

# [MS-ESURL]:

## Excel Services Publishing Protocol

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## Revision Summary

Date	Revision History	Revision Class	Comments
4/4/2008	0.1	New	Initial Availability
6/27/2008	1.0	Major	Revised and edited the technical content
12/12/2008	1.01	Editorial	Revised and edited the technical content
3/18/2009	1.02	Editorial	Revised and edited the technical content
7/13/2009	1.03	Major	Revised and edited the technical content
8/28/2009	1.04	Editorial	Revised and edited the technical content
11/6/2009	1.05	Editorial	Revised and edited the technical content
2/19/2010	2.0	Minor	Updated the technical content
3/31/2010	2.01	Editorial	Revised and edited the technical content
4/30/2010	2.02	Editorial	Revised and edited the technical content
6/7/2010	2.03	Editorial	Revised and edited the technical content
6/29/2010	2.04	Editorial	Changed language and formatting in the technical content.
7/23/2010	2.05	Minor	Clarified the meaning of the technical content.
9/27/2010	2.05	None	No changes to the meaning, language, or formatting of the technical content.
11/15/2010	2.05	None	No changes to the meaning, language, or formatting of the technical content.
12/17/2010	2.05	None	No changes to the meaning, language, or formatting of the technical content.
3/18/2011	2.05	None	No changes to the meaning, language, or formatting of the technical content.
6/10/2011	2.05	None	No changes to the meaning, language, or formatting of the technical content.
1/20/2012	2.05	None	No changes to the meaning, language, or formatting of the technical content.
4/11/2012	2.05	None	No changes to the meaning, language, or formatting of the technical content.
7/16/2012	2.05	None	No changes to the meaning, language, or formatting of the technical content.
9/12/2012	2.05	None	No changes to the meaning, language, or formatting of the technical content.
10/8/2012	2.6	Minor	Clarified the meaning of the technical content.
2/11/2013	2.6	None	No changes to the meaning, language, or formatting of the technical content.
7/30/2013	2.7	Minor	Clarified the meaning of the technical content.

<b>Date</b>	<b>Revision History</b>	<b>Revision Class</b>	<b>Comments</b>
11/18/2013	2.7	None	No changes to the meaning, language, or formatting of the technical content.
2/10/2014	2.7	None	No changes to the meaning, language, or formatting of the technical content.
4/30/2014	2.7	None	No changes to the meaning, language, or formatting of the technical content.
7/31/2014	2.8	Minor	Clarified the meaning of the technical content.
10/30/2014	2.8	None	No changes to the meaning, language, or formatting of the technical content.
3/16/2015	3.0	Major	Significantly changed the technical content.
6/23/2016	3.0	None	No changes to the meaning, language, or formatting of the technical content.

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# 1 Introduction

The Excel Services Publishing Protocol 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 1.5, 1.8, 1.9, 2, and 3 of this specification are normative. All other sections and examples in this specification are informative.

## 1.1 Glossary

This document uses the following terms:

**authentication:** The act of proving an identity to a server while providing key material that binds the identity to subsequent communications.

**Hypertext Transfer Protocol (HTTP):** An application-level protocol for distributed, collaborative, hypermedia information systems (text, graphic images, sound, video, and other multimedia files) on the World Wide Web.

**Hypertext Transfer Protocol Secure (HTTPS):** An extension of HTTP that securely encrypts and decrypts web page requests. In some older protocols, "Hypertext Transfer Protocol over Secure Sockets Layer" is still used (Secure Sockets Layer has been deprecated). For more information, see [\[SSL3\]](#) and [\[RFC5246\]](#).

**permission:** A rule that is associated with an object and that regulates which users can gain access to the object and in what manner. See also rights.

**Request-URI:** A URI in an **HTTP** request message, as described in [\[RFC2616\]](#).

**site:** A group of related pages and data within a SharePoint site collection. The structure and content of a site is based on a site definition. Also referred to as SharePoint site and web site.

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

## 1.2 References

Links to a document in the Microsoft Open Specifications library point to the correct section in the most recently published version of the referenced document. However, because individual documents in the library are not updated at the same time, the section numbers in the documents may not match. You can confirm the correct section numbering by checking the [Errata](#).

