

# [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 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 [\[MS-GLOS\]](#):

**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 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](mailto: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](#)".

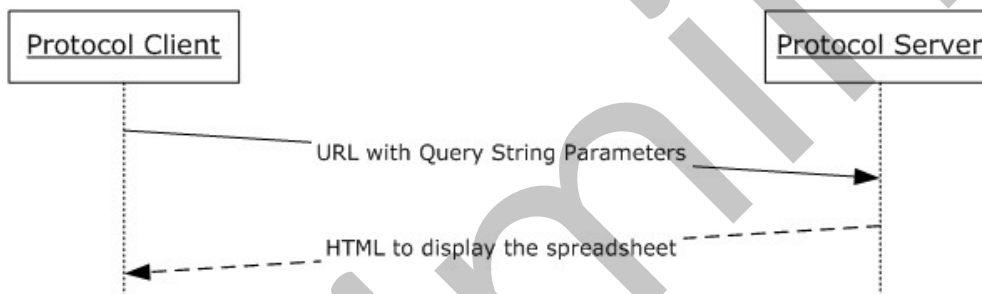
[MS-OFCGLOS] Microsoft Corporation, "[Microsoft Office Master Glossary](#)".

### 1.3 Protocol Overview (Synopsis)

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.

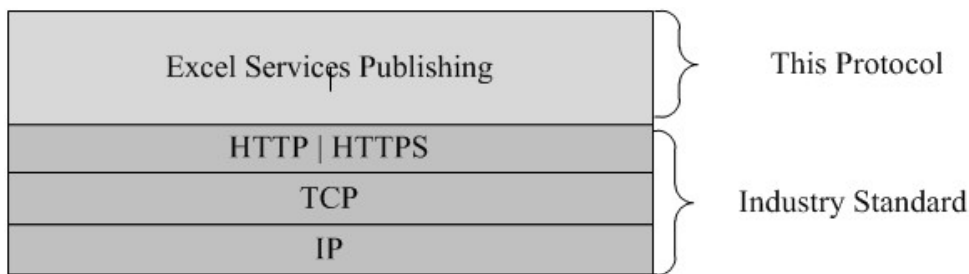


**Figure 1: This protocol message processing sequence**

### 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 <a href="#">[RFC1738]</a> . The Scheme Component as specified in <a href="#">[RFC2396]</a> 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 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. Microsoft 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=S5dt4K8TJGVVYU9HrW6enw%3D%3D"></script>
<script src="/_layouts/1033/owsbrows.js?rev=%2F0cWXc03f8AvMOC%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.xlsx&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
FjY2VzcyAtIGh0dHA6Ly94bHN1cnZpY2VzL3RlYW0vbXN1cmkvU2hhcmVkJERvY3VtZW50cy9FeGFtcGx1Lnhsc3hkAg0
PFgIFAAUDBHRyFgQCBQ8PFgQeBFR1eHQFDk1hbnByYXRhcCBTdXJpHgtOYXZpZ2F0ZVVybaUcaHR0cDovL3hsc2Vydm1j
ZXMvdGVhbS9tc3VyaWRkAgkPdxEHwIFEFNoYXJlZCBEB2N1bWVudHMfAwUwL3RlYW0vbXN1cmkvU2hhcmVkJERvY3VtZ
W50cy9Gb3Jtcy9BbGxJdGVtcy5hc3B4ZGQCCw9kFgJmD2QWBmYpFgIFAgUmPHNwYW4gc3R5bGU9J3BhZGRpbmctbGVmdD
