

[MS-ESURL]: Excel Services Publishing Protocol Specification

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1 Introduction

This document specifies the Excel Services Publishing Protocol, which enables a protocol client to form the protocol server URL and associated query string parameters to display the workbook in the browser after the workbook is published to the protocol server.

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

1.1 Glossary

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

authentication
Hypertext Transfer Protocol (HTTP)
Hypertext Transfer Protocol over Secure Sockets Layer (HTTPS)

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

permission
Request-URI
site

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-WEBSS] Microsoft Corporation, "[Webs Web Service Protocol Specification](#)".

[RFC1738] Berners-Lee, T., Masinter, L., and McCahill, M., "Uniform Resource Locators (URL)", RFC 1738, December 1994, <http://www.ietf.org/rfc/rfc1738.txt>

[RFC1945] Berners-Lee, T., Fielding, R., and Frystyk, H., "Hypertext Transfer Protocol -- HTTP/1.0", RFC 1945, May 1996, <http://www.ietf.org/rfc/rfc1945.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>

[RFC2396] Berners-Lee, T., Fielding, R., and Masinter, L., "Uniform Resource Identifiers (URI): Generic Syntax", RFC 2396, August 1998, <http://www.ietf.org/rfc/rfc2396.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>

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 specifies how the protocol server URL that is used for displaying the workbook in the browser is formed. At a high level, the protocol involves the following operations:

- Discovery of the URL that is used to display the workbook in the browser given the URL to the workbook.
- Setting the appropriate query string parameters in the URL for displaying the workbook in the browser.

The following sequence diagram illustrates the operations of the protocol.

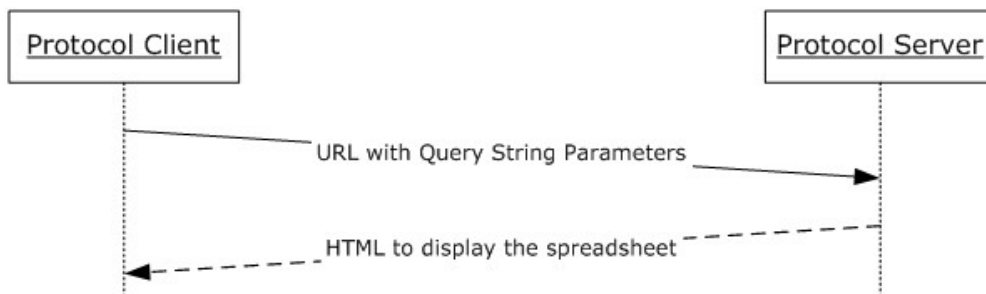


Figure 1: This protocol message processing sequence

1.4 Relationship to Other Protocols

This protocol uses **HTTP** 1.0, as described in [\[RFC1945\]](#), HTTP 1.1, as described in [\[RFC2616\]](#), or **Hypertext Transfer Protocol over Secure Sockets Layer (HTTPS)**, as described in [\[RFC2818\]](#), for message transport.

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

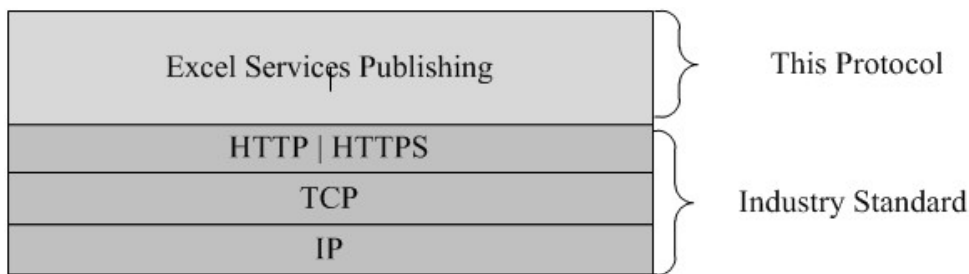


Figure 2: This protocol in relation to other protocols

1.5 Prerequisites/Preconditions

This protocol operates against a **site (2)** identified by a URL that is known by protocol clients. The protocol server endpoint is formed by appending `/_layouts/xlviewer.aspx` to the URL of the site (2), for example: `http://www.contoso.com/Repository/_layouts/xlviewer.aspx`.

The protocol assumes that **authentication (2)** has been performed by the underlying protocols.

1.6 Applicability Statement

This protocol is for providing protocol clients access to an HTML rendering of a workbook.

1.7 Versioning and Capability Negotiation

Versioning and capability negotiation for this protocol is handled by either the HTTP protocols as described in [\[RFC1945\]](#) and [\[RFC2616\]](#), or the HTTPS protocol as described in [\[RFC2818\]](#).

1.8 Vendor-Extensible Fields

None.

1.9 Standards Assignments

None.

2 Messages

2.1 Transport

All protocol messages MUST use HTTP 1.0 (as specified in [\[RFC1945\]](#)), HTTP 1.1 (as specified in [\[RFC2616\]](#)), or the HTTPS protocol (as specified in [\[RFC2818\]](#)) for message transport.

2.2 Message Syntax

All messages in this protocol MUST be valid HTTP requests and responses as specified in [\[RFC2616\]](#).

2.2.1 Request Syntax

2.2.1.1 Request HTTP Version

The HTTP version MUST be either HTTP 1.0 or HTTP 1.1, as specified in [\[RFC2616\]](#) section 3.1.

