

# [MS-OWEXTSP]:

## Office Web Extensibility SharePoint Protocol

---

### Intellectual Property Rights Notice for Open Specifications Documentation

- **Technical Documentation.** Microsoft publishes Open Specifications documentation (“this documentation”) for protocols, file formats, data portability, computer languages, and standards support. Additionally, overview documents cover inter-protocol relationships and interactions.
- **Copyrights.** This documentation is covered by Microsoft copyrights. Regardless of any other terms that are contained in the terms of use for the Microsoft website that hosts this documentation, you can make copies of it in order to develop implementations of the technologies that are described in this documentation and can distribute portions of it in your implementations that use these technologies or in your documentation as necessary to properly document the implementation. You can also distribute in your implementation, with or without modification, any schemas, IDLs, or code samples that are included in the documentation. This permission also applies to any documents that are referenced in the Open Specifications documentation.
- **No Trade Secrets.** Microsoft does not claim any trade secret rights in this documentation.
- **Patents.** Microsoft has patents that might cover your implementations of the technologies described in the Open Specifications documentation. Neither this notice nor Microsoft's delivery of this documentation grants any licenses under those patents or any other Microsoft patents. However, a given Open Specifications document might be covered by the Microsoft [Open Specifications Promise](#) or the [Microsoft Community Promise](#). If you would prefer a written license, or if the technologies described in this documentation are not covered by the Open Specifications Promise or Community Promise, as applicable, patent licenses are available by contacting [iplg@microsoft.com](mailto:iplg@microsoft.com).
- **License Programs.** To see all of the protocols in scope under a specific license program and the associated patents, visit the [Patent Map](#).
- **Trademarks.** The names of companies and products contained in this documentation might be covered by trademarks or similar intellectual property rights. This notice does not grant any licenses under those rights. For a list of Microsoft trademarks, visit [www.microsoft.com/trademarks](http://www.microsoft.com/trademarks).
- **Fictitious Names.** The example companies, organizations, products, domain names, email addresses, logos, people, places, and events that are depicted in this documentation are fictitious. No association with any real company, organization, product, domain name, email address, logo, person, place, or event is intended or should be inferred.

**Reservation of Rights.** All other rights are reserved, and this notice does not grant any rights other than as specifically described above, whether by implication, estoppel, or otherwise.

**Tools.** The Open Specifications documentation does not require the use of Microsoft programming tools or programming environments in order for you to develop an implementation. If you have access to Microsoft programming tools and environments, you are free to take advantage of them. Certain Open Specifications documents are intended for use in conjunction with publicly available standards specifications and network programming art and, as such, assume that the reader either is familiar with the aforementioned material or has immediate access to it.

**Support.** For questions and support, please contact [dochelp@microsoft.com](mailto:dochelp@microsoft.com).

## Revision Summary

Date	Revision History	Revision Class	Comments
11/16/2021	1.0	New	Released new document.
2/15/2022	2.0	Major	Significantly changed the technical content.

# Table of Contents

<b>1</b>	<b>Introduction</b>	<b>5</b>
1.1	Glossary	5
1.2	References	5
1.2.1	Normative References	5
1.2.2	Informative References	5
1.3	Overview	5
1.4	Relationship to Other Protocols	6
1.5	Prerequisites/Preconditions	6
1.6	Applicability Statement	6
1.7	Versioning and Capability Negotiation	6
1.8	Vendor-Extensible Fields	6
1.9	Standards Assignments	7
<b>2</b>	<b>Messages</b>	<b>8</b>
2.1	Transport	8
2.2	Message Syntax	8
2.2.1	_messageType	8
2.2.2	_actionName	8
2.2.3	_conversationId	8
2.2.4	_correlationId	8
2.2.5	_origin	8
2.2.6	_data	8
2.2.7	officeVersion	8
2.2.8	_actionType	9
2.2.9	_errorCode	9
2.2.10	_responseType	9
2.2.11	_serializerVersion	9
<b>3</b>	<b>Protocol Details</b>	<b>10</b>
3.1	Details	10
3.1.1	Abstract Data Model	10
3.1.2	Timers	10
3.1.3	Initialization	10
3.1.4	Higher-Layer Triggered Events	10
3.1.5	Message Processing Events and Sequencing Rules	10
3.1.5.1	OEM_isProxyReady	10
3.1.5.2	OEM_getSPCatalogUrlAsync	11
3.1.5.3	OEM_getEntitlementSummaryAsync	11
3.1.5.4	OEM_getManifestAsync	12
3.1.5.5	OEM_getSPAppWebUrlFromPageUrlAsync	13
3.1.5.6	OEM_getSPAppInstanceInfoByIdAsync	14
3.1.5.7	OEM_getSPTokenByProductIdAsync	14
3.1.6	Timer Events	15
3.1.7	Other Local Events	15
<b>4</b>	<b>Protocol Examples</b>	<b>16</b>
4.1	Get Add-in Entitlement list	16
<b>5</b>	<b>Security</b>	<b>17</b>
5.1	Security Considerations for Implementers	17
5.2	Index of Security Parameters	17
<b>6</b>	<b>Appendix A: Full JSON Schema</b>	<b>18</b>
<b>7</b>	<b>Appendix B: Product Behavior</b>	<b>23</b>
<b>8</b>	<b>Change Tracking</b>	<b>24</b>