ozcHgnPjwvc3Bhb3J5aGAgIPDxEHwIFB015IFNpdGUfAwUraHR0cDovL3hsc2Vydm1jZXM6NTYyNS9fbGF5b3V0cy9NeVN
pdGUuYXNweGRkAgQPFgIFAgU5PHNwYW4gc3R5bGU9J3BhZGRpbmctbGVmdDo0cHg7cGFkZGl1cy9yaWdodDozcHgnPnw8
L3NwYW4+ZAIND2QWAmYPZBYCAgMPFgIFAgUBfGQCDw8PFgIeEFBzZpb3VzV29ya2Jvb2sF+AFscGxTSg55Swk2N0J1c
zNCAw9tdmXhNXZ0aU1hSzbkUnc4Q3dCK0N1WEFhcEhrRVhBzJzYoYmJlUHdBS1lXaUdGVThlUD1sZ1FiUG56c2gvMWVmbV
J4MFY4enQ5SFJxNG56Um8vQVVAwV5k5MxJ5cGs0Yzk0a1BybWpSeHFRwX2Yk5TbTMyRHRMRjVkaWdSU3RsczRvVkmXU0Q
wRmw2Yyszm2FaczJ4WHdqTmlCTlFYs1dLS0tRd05KYXZqTki5QWVLRUQ4N1dkUU9wcWlKeWlFT2tKRWoxNlhSNjJJZjJl
TjdzZEdxTjkr0MYyY3o2b1hORkxJY3c9PWQWBMYPDxYOHgJobQsqmL1N5c3R1bS5XZWIuVUkuV2ViQ29udHJvbHMvV2ViU
GFydhMuV2ViUGFyEh1bHBNb2RlAR8ACymFAU1p3Jvc29mdC5TAgFyZVBvaW50Ld1YlBhcnRQYQdlcy5EaXJlY3Rpb2
4sIElpY3Jvc29mdC5TAgFyZVBvaW50LCBWXZJzaW9uPTEyLjAUMC4wLWCBdWx0dXJlPW5ldXRYyWwsIFB1YmXpY0tleVR
va2VuPtcxZTliY2UxMTFlOTQyOWMAHqJobGUEbnVyB9yZwWMAW0dHA6Ly94bHN1cnZpY2VzL3RlYW0vbXN1cmkvX2xh
eW91dHMveGx2aWV3ZXIuYXNweD9pZD1odHRwOi8veGxzZXJ2aWNLcy90ZWFTL21zdxJpL1NoYXJlZCBEB2N1bWVudHMvR
XhhbXB3ZS54bHN4JkRlZmFlbHRhR3B1b3J0xkNvb2tpZ2V0YHJld3JndWlkBRJtX2V4Y2VsV2ViUmVzUGVzZXJFRUNTRnJhbWVkaGAgIPZBYCAgE
PZBYCZg9kFgJmD2QWBmYpDxYCHgLNzXNzYwd1SUQLKZUBTW1jcm9zb2Z0Lk9mZmljZS5FeGNlbC5TZXJ2ZXIuRXhjZwWt
ZXJ2ZXJNzXNzYwd1SWQsIE1pY3Jvc29mdC5PZmZpY2UuRXhjZwWuU2VydmVycWVzZXJzaW9uPTEyLjAUMC4wLWCBdWx0d
XJlPW5ldXRYyWwsIFB1YmXpY0tleVRva2VuPtcxZTliY2UxMTFlOTQyOWNFgYeBXdPZHRoBQXMDALHgZoZw1naHQFBD
EwMCUEBxN0EwXlBQp6LWluzGV40jA7ZAIBDXCHw8FF3dpZHR0oJewMCU7aGVpZ2h0oJewMCU7FgJmDxYUHHZTY3JpcHR