2.2.1.2 Request HTTP Method

The protocol client MUST use the HTTP GET method as specified in [\[RFC2616\]](#) section 9.

2.2.1.3 Request-URI Syntax

The **Request-URI** MUST adhere to the following rules:

- The Request-URI sent in the HTTP request MUST be a valid URI as specified in [\[RFC1738\]](#).
- The Scheme Component MUST be either HTTP or HTTPS, as specified in [\[RFC2396\]](#) section 3.1.
- The protocol client MUST generate the Request-URI by appending "/_layouts/xlviewer.aspx" to the site (2) URI to which the workbook was published. The protocol client MUST determine the site (2) URI by calling **WebUrlFromPageUrl** (as specified in [\[MS-WEBSS\]](#) section 3.1.4.21) with the full URI to which the workbook was published. Therefore the Path Component of the Request-URI MUST end with "/_layouts/xlviewer.aspx", as specified in [\[RFC2396\]](#) section 3.3.
- The Query Component of the Request-URI MUST be present and follow the rules specified in section [2.2.1.3.1](#) and [\[RFC2396\]](#) section 3.4.

The complete contents of the Request-URI MUST be negotiated prior to initiating the protocol as described in section [1.5](#). This includes the Authority Component as specified in [\[RFC2396\]](#) section 3.2 and the Path Component specified in [\[RFC2396\]](#) section 3.3.

2.2.1.3.1 Query Segment

The Query Component of the Request-URI MUST contain three query string parameters with the following names:

- ID
- DefaultItemOpen
- Cookie

The value for each query string parameter MUST be a non-empty string and a valid query string parameter value as specified in [\[RFC2396\]](#). The Query Component MUST NOT contain query string

parameters other than the three required parameters, as specified in [\[RFC2396\]](#) section 3.4. The protocol server MUST NOT require the query string parameters to appear in any particular order.

The protocol client and protocol server MUST interpret the query string parameters as defined in the following table.

Parameter name	Description
ID	The location to which the workbook is published. The value for this parameter MUST be a valid URL as specified in [RFC1738] . The Scheme Component as specified in [RFC2396] section 3.1 of the ID URL MUST be either "HTTP" or "HTTPS".
DefaultItemOpen	The value for this parameter MUST be set to 1.
Cookie	An identifier used to make the Request-URI unique. SHOULD be ignored by the protocol server. The protocol client MUST set the value for this parameter to a unique value across all requests from that protocol client.

Table 1: Query Parameters

2.2.1.4 Request Header Syntax

The protocol client MUST provide valid Message Headers as specified in [\[RFC2616\]](#) section 4.2.

2.2.2 Response Syntax

2.2.2.1 Response Status

The protocol server MUST provide a valid status code as specified in [\[RFC2616\]](#) section 6.1.1.

2.2.2.2 Response Header Syntax

The protocol server MUST provide valid message headers as specified in [\[RFC2616\]](#) section 4.2.

2.2.2.3 Response Body Syntax

The protocol server MUST provide a valid message body as specified in [\[RFC2616\]](#) section 4.3.

3 Protocol Details

3.1 Common Details

3.1.1 Abstract Data Model

None.

3.1.2 Timers

None.

3.1.3 Initialization

None.

3.1.4 Higher-Layer Triggered Events

None.

3.1.5 Message Processing Events and Sequencing Rules

The message processing events and sequencing rules are as follows:

- The protocol client MUST generate a valid Request-URI as specified in section [2.2.1.3](#).
- The protocol client MUST issue the HTTP GET request to the generated URL.
- The protocol server MUST verify that the client has **permission** to access the specified URL and MUST return the appropriate Status Code as specified in [\[RFC2616\]](#) section 6.1.1 if the protocol client does not have permissions. The client MUST be prepared to accept all status codes specified in [\[RFC2616\]](#) section 6.1.1.
- After performing any implementation specific processing, the protocol server MUST return a valid HTTP response as specified in section [2.2.2](#).

3.1.6 Timer Events

None.

3.1.7 Other Local Events

None.

4 Protocol Examples

The following is an example of this protocol usage. In this example, the workbook is published to the following location:

```
http://server-name/Site/Dir/Book1.xlsx
```

The URL generated by this protocol that will render the workbook in HTML is as follows:

```
http://server-name/Site/_layouts/xlviewer.aspx?id=http://server-name/Site/Dir/Book1.xlsx&DefaultItemOpen=1&Cookie=0
```

http://server-name/Site is the URL of the site (2) to which the workbook was published. Protocol clients determine the site (2) URL by calling **WebUrlFromPageUrl** (as described in [\[MS-WEBS\]](#)) with the full URL to which the workbook was published.