### 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.

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

[RFC1738] Berners-Lee, T., Masinter, L., and McCahill, M., Eds., "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.rfc-editor.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.rfc-editor.org/rfc/rfc2616.txt>

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

## 1.2.2 Informative References

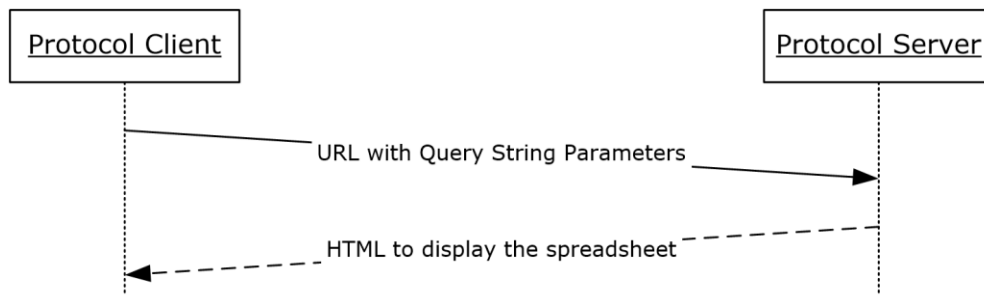
None.

## 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.

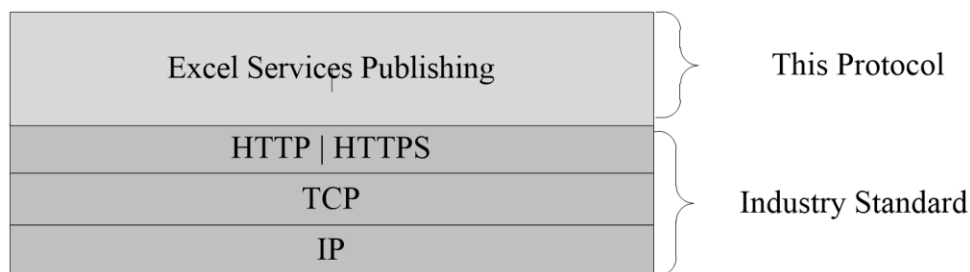


**Figure 1: This protocol message processing sequence**

## 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** 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, for example: `http://www.contoso.com/Repository/_layouts/xlviewer.aspx`.

The protocol assumes that **authentication** 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 URL 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 URI to which the workbook was published. The protocol client MUST determine the site URI by calling **WebUriFromPageUri** (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 to which the workbook was published. Protocol clients determine the site URL by calling **WebUrlFromPageUrl** (as described in [\[MS-WEBSS\]](#)) 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=0Iw8MMnEVJ5jKs65UzX4cw%3D%3D"/>
  <link rel="stylesheet" type="text/css"
href="/_layouts/1033/styles/core.css?rev=5msmprmeONfN6lJ3wtbA1A%3D%3D"/>

  <script type="text/javascript" language="javascript"
src="/_layouts/1033/init.js?rev=ck%2BhdHQ8ABQHif7kr%2Bj7iQ%3D%3D"></script>
```