Gb3JURnJhbWVDb250ZW50BdMTDQo8aHRtbD4NCgk8Ym9keSBjQW1UaGVJbml0aWVsUUFnZT0nVHJlZSc+dQoJCTxmb3Jt
IG1ldGhvdD0ncG9zdCc9YWN0aW9uPScvdGVhbS9tc3VyaS9fbGF5b3V0cy9FeGNlbFJlbnRlcmVyLmFzcHgvJWNhbmN1b
CULcmVsb2FkJSJcyc3R5bGU9J2Rpc3BsYXk6bW9uZSc+dQoJCk8aW5wdXQgbmFtZT0nZXdyUG9zdERhdGEnIHZhbHVlPS
dscGxTSg55Swk2N0J1cZnCAw9tdmXhNXZ0aU1hSzbkUnc4Q3dCK0N1WEFhcEhrRVhBzJzYoYmJlUHdBS1lXaUdGVThlUD1
sZ1FiUG56c2gvMWVmbVJ4NERvcGxJVfhsQnZiVdQvRDBUaFhmVHFVSDNu1BMK1V6U3dsbXM2Nz1rRW1Db1htWDJpDvVs
RHprZVpvnDNTZ3BoUmR6OFVrc1RaaDRhRmFzZegzUFzFwWrtMXzoOVNXTE9rSjZkUjJFZDZvVjBkUlFKd0xpVnFTLLmZo
HRrSTIyYXozVnJhbWVJRdJOOC9qRGN3QUNZaWZzZ2dQdUWvb09Zc2toNmMvR2ZMOHBPWnZCdFNSU3UzL2E2bjBHSXdkK2
9zYzBGOE9wb1lmM0Q5REhxWVM2d0VpU0prYkRrTzBPdGMEgrVEhNNmWyc2FmMkhBcGxZcWR1M2l1z05xadV5Sy9HS1Q
rRHTNzVKeTVJTUdEcX1DR01vUXZFdkU1Tm11cEtXa2VEWi9WVE1MT1ZnSG5UWRSVnRtTitGL0duNvpBTUprRzJRNvAx
RWWhcm5VqJNGNH1oUEFzZHNTVXhquWxoYX130U030E1s0W90S0U0V1o4Z3JKZDZpR09ieXBBY0Z3VzVQndjTgDcbnUra
WM2UHZISjVDeK54WU1OenBLMEtHbURqMmRJVdH3SnhnaDRWVmhlVDJCM1FMRG56THRYZwXsZDdjdtNjNUJ6dJtU2RMZF
c2Y1h1tVWRWfd4WTBocU9HWUhgBxYxamljTtnxdTjORd2yaFhFMEZFT1Q4Z3Jxa1NPSWlkVtCvOTLMRGhzcmlrQnd5NFR
vbXRqaEdmbFMjMDdRZGhJtkg5VU1sUhlqcDMYSHk1Z1ZwaTU2ME1zalh5eWJBCUJGblJLNDZhrTY5dxIwbUZYZnhvVDRS
TEV6dWR1cXJhTHV2RlJUai95Q2U3VU1JaENFVDV0U1VzUkhPdDBYaWZUQzFgTm4zZTR2VnBRTjNaSHZNMTF6Q0E5U1RXC
UJsqmVJYXRRA3BkCctVMVg3QVBhdEhMUjh1RlpvdkZoSjkyQ1gwRjEwRd1Tcc9jY3JyTkJfjOEfQTnNemJTVGJzblm1vRy
9iejR1eG1TZFNZd3VknTk2dHhIV1FFOHRHOXliVm1hWE5RQ0Rd2psOGJJuMLRnV0ZH12T3N4bE1yeHRNWmcwWE84OUR
```