HTTP request

```
GET
/team/mysite/_layouts/xlviewer.aspx?id=http%3a%2f%2fServerName%2fSite%2fDocument%20Library%2f
Example.xlsx&DefaultItemOpen=1&Cookie=2 HTTP/1.1
Accept: */*
Host: ServerName
```

HTTP response

```
HTTP/1.1 200 OK
Date: Fri, 22 Jan 2010 20:46:55 GMT
Server: Microsoft-IIS/6.0
MicrosoftSharePointTeamServices: 12.0.0.4017
X-Powered-By: ASP.NET
X-AspNet-Version: 2.0.50727
Set-Cookie: WSS_KeepSessionAuthenticated=80; path=/
Set-Cookie: MSOWebPartPage_AnonymousAccessCookie=80; expires=Fri, 22-Jan-2010 21:16:55 GMT;
path=/
Cache-Control: private, max-age=0
Expires: Thu, 07 Jan 2010 20:46:55 GMT
Last-Modified: Fri, 22 Jan 2010 20:46:55 GMT
Content-Type: text/html; charset=utf-8
Content-Length: 20300
<html id="m_htmlTag" dir="ltr">
<head>
  <meta name="WebPartPageExpansion" content="full" />
  <meta name="GENERATOR" content="Microsoft SharePoint" />
  <meta name="ProgId" content="SharePoint.WebPartPage.Document" />
  <meta http-equiv="Content-Type" content="text/html; charset=utf-8" />
  <title id="m_title">Excel Web Access - http://ServerName/Site/Document
Library/Example.xlsx</title>
  <link rel="stylesheet" type="text/css"
href="/_layouts/1033/styles/EWRDefault.css?rev=oIw8MMnEVJ5jKs65UzX4cw%3D%3D"/>
  <link rel="stylesheet" type="text/css"
href="/_layouts/1033/styles/core.css?rev=5msmprmeONfN6lJ3wtbAlA%3D%3D"/>
```

```
<script type="text/javascript" language="javascript"
src="/_layouts/1033/init.js?rev=ck%2BHDHQ8ABQHif7kr%2Bj7iQ%3D%3D"></script>
<script src="/_layouts/1033/core.js?rev=S5dt4K8TJGVTYU9HrW6enw%3D%3D"></script>
<script src="/_layouts/1033/owsbrows.js?rev=%2F0cWx03f8AvMOC%2F2LOCJA%3D%3D"></script>
<script src="/_layouts/EWRScripts.js?rev=yCNXUsNKKdlq12ZwFcmTQ%3D%3D"></script>
<script type="text/javascript" language="javascript"
src="/_layouts/portal.js?rev=cRI8b5r5N%2BkLhLuWR03ICg%3D%3D"></script>

<meta name="Microsoft Theme" content="default" />
<meta name="Microsoft Border" content="none" />
<link type="text/xml" rel="alternate" href="_vti_bin/spdisco.aspx" />
</head>

<body style="overflow:auto;">
<form name="ctl05" method="post"
action="xlviewer.aspx?id=http%3a%2f%2fServerName%2fSite%2fDocument+Library%2fExample.xls&amp;
;DefaultItemOpen=1&Cookie=2" onsubmit="javascript:return WebForm_OnSubmit();" id="ctl05"
dir="ltr">
<div>
<input type="hidden" name="__EVENTTARGET" id="__EVENTTARGET" value="" />
<input type="hidden" name="__EVENTARGUMENT" id="__EVENTARGUMENT" value="" />
<input type="hidden" name="__REQUESTDIGEST" id="__REQUESTDIGEST"
value="0x287836C9DDD259475E14616190CA7036C18EBEF6F4F6F9AFB1D46B8A3C0D763F5CCFEC4B5E5C51BCB1E1
C4AF4E6327C0C726F3A1C10D7EC9EF9726A135AE3F55,22 Jan 2010 21:28:17 -0000" />
<input type="hidden" name="__VIEWSTATE" id="__VIEWSTATE"
value="/wEPDwUKLTI5NzU2NDc5NW9kFgJmDxYCHgNkaXIFA2x0chYEAgEPFgIeCwLubmVyaHRtbAVNRXhjZwWgV2ViIE
FjY2VzcyAtIGh0dHA6Ly94bHN1cnZpY2VzL3RlYW0vbXN1cmkvU2hhcmVkiERvY3VtZW50cy9FeGtGcGx1Lnhsc3hkAg0