```
NCgkJCQl9DQoJCQkJY2F0Y2goZXgpDQoJCQkJEw0KCQkCJCX0NCgkCJCX0NCg0KCQkCJZnVuY3Rpb24gRXYRnJhbWVwQb3N0
VG9TZXJ2ZXIoK0KCQkJEw0KCQkCJCXZhcjB2YWwgPSAnU3VyZURpZCc7DQoJCQkCjDhJ5DQoJCQkJEw0KCQkCJCQl2YWwgP
SBMb2NhbFNjcmldEdldEF0dHJpYnV0ZSh3aW5kb3cuZnJhbWVfZGVtZW50LCdQb3N0ZWRCYWNRQWxyZWVkeScpOw0KCQ
kCJCX0NCgkCJCQlqjYXRjaCAoZXgpDQoJCQkJEw0KCQkCJCX0NCgkCJCQl2YXIgc3B1Y2lhbFJlcG9zdCA9ICl1Y2FuY2VsJSI
gPT0gImNhbmlbdD1UcnV1JiIgfHwgIiVyZWxvYWQlIiA9PSAicmVsb2FkPVRYdWUmIj5NCgkCJCQlpZiAodmFsID09IG51
bGwgfHwgc3B1Y2lhbFJlcG9zdCkNCgkCJCQl7DQoJCQkCJCWlmcGhc3B1Y2lhbFJlcG9zdCkNCgkCJCQkJEw0KCQkCJCQk
2V0UG9zdGVkQmFja0FscmVhZkkoJ1N1cmVEaWQnKTSnKgkCJCQkCjF0KCQkCJCQl1bHN1DQoJCQkCJCXsNCgkCJCQkCjVn
Bvc3RlZEJhY2tBbHJlYWR5K51bGwpOw0KCQkCJCQkCjD2luZG93LmZyYW1lRWxlbWVudC5zZXRBdHRyaWJ1dGUoIkv3clN
0YXR1cyIsICJsb2FkaW5nIik7DQoJCQkCJCX0NCgkCJCQkCjZG9jdW11bnQuZm9ybXMuXRlbnSgWKS5zdWJtaXQoKTSnKgkC
Cj19DQoJCQkCjZWxzZQ0KCQkCJCXsNCgkCJCQkCjU2V0UG9zdGVkQmFja0FscmVhZkkoJ1N1cmVEaWQnKTSnKgkCJCQkCjVn
mFjyagpOw0KCQkCJCQl3aW5kb3cuZm93LmZyYW1lRWxlbWVudC5zZXRBdHRyaWJ1dGUoIkv3clN0YXR1cyIsICJsb2FkaW5n
Iik7DQoJCQkCJCX0NCgkCJCQkCjZG9jdW11bnQuZm9ybXMuXRlbnSgWKS5zdWJtaXQoKTSnKgkCJCQkCjU2V0UG9zdGVkQm
Fja0FscmVhZkkoJ1N1cmVEaWQnKTSnKgkCJCQkCjVnV2F0aW9uLnJlbG9hZChmYWxzZSk7IiwuKTSnKgkCJCQkCjU2V0UG9
zdGVkQmFja0FscmVhZkkoJ1N1cmVEaWQnKTSnKgkCJCQkCjU2V0UG9zdGVkQmFja0FscmVhZkkoJ1N1cmVEaWQnKTSnKgkC
m9sbGluZwUCbm8eD0lZRXdyTFwFpbklmcmFtZQUeDhJlZr4JRXdyU3RhdHVzZr4JRHVtbXlQYWdlZWQCBAB8WBB8PBQ1kaX
NwbGF5Om5vbWU7HxZlZGRcHuXjujvvxWWE+rd32TchVa4Eaw==" />
</div>
```

```
<script type="text/javascript">
//
var theForm = document.forms['ctl105'];
if (!theForm) {
    theForm = document.ctl105;
}
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="143 467 783 491" data-label="Code-Block"><pre>&lt;script src="/WebResource.axd?d=e0GKyGKnoukxMqsPUJZAlQ2&amp;amp;t=633911231850302493"
type="text/javascript"&gt;&lt;/script&gt;</pre></div>
<div data-bbox="143 502 883 868" data-label="Code-Block"><pre>&lt;script&gt; var MSOWebPartPageFormName = 'ctl105';&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;

    WebForm_DoCallback('ctl10$MyLinksMenu','',PopulateCallbackMenuItems,'^R^','^F^',ctl10_MyLinksMen
uMenu,ctl10 MyLinksMenuMenuTemplate',null,false);
    document.forms[0].action = lastFormAction;
}
//]]&gt;
&lt;/script&gt;
&lt;script type="text/JavaScript" language="JavaScript"&gt;
&lt;!--
var L_Menu_BaseUrl="/Site";
var L_Menu_LCID="1033";
var L_Menu_SiteTheme="";
//--&gt;
&lt;/script&gt;
&lt;script src="/ layouts/EWRScripts.js?rev=ycNXUsNKKd1qh12ZwFcmTQ%3D%3D"
type="text/javascript"&gt;&lt;/script&gt;
&lt;script type="text/javascript"&gt;</pre></div>
<div data-bbox="828 883 889 897" data-label="Page-Footer"><p>13 / 22</p></div>
<div data-bbox="112 902 383 954" data-label="Page-Footer"><p>[MS-ESURL] - v20160623
Excel Services Publishing Protocol
Copyright © 2016 Microsoft Corporation
Release: June 23, 2016</p></div>
```

```

//
function WebForm_OnSubmit() {
UpdateFormDigest('\u002f\u002f', 1440000);
return true;
}
//]]&gt;
&lt;/script&gt;

&lt;div&gt;

<input type="hidden" name=" EVENTVALIDATION" id=" EVENTVALIDATION"
value="/wEWAgL85K7DagLdp935A227vZTrpVx+IX9lEdSAIKYOVXMc" /&gt;
&lt;/div&gt;

