4%7D&site-
name=Example%20Lists&list-name=Personal
```

3.2   Upcoming Events Calendar

This URI represents the "Upcoming events" calendar for the person with user-id "34" located at the "Woodgrove Portal" site at "http://woodgrove/lists/pcoming%20evts/" with a list GUID of "{0C600187-1CC6-4AA0-A80E-5AD683397570}".

```
stssync://sts/?ver=1.0&type=calendar&cmd=add-folder&base-
url=http%3A%2F%2Fwoodgrove&guid=%7B0C600187%2D1CC6%2D4AA0%2DA80E%2D5AD683397570&7D&site-
name=Woodgrove%20Portal&list-name=[00DC]pcoming%20ev[00E900F1]ts&list-
url=%2Flists%2Fpcoming%20evts%2F&user-id=34
```

3.3   Expenses Folder Contents

This URI represents the "Expenses" folder contained within the "Finance" folder of the "Johnson Project" documents list on the "http://projects/johnson%20project/" site with a list GUID of "{1D711298-2DD7-5BB1-B91F-6BE684408681}".

```
stssync://sts/?ver=1.1&type=documents&cmd=add-folder&base-
url=http%3A%2F%2Fprojects&guid=%7B1D711298%2D2DD7%2D5BB1%2DB91F%2D6BE684408681%7D&site-
name=Projects&list-name=Johnson%20Project&list-url=%2Fjohnson%20project%2F&folder-
url=%2FFinance%2FExpenses&folder-id=4
```

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4 Security

4.1 Security Considerations for Implementers

Protocol URIs can be contained in mediums that are not trusted, for example, in the body of an e-mail message or on a Web page. Clients invoked when the user activates a protocol URI could be presented with malicious data intended to initiate unwanted actions when the client processes the URI.

4.2 Index of Security Parameters

None.

5   Appendix A: 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® Office Outlook® 2007

- Microsoft® Outlook® 2010

- Microsoft® Outlook® 2013

- Windows® SharePoint® Services 3.0

- Microsoft® SharePoint® Foundation 2010

- Microsoft® SharePoint® Foundation 2013

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

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

<1> Section 2.1: Office Outlook 2007 and Outlook 2010 ignore any unrecognized field-value pairs.

<2> Section 2.1: Office Outlook 2007 and Outlook 2010 consider URLs constructed without a **ver** field value to be malformed.

<3> Section 2.1: Office Outlook 2007 and Outlook 2010 consider URLs constructed with more than two digits in either x or y to be malformed.

<4> Section 2.1: Windows SharePoint Services 3.0 and SharePoint Foundation 2010 do not support this field.

<5> Section 2.1: Windows SharePoint Services 3.0 and SharePoint Foundation 2010 do not support this field.

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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