PFgIFAUDbHRyFgoCBQ8PFgQeBFR1eHQFDk1hbnByYXRhcCBTdXJpHgtOYXZpZ2F0ZVYyAUcaHR0cDovL3hsc2Vydmlj
ZXMvdGVhbS9tc3VyaWRkAgkPdxEHwIFEFNoYXJlZCBEB2N1bWVudHMfAwUwL3RlYW0vbXN1cmkvU2hhcmVkiERvY3VtZ
W50cy9Gb3Jtcy9BbGxJdGVtcy5hc3B4ZGQCCw9kFgJmD2QWBMYPFgIFAgUmPHNwYW4gc3R5bGU9J3BhZGRpbmctbGVmdD
ozcHgnPjwvc3Bhb3k5AgIPDxEHwIFB015IFNpdGUfAwUraHR0cDovL3hsc2VydmljZXM6NTYyNS9fbGF5b3V0cy9NeVN
pdGUuYXNweGRkAgQPFgIFAgU5PHNwYW4gc3R5bGU9J3BhZGRpbmctbGVmdD0cHg7cGFkZGluZy1yaWdodDozcHgnPnw8
L3NwYW4+ZAIND2QWAmYPZBYCAgMPFgIFAgUBfGQCdW8PFgIeEFYyZXB3VzV29ya2Jvb2sF+AFscGxTSG5wSww2N0J1c
zNCAw9tdmXhNXZ0aU1hSzBkUnc4Q3dCK0N1WEFhcEhrRVhBzJzoYmJlUHdBS1lXaUdGVThlUD1sZ1FiUG56c2gvMWVmbV
J4MFY4enQ5SFJxNG56Um8vQVVAwV5k5MxJ5cGs0YzkoalBybWFFSeHFNRWx2Yk5TbTMyRHRMRjVkaWdSU3RsczRvVkmxU0Q
wRmw2Yyszm2FaczJ4WHdqTmlCTlFYs1dLS0tRd05KYXZqTki5QWVLRUQ4N1dkUU9wcWlKeWlFT2tKRWoxNlhSNjJJZjJl
TjdzZEdxTjk0RmYxY3o2b1hORkxjY3c9PWQWBMYPDxYOHgJobQsqm1N5c3R1bS5XZWIuVUkuV2ViQ29udHJvbmMuV2ViU
GFydhMuV2ViUGFyEh1bHBNb2RlAR8ACymFAU1p3Jvc29mdC5TAyFyZVbVaw50LCBwZXJzaW9uPTEyLjZlU2UxMTFlOTQyO
WNFFgYeBXdPZHRoBQqXMDALHgZoZW1naHQFBdEwMCUeBxN0eWxlBQp6LWluzGV40jA7ZAIBDxYCHw8FF3dpZHRoOjEwMCU7aGVpZ2h0OjEwMCU7FgJmDxYUHHZTY3JpCHR
Gb3JURnJhbWVDb250ZW50BdMTDQo8aHRtbD4NCgk8Ym9keSBjQW1UaGVJbm10aWFSUGFnZT0nVHJlZSc+DQoJCTxmb3Jt
IG1ldGhvdD0ncG9zdCcgYWN0aW9uPScvdGVhbS9tc3VyaS9fbGF5b3V0cy9FeGNlbFJlbnRlcmVYLmFzcHg/JWNhbmN1b
CULcmVsb2FkJSJcgc3R5bGU9J2Rpc3BsYXk6bm9uZSc+DQoJCQk8aW5wdXQgbmFtZT0nZXdyUG9zdERhdGEnIHZhbHVlPS
dscGxTSG5wSww2N0J1czNCAw9tdmXhNXZ0aU1hSzBkUnc4Q3dCK0N1WEFhcEhrRVhBzJzoYmJlUHdBS1lXaUdGVThlUD1
sZ1FiUG56c2gvMWVmbVJ4NERvcGxJVfhsQnZiVDQvRDBUaFhmVHFVSDNu1BMK1V6U3dsbXM2Nz1rWV1Db1htWDJpDvVs
RHPrZVpvnDNTZ3BoUmR6OFVrc1RaaDRhRmFzZEGzUFzFWWRtMXzoOVNXTE9rSjZkUjJFZDZvVjBkUlFKd0xpVnFTLLmZo
HRrSTIYsYXoVnJhbWVJRDJOOC9qRGN3QUNZaWZzZ2dQdUwVhb09Zc2toNmMvR2ZMOHBPWnZCdFNSU3UzL2E2bjBHSXDKK2
9zYzBGOE9wb1lmM0Q5REhXWVM2d0VpU0prYkRrTzBpdQsWMEgrVEhNNmwy2FmMkhBcGxZcWR1M2l1z05xadV5Sy9HSLQ
rRHFTNzVKeTVJTUdEcX1DR01vUXZFdkU1Tm11cEtXa2VEWi9WVE1MT1ZnSG5UWRSVnRTTitGL0duNvpBTUprRzJRNVAx
RWwhcm5VqjNGNH1oUEFZzHNTVXhqwXwoYX130U030E1s0W90S0U0v1o4Z3JKZDZpR09ieXBBY0Z3VzVQndjTgDcBnUra
wM2UHZISjVdek54WU1OenBLMEtHbURqMmRJVdH3SnhnaDRWVmhlVDJCM1FMRG56THRYZwxsZDdjdtNjNUJ6dJtU2RMZF
c2YV1hTVVRWfd4WTBocU9HWUhgBxYxamljTTNxdTY0RD2yaFhFMEZFT1Q4Z3Jxa1NPSWlkVTCvOTLMRGhzcmlrQnd5NFR
vbXRqaEdmbfMYMddRZGhjTkg5VU1sUHLqcDMYSHk1Z1ZwaTU2ME1zalh5eWJBCUJGblJLNDZhrTY5dXIwUZYZnhvVDRS
TEV6dWR1cXJhTHV2RlJUai95Q2U3VU1JaENFVDV0U1VzUkhPdDBYaWZUQzFgTm4zZTR2VnBRTjNaSHZNMTF6Q0E5U1RXc
UJsqmVjYXRRA3BkCctVMVg3QVBhdEhMujhjRlpvdkZoSjkyQ1gwRjEwRD1Tcc9jY3JyTkJfjOEFTQTNnemJTVGJzblm1vRy
9ieJR1eGlTZFNZd3VknTk2dHhIV1FFOHRHOXliVm1hWE5RQ0RD2psOGJJuMLRnV0ZH12T3N4bE1yeHRNWmcwWE84OUR
```

```
SaFg1YmloNDVnV1d0enAzMEVEdWljMFlnbW5mWWNBVMxTZfJDUzZHjV2R0NhNVlqR2dzVEIyQjZuaWJXY2FzYXRva2NZ
cU5oTVl4N0QvMUtvREYrdm5Suk4wY2t2Y0ZJPsc+DQoJCTwvZm9ybT4NCgk8L2JvZHk+DQoJPHNjcmldCB0eXB1PSd0Z