```
SaFglYmloNDVnV1d0enAzMEVEdWljMFlnbW5mWWNBVmxTZfJDUzZHjV2R0NhNV1gR2dzVEIyQjZuaWJXY2FzYXRva2NZ
cU5oTV14N0QvMUtvREYrdm5SUK4wY2t2Y0ZJPSc+DQoJCTwvZm9ybT4NCgk8L2JvZHk+DQoJPHNjcmldCB0eXB1PSd0Z
Xh0L2phdmFzY3JpcHQnIGxhbmd1YWdlPSdqYXZhc2NyaXB0JyD0ZXh0L2phdmFzY3JpcHQnPg0KCQk8IS0tDQoJJCQlmdW
5jdGlVbiBmB2NhbFNjcmldEdlDEf0dHJpYnV0ZShjdHJsLCBhdHRyaWIpDQoJJCQl7DQoJJCQkJaWYgKGN0cmwuaGFzQXR
0cmldXRlICE9IG51bGwgKQ0KCQkJCQlyZXR1cm4gKGN0cmwuaGFzQXR0cmldXRlKGF0dHJpYiKpID8gY3RybC5nZXRb
dHRyaWJldGUoYXR0cmliKSA6IG51bGw7DQoJJCQkJCWwzZQ0KCQkJCQlyZXR1cm4gY3RybC5nZXRbDHRyaWJldGUoYXR0c
mliKTsNCgkJCX0NCg0KCQkKJZnVuY3Rpb24gU2V0UG9zdGVkQmFja0FscmVhZHkodmFskQ0KCQkKJew0KCQkKJCXRYeQ0KCQ
kJCXsNCgkJCQkKJd2luZG93LmZyYW1lRWxlbWVudC5zZXRBdHRyaWJldGUoJ1Bvc3RlZEJhY2tBbHJlYWR5JywgdmFskTs
NCgkJCQl9DQoJJCQkKJY2F0Y2goZGxpDQoJJCQkKJew0KCQkKJCX0NCgkJCX0NCg0KCQkKJZnVuY3Rpb24gRXdYRnJhbWVQb3N0
VG9TZXJ2ZXIoKQ0KCQkKJew0KCQkKJCXZhciB2YWwgPSAnU3VyZURpZCc7DQoJJCQkKJdHJ5dDQoJJCQkKJew0KCQkKJCQl2YWwgP
SBmB2NhbFNjcmldEdlDEf0dHJpYnV0ZSh3aW5kb3cuZnJhbWVfBgVtZW50LcDQb3N0ZWRCYWNrQWxyZWfkeScpOw0KCQ
kJCX0NCgkJCQl1jYXRjaCAoZGxpDQoJJCQkKJew0KCQkKJCX0NCgkJCQl2YXIgc3BlY21hbFJlcG9zdCA9TC1lY2FuY2VsJSI
gPTQgImNhbmN1bD1UcnV1JiIgfHwgIiVyZWxvYWQlIiA9PSAicmVsb2FkPVRYdWUmiJsnCgkJCQl1pZiAodmFskID09IG51
bGwgfHwgc3BlY21hbFJlcG9zdCkNCgkKJCQl7DQoJJCQkKJWlMcGhc3BlY21hbFJlcG9zdCkNCgkKJCQkKJew0KCQkKJCQkKJ
2V0UG9zdGVkQmFja0FscmVhZHkoJ1N1cmVEaWQnKTsNCgkKJCQkKJfQ0KCQkKJCQl1bHNlDQoJJCQkKJCXsNCgkKJCQkKJCVNlDf
Bvc3RlZEJhY2tBbHJlYWR5K51bGwpOw0KCQkKJCQkKJd2luZG93LmZyYW1lRWxlbWVudC5zZXRBdHRyaWJldGUoIkw3c1N
0YXR1cyIsICJsb2FkaW5nIik7DQoJJCQkKJCX0NCgkKJCQkKJZG9jdW1lbnQuZm9ybXMuaXRlbSgwkS5zdWJtaXQoKTsNCgkK
JCQl9DQoJJCQkKJZwzZQ0KCQkKJCXsNCgkKJCQkKJU2V0UG9zdGVkQmFja0FscmVhZHkobnVsbCk7DQoJJCQkKJCWhpc3RvcnkU
mFjyagpOw0KCQkKJCQl3aW5kb3cuc2V0VGltZW91dCgid2luZG93LmxyY2F0aW9uLnJlbG9hZChmYXxzZSk7IiwkKTsNCg
kJCQl9DQoJJCQl9DQoJJCQl3aW5kb3cuc2V0VGltZW91dCgid2luZG93LmxyY2F0aW9uLnJlbG9hZChmYXxzZSk7IiwkKTsNCg
V2FpdEltYWdlHw4FBDEwMCUeC2ZyYW1lYm9yZGVyBQeWw8FHHotaw5kZXg6MTt2aXNpYmlsaXR5OmhpZGR1bjseCVNjc
m9sbGluzWUCbm8eD01zRXdyTWfPbk1mcmFtZQUeDhJ1ZR4JRXdyU3RhdHVzZR4JRHVtbXlQYWdlZWQCA8WBB8PBQ1kaX
NwbGF5Om5vbmU7HxZlZGRcHuxjujvvxWWE+rd32TchVa4Eaw==" />
```