# 1 Introduction

Office Web Extensibility SharePoint Protocol provides specifications for messages between Microsoft Office for the web applications (Word, Excel, PowerPoint, etc.) and Microsoft SharePoint Server that support Office Extensibility scenarios.

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:

**iframe:** An inline frame used to embed another document within the current HTML document.

**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.

[ECMA-404] Ecma International, "The JSON Data Interchange Format", Standard ECMA-404 1st Edition / October 2013, <http://www.ecma-international.org/publications/files/ECMA-ST-ARCH/ECMA-404%201st%20edition%20October%202013.pdf>

[MS-WOPI] Microsoft Corporation, "[Web Application Open Platform Interface Protocol](#)".

[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>

[W3C-HTML5WEBMSG] World Wide Web Consortium, "HTML5 Web Messaging", W3C Recommendation 19 May 2015, <http://www.w3.org/TR/2015/REC-webmessaging-20150519/>

### 1.2.2 Informative References

[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>

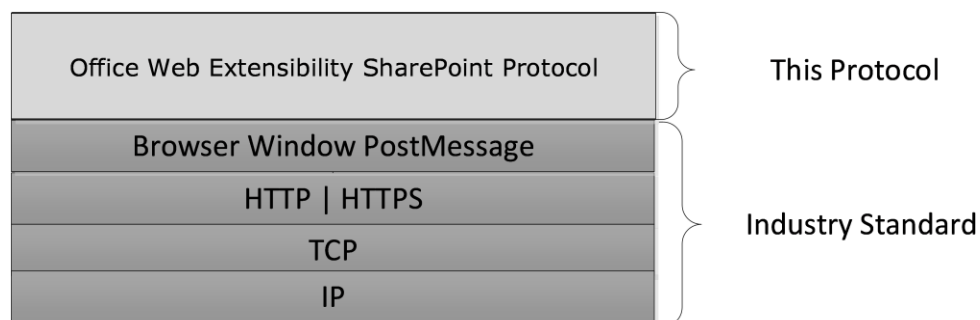
[RFC2818] Rescorla, E., "HTTP Over TLS", RFC 2818, May 2000, <http://www.rfc-editor.org/rfc/rfc2818.txt>

## 1.3 Overview

This protocol defines the messages between Office for the web applications and SharePoint Server through a cross-origin **iframe** proxy that supports the scenarios like retrieving entitlements from SharePoint Catalog, downloading Add-in manifest for Add-in activation.

## 1.4 Relationship to Other Protocols

Office Web Extensibility SharePoint Protocol is a protocol built on top of browser Window.postMessage API that communicate from an Office for the web application domain with a SharePoint domain. After a SharePoint domain code base receives the message, it will call Window.postMessage API to transfer the response data to Office for the web application domain side code for it to consume.



**Figure 1: This protocol in relation to other protocols**

Browser Window.postMessage API, as specified in [\[W3C-HTML5WEBMSG\]](#).

HTTP, as specified in [\[RFC2616\]](#).

HTTPS, as specified in [\[RFC2818\]](#).

## 1.5 Prerequisites/Preconditions

This protocol assumes that authentication of HTTP/HTTPS requests have been performed by the underlying protocols.

This protocol also assumes that SharePoint Server will host an OfficeExtensionManager.aspx page that contains the Javascript code that communicates with Office for the web application side through this protocol. The relative path of the file is SharePoint base URL + `/_layouts/15/OfficeExtensionManager.aspx`. For example, `https://xyz.contoso.com/_layouts/15/OfficeExtensionManager.aspx`. This ought to be known by Office for the web application side so it can create the proxy **iframe** with the URL path to the page.