Xh0L2phdmFzY3JpcHQnIGxhbmd1YWdlPSdqYXZhc2NyaXB0Jyd0ZXh0L2phdmFzY3JpcHQnPg0KCQk8IS0tDQoJJCQlmdW
5jdGlVbiBmB2NhbFNjcmldEdldEF0dHJpYnV0ZShjdHJsLCBhdHRyaWIpDQoJJCQl7DQoJCQkJaWYgKGN0cmwuaGFzQXR
0cmldXRlICE9IG51bGwgKQ0KCQkJCQlyZXR1cm4gKGN0cmwuaGFzQXR0cmldXRlKGF0dHJpYiKpID8gY3RybC5nZXRb
dHRyaWJldGUoYXR0cmliKSA6IG51bGw7DQoJCQkZVwzZQ0KCQkJCQlyZXR1cm4gY3RybC5nZXRbZXRbZXRbZXRbZXRb
dHRyaWJldGUoYXR0cmliKSA6IG51bGw7DQoJCQkZVwzZQ0KCQkJCQlyZXR1cm4gY3RybC5nZXRbZXRbZXRbZXRbZXRb
mliKTsNCgkJCX0NCgk0KCQkZVwzZQ0KCQkZVwzZQ0KCQkZVwzZQ0KCQkZVwzZQ0KCQkZVwzZQ0KCQkZVwzZQ0KCQkZVwz
kJCXsNCgkJCQkZVwzZQ0KCQkZVwzZQ0KCQkZVwzZQ0KCQkZVwzZQ0KCQkZVwzZQ0KCQkZVwzZQ0KCQkZVwzZQ0KCQkZVwz
NCgkJCQl9DQoJCQkZVwzZQ0KCQkZVwzZQ0KCQkZVwzZQ0KCQkZVwzZQ0KCQkZVwzZQ0KCQkZVwzZQ0KCQkZVwzZQ0KCQk
VG9TZXJ2ZXIoKQ0KCQkZVwzZQ0KCQkZVwzZQ0KCQkZVwzZQ0KCQkZVwzZQ0KCQkZVwzZQ0KCQkZVwzZQ0KCQkZVwzZQ0
SBmB2NhbFNjcmldEdldEF0dHJpYnV0ZSh3aW5kb3cuZnJhbWVfZGVtZW50L2d0b3N0ZWRCYWNrQWxyZWZkeScpOw0KCQ
kJCX0NCgkJCQl9DQoJCQkZVwzZQ0KCQkZVwzZQ0KCQkZVwzZQ0KCQkZVwzZQ0KCQkZVwzZQ0KCQkZVwzZQ0KCQkZVwzZQ
kPT0gImNhbmN1bD1UcnV1JiIGfhWgIiVyZWxvYWQlIiA9PSAicmVsb2FkPVRydWUmijsNCgkJCQl9DQoJCQkZVwzZQ0KCQ
bGwgfHwgc3BlY21hbFJlcG9zdCkNCgkJCQl7DQoJCQkZVwzZQ0KCQkZVwzZQ0KCQkZVwzZQ0KCQkZVwzZQ0KCQkZVwzZQ0
2V0UG9zdGVkQmFja0FscmVhZHRyaWJldGUoYXR0cmliKSA6IG51bGw7DQoJCQkZVwzZQ0KCQkZVwzZQ0KCQkZVwzZQ0KCQ
0YXR1cyIsICJsb2FkaW5nIik7DQoJCQkZVwzZQ0KCQkZVwzZQ0KCQkZVwzZQ0KCQkZVwzZQ0KCQkZVwzZQ0KCQkZVwzZQ0
CQl9DQoJCQkZVwzZQ0KCQkZVwzZQ0KCQkZVwzZQ0KCQkZVwzZQ0KCQkZVwzZQ0KCQkZVwzZQ0KCQkZVwzZQ0KCQkZVwzZQ
mFjaYyppOw0KCQkZVwzZQ0KCQkZVwzZQ0KCQkZVwzZQ0KCQkZVwzZQ0KCQkZVwzZQ0KCQkZVwzZQ0KCQkZVwzZQ0KCQkZ
kJCQl9DQoJCQl9DQoJCQl9DQoJCQl9DQoJCQl9DQoJCQl9DQoJCQl9DQoJCQl9DQoJCQl9DQoJCQl9DQoJCQl9DQoJCQl9DQ
tPg0KCTwvc2NyaXB0Pg0KPC9odG1sPh8NBQQxMDA1HhBfd3JXYWl0RwXlbWVudElkBRxtX2V4Y2VsV2ViUmVuzGVyZXJf
V2FpdEltYWdlHw4FBDEwMCUeC2ZyYW11Ym9yZGVyBQeWw8FHHotaw5kZXg6MTt2aXNpYmlsaXR5OmhpZGRlbnJseCVNjc
m9sbGluzWUCbm8eD0lZRXdyTWfPbk1mcmFtZQUeDhJ1ZR4JRXdyU3RhdHVzZR4JRHVtbXlQYWdlZWQCBAB8WBB8PBQ1kaX
NwbGF5Om5vbmU7HxZlZGRcHuxjujvxxWWE+rd32TChVa4Eaw==" />
```

```
</div>
<script type="text/javascript">
//
var theForm = document.forms['ctl05'];
if (!theForm) {
    theForm = document.ctl05;
}
function __doPostBack(eventTarget, eventArgument) {
    if (!theForm.onsubmit || (theForm.onsubmit() != false)) {
        theForm.__EVENTTARGET.value = eventTarget;
        theForm.__EVENTARGUMENT.value = eventArgument;
        theForm.submit();
    }
}
//]]&gt;
&lt;/script&gt;</pre></div>
<div data-bbox="145 585 785 610" data-label="Code-Block"><pre>&lt;script src="/WebResource.axd?d=e0GKyGKnuokxMqsPUJZAlQ2&amp;amp;t=633911231850302493"
type="text/javascript"&gt;&lt;/script&gt;</pre></div>
<div data-bbox="145 620 725 815" data-label="Code-Block"><pre>&lt;script&gt; var MSOWebPartPageFormName = 'ctl05';&lt;/script&gt;
&lt;script type="text/javascript"&gt;
//<![CDATA[
var originalFormAction = document.forms[0].action;