```
<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="145 584 786 608" 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="145 621 721 811" 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="828 850 889 864" data-label="Page-Footer"><p>13 / 23</p></div>
<div data-bbox="128 869 448 896" data-label="Page-Footer"><p>[MS-ESURL] — v20120122<br/>Excel Services Publishing Protocol Specification</p></div>
<div data-bbox="133 905 406 921" data-label="Page-Footer"><p>Copyright © 2012 Microsoft Corporation.</p></div>
<div data-bbox="133 930 374 945" data-label="Page-Footer"><p>Release: Sunday, January 22, 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+IX9lEdSAIKYOVMc" />
</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> &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>

```

```

        <td nowrap="nowrap" class="ms-globallinks" align="right" style="padding-
left: 5px;padding-right: 5px">
        <table cellpadding="0" cellspacing="0">
        <tr>
        <td class="ms-globallinks" nowrap="nowrap">
        <span style='padding-left:3px'></span>
<a id="ctl108_hlMySite" href="http://ServerName:5625/_layouts/MySite.aspx">My Site</a>
        <span style='padding-left:4px;padding-right:3px'>|</span>
        </td>
        <td class="ms-globallinks" nowrap="nowrap">
        <table>
        <tr>
        <td class="ms-globallinks"><span
id="ctl110_MyLinksMenu"><span style="display:none"><menu type='ServerMenu'
id="ctl110_MyLinksMenuMenuTemplate" largeIconMode="true"></menu></span><span title="Open
Menu"><span id="ctl110_MyLinksMenuMenu t" class="ms-SPLink ms-hovercellinactive"
onmouseover="MMU_PopMenuIfShowing(this);MMU_EcbTableMouseOverOut(this, true)"
hoverActive="ms-SPLink ms-hovercellactive" hoverInactive="ms-SPLink ms-hovercellinactive"
onclick="javascript:FetchCallbackMenuItems(&#39;ctl110_MyLinksMenuMenuTemplate&#39;);
MMU_Open(byid('ctl110_MyLinksMenuMenuTemplate'),
MMU_GetMenuFromClientId('ctl110_MyLinksMenuMenu'),event,true, null, 0);"
foa="MMU_GetMenuFromClientId('ctl110_MyLinksMenuMenu')" oncontextmenu="this.click(); return
false;" nowrap="nowrap"><a id="ctl110_MyLinksMenuMenu" accesskey="M" href="#"
onclick="javascript:return false;" style="cursor:hand;white-space:nowrap;"
onfocus="MMU_EcbLinkOnFocusBlur(byid('ctl110_MyLinksMenuMenuTemplate'), this, true);"
onkeydown="MMU_EcbLinkOnKeyDown(byid('ctl110_MyLinksMenuMenuTemplate'),
MMU_GetMenuFromClientId('ctl110_MyLinksMenuMenu'), event);"
onclick="javascript:FetchCallbackMenuItems(&#39;ctl110_MyLinksMenuMenuTemplate&#39;);
MMU_Open(byid('ctl110_MyLinksMenuMenuTemplate'),
MMU_GetMenuFromClientId('ctl110_MyLinksMenuMenu'),event,true, null, 0);"
oncontextmenu="this.click(); return false;"
menuTokenValues="MENUCLIENTID=ctl110_MyLinksMenuMenu,TEMPLATECLIENTID=ctl110_MyLinksMenuMenuTem
plate" serverclientid="ctl110_MyLinksMenuMenu">My Links</a></span></span></span></td>
        <td class="ms-globallinks">|</td>
        </tr>
        </table>
        </td>
        </tr>
        </table>
        </td>
        </tr>
        </table>
        <!-- end global breadcrumb -->
    </td>
</tr>
<tr>
<td id="webpartContainerCell" height="100%" valign="top">
<!-- begin Excel Web Renderer -->
<table TOPLEVEL border="0" cellpadding="0" cellspacing="0" width="100%">
<tr>
<td valign="top"><div WebPartID="00000000-0000-0000-0000-000000000000"
HasPers="true" id="WebPartm_excelWebRenderer" width="100%" OnlyForMePart="true"
allowMinimize="false" allowRemove="false" allowDelete="false" style="height:100%;" ><div
id="m_excelWebRenderer" style="height:100%;">
        <span></span><input name="m_excelWebRenderer$wbid" type="hidden"
id="m_excelWebRenderer_wbid" wbid="m_excelWebRenderer_ECSFrame" /><table cellpadding="0"
cellspacing="0" border="0" style="border-
collapse:collapse;width:100%;height:100%;border:0;overflow:auto;">
        <tr>
        <td><span></span></td>

```