<table cellpadding="0" cellspacing="0" width="100%" height="100%" border="0"&gt;
<tr>
<td>
&lt;!-- begin global breadcrumb --&gt;
<table width="100%" cellpadding="3" cellspacing="0" border="0" class="ms-
globalbreadcrumb"&gt;
<tr>
<td nowrap="nowrap">
<span id="GlobalNavigationSiteMap">&lt;a
href="#GlobalNavigationSiteMap_SkipLink"&gt;&lt;img alt="Skip Navigation Links" height="0"
width="0" src="/WebResource.axd?d=1eQdCimhkLaqCJVEiXyRrQ2&amp;amp;t=633911231850302493"
style="border-width:0px;" /&gt;&lt;/a&gt;&lt;span&gt;&lt;a href="/"&gt;Excel Services&lt;/a&gt;&lt;/span&gt;&lt;span&gt; &amp;gt;
&lt;/span&gt;&lt;span&gt;&lt;a href="/team"&gt;Team&lt;/a&gt;&lt;/span&gt;&lt;span&gt; &amp;gt; &lt;/span&gt;&lt;span&gt;&lt;/span&gt;&lt;a
id="GlobalNavigationSiteMap_SkipLink"&gt;&lt;/a&gt;&lt;/span&gt;
&lt;/td&gt;
<td nowrap="nowrap">
&lt;a id="m webLink" href="http://ServerName/Site"&gt;Site Name&lt;/a&gt;
&lt;/td&gt;
<td nowrap="nowrap">
<span id="m backLinkSeparator">&amp;gt; &lt;/span&gt;
&lt;/td&gt;
<td nowrap="nowrap">
&lt;a id="m_backLink"
href="/site/Document%20Library/Forms/AllItems.aspx"&gt;Shared Documents&lt;/a&gt;
&lt;/td&gt;
<td width="100%"&gt;
&amp;#160;
&lt;/td&gt;
<td nowrap="nowrap" class="ms-globallinks" align="right" style="padding-
left: 5px;padding-right: 5px"&gt;
<table cellpadding="0" cellspacing="0"&gt;
<tr>
<td class="ms-globallinks" nowrap="nowrap">
<span style='padding-left:3px'&gt;&lt;/span&gt;
&lt;a id="ctl108_hlMySite" href="http://ServerName:5625/_layouts/MySite.aspx"&gt;My Site&lt;/a&gt;
<span style='padding-left:4px;padding-right:3px'&gt;|&lt;/span&gt;
&lt;/td&gt;
<td class="ms-globallinks" nowrap="nowrap">
<table&gt;
<tr&gt;
<td class="ms-globallinks"&gt;&lt;span
id="ctl10_MyLinksMenu"&gt;&lt;span style="display:none"&gt;&lt;menu type='ServerMenu'
id="ctl10_MyLinksMenuMenuTemplate" largeIconMode="true"&gt;&lt;/menu&gt;&lt;/span&gt;&lt;span title="Open
Menu"&gt;&lt;span id="ctl10_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(&amp;#39;ctl10_MyLinksMenuMenuTemplate&amp;#39;);
MMU_Open(byid('ctl10_MyLinksMenuMenuTemplate'),
MMU_GetMenuFromClientId('ctl10_MyLinksMenuMenu'),event,true, null, 0);"
foa="MMU_GetMenuFromClientId('ctl10_MyLinksMenuMenu')" oncontextmenu="this.click(); return
false;" nowrap="nowrap"&gt;&lt;a id="ctl10_MyLinksMenuMenu" accesskey="M" href="#"
onclick="javascript:return false;" style="cursor:hand;white-space:nowrap;"
onfocus="MMU_EcbLinkOnFocusBlur(byid('ctl10_MyLinksMenuMenuTemplate'), this, true);"
onkeydown="MMU_EcbLinkOnKeyDown(byid('ctl10_MyLinksMenuMenuTemplate'),
MMU_GetMenuFromClientId('ctl10_MyLinksMenuMenu'), event);"
</pre>
</div>
<div data-bbox="828 882 889 896" data-label="Page-Footer">
<p>14 / 22</p>
</div>
<div data-bbox="112 901 384 953" data-label="Page-Footer">
<p>[MS-ESURL] - v20160623<br/>
Excel Services Publishing Protocol<br/>
Copyright © 2016 Microsoft Corporation<br/>
Release: June 23, 2016</p>
</div>
```