function FetchCallbackMenuItems (menutemplate)
{
    var template=document.getElementById (menutemplate);
    if(template == null || (template != null &amp;&amp; template.hasChildNodes()))
    {
        return;
    }
    __theFormPostData = '';
    WebForm_InitCallback();
    var lastFormAction = document.forms[0].action;
    document.forms[0].action = originalFormAction;
}</pre></div>
<div data-bbox="830 850 887 865" data-label="Page-Footer"><p>13 / 24</p></div>
<div data-bbox="130 870 450 950" data-label="Page-Footer"><p>[MS-ESURL] — v20121003
Excel Services Publishing Protocol Specification
Copyright © 2012 Microsoft Corporation.
Release: October 8, 2012</p></div>
```

```

WebForm_DoCallback('ctl10$MyLinksMenu','',PopulateCallbackMenuItems,'^R^,^F^,ctl10_MyLinksMen
uMenu,ctl10_MyLinksMenuMenuTemplate',null,false);
    document.forms[0].action = lastFormAction;
}
//]]>
</script>
<script type="text/JavaScript" language="JavaScript">
    <!--
        var L_Menu_BaseUrl="/Site";
        var L_Menu_LCID="1033";
        var L_Menu_SiteTheme="";
    </script>
<script src="/_layouts/EWRScripts.js?rev=ycNXUsNKKd1qh12ZwFcmTQ%3D%3D"
type="text/javascript"></script>
<script type="text/javascript">
    <![CDATA[
        function WebForm_OnSubmit() {
            UpdateFormDigest('\u002f\u002f', 1440000);
            return true;
        }
    </script>
</script>

<div>

    <input type="hidden" name="__EVENTVALIDATION" id="__EVENTVALIDATION"
value="/wEWAgl85K7DAgLDp935A227vZTrpVx+IX9lEdSAIKYOVXMc" />
</div>

    <table cellpadding="0" cellspacing="0" width="100%" height="100%" border="0">
        <tr>
            <td>
                <!-- begin global breadcrumb -->
                <table width="100%" cellpadding="3" cellspacing="0" border="0" class="ms-
globalbreadcrumb">
                    <tr>
                        <td nowrap="nowrap">
                            <span id="GlobalNavigationSiteMap"><a
href="#GlobalNavigationSiteMap_SkipLink"></a><span><a href="/">Excel Services</a></span><span> &gt;
</span><span><a href="/team">Team</a></span><span> &gt; </span><span><a
id="GlobalNavigationSiteMap_SkipLink"></a></span>
                            </td>
                        <td nowrap="nowrap">
                            <a id="m_webLink" href="http://ServerName/Site">Site Name</a>
                            </td>
                        <td nowrap="nowrap">
                            <span id="m_backLinkSeparator"> &gt; </span>
                            </td>
                        <td nowrap="nowrap">
                            <a id="m_backLink"
href="/site/Document%20Library/Forms/AllItems.aspx">Shared Documents</a>
                            </td>
                        <td width="100%">
                            &#160;
                            </td>
                    </tr>
                </table>
            </td>
        </tr>
    </table>