```

        </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>
                                                        <td colspan="2" style="height: 1px">
                                                            </td>
                                                    </tr>
                                                    <tr>
                                                        <td colspan="2">
                                                            <td class="ms-sectionline" height="1px"
width="1px" height="1px" alt="">
                                                            
                                                        </td>
                                                    </tr>
                                                    <tr>
                                                        <td colspan="2" style="height: 1px">
                                                            
                                                        </td>
                                                    </tr>
                                                    <tr>
                                                        <td>
                                                            
                                                        </td>
                                                    </tr>
                                                </table>
                                            </tr>
                                        </tr>
                                    </table>
                                </td>
                            </tr>
                        </table>
                    </td>
                </tr>
            </table>
        </td>
    </tr>
</table>

```



```

        <td>
            <table cellpadding="0"
cellspacing="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
DoplITXlBvbT4/D0ThXfTqUH3n7PL+UzSwlms679QYYCnXmX2OuUlDzkeZo43SgphRdz8UksTZh4aFasdH3PVEYdm1vh9
SWLOkJ6dR2Ed6oV0dRQJwLiVqS/S38tkI22az3VramUID2N8/jDcwACYifGggPuEaoOYskh6c/GfL8pOZvBtSRSu3/a6n
0GIwJ+osc0F8OpoYf3D9DHqYS6wEiSJkbDk000tk00H+THM6l2saf2HAplYqde3msgNqh5yK/GJT+DqS75Jy5IMGDqyCG
MoQvEvE5NmupKWkeDZ/VTMLNVgHnTQdRVtSN+F/Gn5ZAMJoG2Q5P1EhlrnUB3F4yhPasdsmUxjQlhayw9M78M19otIM/C
Z8grJd6iG0bypAcFwW5NBwclgBnu+ic6PvHJ5CzNxYMNzPK0KGMdJ2dIT8wJxgh4VVhuT2B2QLDnzLtrell1d7cu3c5Bzt
2mSdLdW6aYaMTVtWxY0hqOGYHFmvljicM3qu64D6rhXE0FEOT8grqjSOIidU7/99LDhsrikBwy4TomtjhGf1S207Qdhcn
H9UMLPyjp32Hy5gVpi560IsjXyybDqBFoRK46aE69urOmFXfxoT4RLEzuduqraLuvFRTj/yCe7UMIhCET5hrUsRH0t0Xi
fTCljNn3e4vVpQN3ZHvM11zCA9STWqBlBeIatQkpJp+U1X7APatHLR8cFZovFhJ92CX0F10D9Sp/ccrrNac8AmA3gzbst
bsnioG/bz4uxmSdSYwud596txHVQE8tG9ybVmaXNQCDcwj18bIRbKfFutdyvOsxlMrxtMZg0XO89DRhX5bih45gWWtzp30
EDuic0YgmnfYcAV1SdRCS6Gf5vGCa5YjGgsTB2B6nibWcasatokcYqNhmYx7D/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 data-bbox="828 849 890 864" data-label="Page-Footer">
<p>19 / 23</p>
</div>
<div data-bbox="128 868 450 896" data-label="Page-Footer">
<p>[MS-ESURL] — v20120122<br/>Excel Services Publishing Protocol Specification</p>
</div>
<div data-bbox="133 904 408 921" data-label="Page-Footer">
<p>Copyright © 2012 Microsoft Corporation.</p>
</div>
<div data-bbox="133 929 375 946" data-label="Page-Footer">
<p>Release: Sunday, January 22, 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 described 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® 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.

## 7 Change Tracking

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

Preliminary

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