```

onclick="javascript:FetchCallbackMenuItems (&#39;ctl10_MyLinksMenuMenuTemplate&#39;);
MMU Open (byid ('ctl10 MyLinksMenuMenuTemplate'),
MMU GetMenuFromClientId ('ctl10 MyLinksMenuMenu'),event,true, null, 0);"
oncontextmenu="this.click(); return false;"
menuTokenValues="MENUCLIENTID=ctl10_MyLinksMenuMenu,TEMPLATECLIENTID=ctl10_MyLinksMenuMenuTem
plate" serverclientid="ctl10_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>
                                                    </tr>
                                                </table>
                                            </td>
                                        </tr>
                                    </table>
                                </td>
                            </tr>
                        </table>
                    </td>
                </tr>
            </table>
        </td>
    </tr>
</table>

```

```

        </td>
      </tr>
    <tr>
      <td colspan="2" style="height: 1px">
        </td>
      </tr>
    <tr>
      <td colspan="2">
        
      </td>
    </tr>
    <tr>
      <td colspan="2" style="height: 1px">
        
      </td>
    </tr>
    <tr>
      <td>
        
      </td>
    </tr>
    <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_excelWebRender_
ctl106');" />
      </td>
    </tr>
  </table>
</td>
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</table>
</td>
</tr>
</table>
</div><div style="width:100%;height:100%;"><IFrame id="m_excelWebRender_ ECSFrame"
ScriptForIFrameContent="
<html>
  <body IAmTheInitialPage='True'>
    <form method='post' action='/Site/_layouts/ExcelRenderer.aspx?%cancel%%reload%'
style='display:none'>
      <input name='ewrPostData'
value='lp1SHnpIi67Bus3Biomvla5vtiMaK0dRw8CwB+CbXAapHkEXAf6hbBuPwAJYWiGFU8eP9lgQbPnzsh/1efmRx4
DoplITXlBvbT4/D0ThXfTqUH3n7PL+UzSwlms679QYYCnXmX2OuU1DzkeZo43SgphRdz8UksTZh4aFasdH3PVEYdm1vh9
SWLOkJ6dR2Ed6oV0dRQJwLiVqS/S38tkI22az3VramUID2N8/jDcwACYifGggPuEaoOYskh6c/GfL8pOZvBtSRSu3/a6n
0GIwJ+osc0F8Opoyf3D9DHqYS6wEiSjkbDk00otk00H+THM6l2saf2HAplYqde3msgNqh5yK/GJT+DqS75Jy5IMGDqyCG
MoQvEvE5NmupKWkeDZ/VTMLNVgHnTQdRVtSN+F/Gn5ZAMJoG2Q5P1EhlnUB3F4yhPASdsmUxjQlhayw9M78M19otIM/C

```



```

Z8grJd6iGObypAcFwW5NBwcLgBnu+ic6PvHJ5CzNxYMNzpK0KGMdJ2dIT8wJxgh4VVhuT2B2QLDnzLtrellld7cu3c5Bzt
2mSdLdW6aYaMTVtWxY0hqOGYHFmv1jicM3qu64D6rhXE0FEOT8grqjSOIdU7/99LDhsrikBwy4TomtjhGf1S207QdhcN
H9UmlPyjp32Hy5gVpi560IsjXyybDqBFoRK46aE69ur0mFXfxoT4RLEzuduqraLuvFRTj/yCe7UMIhCET5hRUsRH0t0Xi
fTC1jNn3e4vVpQN3ZHvM11zCA9STWqBlBeIatQkpJp+U1X7APatHLR8cFZovFhJ92CX0F10D9Sp/ccrNac8AmA3gzbst
bsnioG/bz4uxmSdSYwud596txHVQE8tG9ybVmaXNQDCWj18bIRbKFutdyvOxslMrxtMZg0XO89DRhX5bih45gWWtzp30
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);
    }

    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=' == '&cancel=True&';
      '&reload=' == '&reload=True&';
      if (val == null || specialRepost)
      {
        if (!specialRepost)
        {
          SetPostedBackAlready('SureDid');
        }
        else
        {
          SetPostedBackAlready(null);
          window.frameElement.setAttribute('&EwrStatus',
            '&loading');
        }
        document.forms.item(0).submit();
      }
      else
      {
        SetPostedBackAlready(null);
        history.back();
        window.setTimeout('&window.location.reload(false);', 0);
      }
    }
    window.setTimeout('&EwrFramePostToServer()', 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()
        {
            MSOTlPn_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="828 882 890 897" data-label="Page-Footer">
<hr/>
<p>18 / 22</p>
</div>
<div data-bbox="111 901 384 954" data-label="Page-Footer">
<p>[MS-ESURL] - v20160623<br/>
Excel Services Publishing Protocol<br/>
Copyright © 2016 Microsoft Corporation<br/>
Release: June 23, 2016</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 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

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

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