```

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 | | |
```

```

        </tr>
        <tr>
            <td style="height:100%;"><div style="overflow:hidden;height:100%;"><div
id="m_excelWebRenderer_WaitImage" width="100%" height="100%" style="z-
index:0;width:100%;height:100%;overflow:auto;">

<table style="height:100%;width:100%;">
    <tr style="height:48%;">
        <td>
            <div style="height:100%;;overflow:hidden;">&nbsp;</div>
        </td>
    </tr>
    <tr>
        <td>
            <table style="height:100%;width:100%;">
                <tr>
                    <td width="100%" valign="top" style="height:2%">
                        <table width="100%" border="0" cellspacing="0" cellpadding="0" class="ms-
propertySheet">
                            <tr>
                                <td align="center" valign="middle">
                                    <table cellpadding="0" cellspacing="0">
                                        <tr>
                                            <td>
                                                <table cellpadding="0" cellspacing="0">
                                                    <tr>
                                                        <td style="padding-top: 0px; padding-left: 20px;
padding-right: 20px;">
                                                            
                                                                </td>
                                                                <td MessageID = "Ewr_LoadProgress" style="padding-
right:20px;" vertical-align="middle">
                                                                    <span class='ewr-progress-msg-font'>Operation in
progress...</span>
                                                                </td>
                                                            </tr>
                                                        </tr>
                                                        <tr>
                                                            <td colspan="2" style="height: 1px">
                                                                </td>
                                                            </tr>
                                                        <tr>
                                                            <td colspan="2" style="height: 1px">
                                                                
                                                            </td>
                                                        </tr>
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                                                            <td colspan="2" style="height: 1px">
                                                                
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                                                </table>
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                                    </tr>
                                </td>
                            </tr>
                        </table>
                    </td>
                </tr>
            </table>
        </td>
    </tr>
</table>

```



```

                                <td>
                                <table cellpadding="0"
cellsacing="0"><tr><td style="width:100%;">
                                </td>
                                <td>
                                <input id="ServerMessage2"
type="button" class="ewr-dialog-button" value="Cancel"
onclick="javascript:EwrCancelRequest(event,'m_excelWebRenderer_ECSFrame','m_excelWebRenderer_
ctl106');" />
                                </td>
                                </tr>
                                </table>
                                </td>
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                                </table>
                                </td>
                                </tr>
                                </table>
                                </div><div style="width:100%;height:100%;"><IFrame id="m_excelWebRenderer_ECSFrame"
ScriptForIFrameContent="
<html>
    <body IAmTheInitialPage='True'>
        <form method='post' action='/Site/_layouts/ExcelRenderer.aspx?%cancel%%reload%'
style='display:none'>
            <input name='ewrPostData'
value='1plSHnpIi67Bus3Biomv1a5vtiMaK0dRw8CwB+CbXAapHkEXAF6hbpuPwAJYWiGFU8eP9lgQbPnzsh/1efmRx4
DoplITX1BvbT4/D0ThXfTqUH3n7PL+UzSwlms679QYYCnXmX2OuUlDzkeZo43SgphRdz8UksTZh4aFasdH3PVEYdmlvh9
SWLOkJ6dR2Ed6oV0dRQJwLiVqS/S38tkI22az3VramUID2N8/jDcwACYifGggPuEaoOYskh6c/GfL8pOzvBtSRSu3/a6n
0GIwJ+osc0F8OpoYf3D9DHqYS6wEiSJkbDk00Ot00H+THM612saf2HAplYqde3msgNqh5yK/GJT+DqS75Jy5IMGDqyCG
MoQvEvE5NmupKWkeDZ/VTMLNVgHnTQdRVtSN+F/Gn5ZAMJoG2Q5P1Eh1rnUB3F4yhPasdsuXjQlhayw9M78M19otIM/C
Z8grJd6iG0bypAcFwW5NBwclGbnuc6PvHJ5CzNxYMNzpk0KGMdj2dIT8wJxgh4VVhuT2B2QLDnzLtre1ld7cu3c5Bzt
2mSdLdW6aYaMTvTWxY0hqOGYHFmvljicM3qu64D6rhXE0FEOT8grqjSOIidU7/99LDhsrikBwy4TomtjhgflS207Qdhcn
H9UMLPyjp32Hy5gVpi560IsjXyybDqBFoRK46aE69ur0mFXfxoT4RLEzuduqraLuvFRTj/yCe7UMIhCET5hRUsRHOT0Xi
fTC1jNn3e4VpQN3ZHvM1lzCA9STWqBlBeIatQkpJp+U1X7APatHLR8cFZovFhJ92CX0F10D9Sp/ccrrNac8AmA3gzbst
bsnioG/bz4uxmSdSYwud596txHVQE8tG9ybVmaXNQCDCwjl8bIRbKFutdyvOxslMrxtMZg0XOX89DRhX5bih45gWWtzp30
EDuic0YgmnfYcAV1SdRCS6Gf5vGCa5YjGgsTB2B6nibWcasatokcYqNnMYx7D/1KoDF+vnRRN0ckvcFI='>
            </form>
        </body>
        <script type='text/javascript' language='javascript'>
            <!--
            function LocalScriptGetAttribute(ctrl, attrib)
            {
                if (ctrl.hasAttribute != null )
                    return (ctrl.hasAttribute(attrib)) ? ctrl.getAttribute(attrib) : null;
                else
                    return ctrl.getAttribute(attrib);
            }
        </script>
    </html>
</div>

```

```

    }

    function SetPostedBackAlready(val)
    {
        try
        {
            window.frameElement.setAttribute('PostedBackAlready', val);
        }
        catch (ex)
        {
        }
    }
}

function EwrFramePostToServer()
{
    var val = 'SureDid';
    try
    {
        val = LocalScriptGetAttribute(window.frameElement, 'PostedBackAlready');
    }
    catch (ex)
    {
    }
    var specialRepost = '"%cancel%&quot; == &quot;cancel=True&amp;&quot; ||
&quot;%reload%&quot; == &quot;reload=True&amp;&quot;;
    if (val == null || specialRepost)
    {
        if (!specialRepost)
        {
            SetPostedBackAlready('SureDid');
        }
        else
        {
            SetPostedBackAlready(null);
            window.frameElement.setAttribute('&quot;EwrStatus&quot;;,
&quot;loading&quot;');
        }
        document.forms.item(0).submit();
    }
    else
    {
        SetPostedBackAlready(null);
        history.back();
        window.setTimeout('&quot;window.location.reload(false);&quot;;,0);
    }
}
window.setTimeout('&quot;EwrFramePostToServer()&quot;;,0);
// -->
</script>
</html>" width="100%" EwrWaitElementId="m_excelWebRenderer_WaitImage" height="100%"
frameborder="0" style="z-index:1;visibility:hidden;" Scrolling="no" IsEwrMainIframe="true"
EwrStatus="" DummyPage=""></IFrame></div>
<script type='text/javascript' language='javascript'>
    <!--
        FillIFrameWithForm('m_excelWebRenderer_ECSFrame', false, '');
    // -->
</script>
<script type='text/javascript' language='javascript'>
    <!--

```

```

        PollForDocumentCompletion('m_excelWebRenderer_ECSFrame', false);
    // -->
</script><IFRAME id="m_excelWebRenderer_ctl06" style="display:none;" DummyPage=""></IFRAME>
<script type='text/javascript' language='javascript'>
    <!--
        function OpenEwrToolpaneForEditm_excelWebRenderer()
        {
            MSOT1Pn_ShowToolPane2('Edit','m_excelWebRenderer');
        }
    // -->
</script></div></td>
    </tr>
    </table>
</div></div></td>
</tr>
</table>
        <!-- end Excel Web Renderer -->
    </td>
</tr>
</table>

<script type="text/javascript">
//
DoEwrResizeViewerPage();
WebForm_InitCallback();//]]&gt;
&lt;/script&gt;

&lt;script type='text/javascript' language='javascript' for='window' event='onbeforeunload'&gt;
    &lt;!--
        EwrMainPageBeforeUnload();
    // --&gt;
&lt;/script&gt;&lt;/form&gt;
&lt;/body&gt;
&lt;/html&gt;
</pre>
</div>
<div>
<hr/>
<p>19 / 24</p>
</div>
<div>
<p>[MS-ESURL] — v20121003<br/>
Excel Services Publishing Protocol Specification</p>
</div>
<div>
<p>Copyright © 2012 Microsoft Corporation.</p>
</div>
<div>
<p>Release: October 8, 2012</p>
</div>
```

5 Security

5.1 Security Considerations for Implementers

When using this protocol over an untrusted network, an HTTPS (as described in [\[RFC2818\]](#)) connection can help mitigate risks of protocol messages being intercepted or tampered with.

The information contained in the workbook identified by the ID query string parameter is likely to be security sensitive. For example, it could contain confidential data such as financial records. Therefore it is recommended that the protocol server establish that the protocol client has permissions to access the workbook in any implementation in which the contents of this workbook are returned in the message body as specified in section [2.2.2.3](#).

There are no restrictions on the protocol server regarding the message header content type, as described in section [2.2.2.2](#) and in [\[RFC2616\]](#) section 14.17. Therefore, it is recommended that the protocol client checks the Content-Type to avoid running any executable file that could pose a security risk.

5.2 Index of Security Parameters

None.

6 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 Excel® 2007
- Microsoft® Excel® 2010
- Microsoft® Office SharePoint® Server 2007
- Microsoft® SharePoint® Server 2010
- Microsoft® Excel® 2013
- Microsoft® SharePoint® Server 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.

7 Change Tracking

This section identifies changes that were made to the [MS-ESURL] protocol document between the September 2012 and October 2012 releases. Changes are classified as New, Major, Minor, Editorial, or No change.

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

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

- A document revision that incorporates changes to interoperability requirements or functionality.
- An extensive rewrite, addition, or deletion of major portions of content.
- The removal of a document from the documentation set.
- Changes made for template compliance.

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

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

The revision class **No change** means that no new technical or language changes were introduced. The technical content of the document is identical to the last released version, but minor editorial and formatting changes, as well as updates to the header and footer information, and to the revision summary, may have been made.

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

- New content added.
- Content updated.
- Content removed.
- New product behavior note added.
- Product behavior note updated.
- Product behavior note removed.
- New protocol syntax added.
- Protocol syntax updated.
- Protocol syntax removed.
- New content added due to protocol revision.
- Content updated due to protocol revision.
- Content removed due to protocol revision.
- New protocol syntax added due to protocol revision.

- Protocol syntax updated due to protocol revision.
- Protocol syntax removed due to protocol revision.
- New content added for template compliance.
- Content updated for template compliance.
- Content removed for template compliance.
- Obsolete document removed.

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

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

- **Protocol syntax** refers to data elements (such as packets, structures, enumerations, and methods) as well as interfaces.
- **Protocol revision** refers to changes made to a protocol that affect the bits that are sent over the wire.

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

Section	Tracking number (if applicable) and description	Major change (Y or N)	Change type
1.1 Glossary	Added the glossary term "Hypertext Transfer Protocol over Secure Sockets Layer (HTTPS)".	N	New content added.
1.1 Glossary	Removed the glossary terms "published", "Uniform Resource Locator (URL)", and "workbook".	N	Content removed.
1.3 Overview	Changed the name from 'Protocol Overview (Synopsis)' to 'Overview'.	N	Content updated for template compliance.
6 Appendix A: Product Behavior	Added Microsoft® Excel® 15 Technical Preview and Microsoft® SharePoint® Server 15 Technical Preview to the list of applicable product versions.	N	New content added.

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