The Office Web Extensibility SharePoint Protocol requires that SharePoint Server has implemented the WOPI Server Protocol as specified in [\[MS-WOPI\]](#) section 3.3.

## 1.6 Applicability Statement

This protocol is used as a mechanism for the Office Web Extensibility code in Office for the web to communicate with SharePoint Server. This protocol is specific to the SharePoint Corporate Catalog scenario.

## 1.7 Versioning and Capability Negotiation

None.

## 1.8 Vendor-Extensible Fields

None.

## 1.9 Standards Assignments

None.

## 2 Messages

### 2.1 Transport

This section specifies the transport requirements and syntax of Office Web Extension SharePoint Protocol.

Messages are transported by using browser Window.postMessage API. The messages from Microsoft Office for the web application to Microsoft SharePoint Server are mostly request. The messages from SharePoint Server to Office for the web application are mostly response.

### 2.2 Message Syntax

The messages transported in Window.postMessage API are JSON object which look like:

```
{ "_messageType": 0, "_actionName": "OEM_getSPCatalogUrlAsync", "_conversationId": "-32e16b9b_-5757de2_1613757247387", "_correlationId": 2, "_origin": "http://xyz.contoso.com", "_data": { "webUrl": "https://xyz.contoso.com", "officeVersion": "0.0.0" }, "_actionType": 0, "_serializerVersion": 1 }
```

The following sub sections will specify each field in the message structure.

Messages that use these fields, as specified in section [3.1.5](#).

JSON, as specified in [\[ECMA-404\]](#) .

#### 2.2.1 `_messageType`

"0" means request. "1" means response.

#### 2.2.2 `_actionName`

Action name is the string that represents the intention of the message.

#### 2.2.3 `_conversationId`

Unique id to identify the calling channel between parent window and the proxy **iframe** window. There could be multiple calling channels between two windows.

#### 2.2.4 `_correlationId`

Unique id to identify the current calling instance inside a calling channel.

#### 2.2.5 `_origin`

The domain origin URL for the caller domain.

#### 2.2.6 `_data`

Data or the response result for the current calling instance. Data that corresponds to the `_actionName`.



### **2.2.7 officeVersion**

The Office version SHOULD be "0.0.0".

### **2.2.8 \_actionType**

This SHOULD be 0.

### **2.2.9 \_errorCode**

**0:** Enum value "noError". It indicates no error.

**-1:** Enum value "errorInRequest". It indicates error in constructing or sending request on sender side.

**-2:** Enum value "errorHandlingRequest". It indicates error in handling request on receiver side.

**-3:** Enum value "errorInResponse". It indicates error in response on receiver side.

**-4:** Enum value "errorHandlingResponse". It indicates error in handling response on sender side.

**-5:** Enum value "errorHandlingRequestAccessDenied". It indicates error in handling request on receiver side, policy check failed, access denied.

**-6:** Enum value "errorHandlingMethodCallTimeout". It indicates error in method call, timeout happened.

### **2.2.10 \_responseType**

Response type value for the response. 0 for calling and 1 for event.

### **2.2.11 \_serializerVersion**

This SHOULD be 1.

## 3 Protocol Details

### 3.1 Details

#### 3.1.1 Abstract Data Model

None.

#### 3.1.2 Timers

None.

#### 3.1.3 Initialization

The initialization starts from creating a cross-origin **iframe** for communication. The Microsoft Office for the web application will first create an iframe with a web page hosted by Microsoft SharePoint Server AND the page contains the code to help proxy the communication to the SharePoint Server through rest APIs. For example, [https://xyz.contoso.com/\\_layout/15/OfficeExtensionManager.aspx](https://xyz.contoso.com/_layout/15/OfficeExtensionManager.aspx) is the page url. The Office for the web application code uses Window.postMessage API to send message to the code inside this iframe. The iframe code will send a response message back through the parent Window.postMessage API to the Office for the web application side.

When the proxy iframe is created, a conversationId (section [2.2.3](#)) MUST be put on Window.name property to identify this unique communication channel. And any postMessage calls to the parent MUST contain the corresponding conversationId (section [2.2.3](#)). The conversationId (section [2.2.3](#)) is necessary because Office App side could have multiple communication channels set up. When it receives message or response from the other side, the conversationId (section [2.2.3](#)) in the payload will help it to differentiate which communication channel the message or response belongs to.

#### 3.1.4 Higher-Layer Triggered Events

None.

#### 3.1.5 Message Processing Events and Sequencing Rules

None.

##### 3.1.5.1 OEM\_isProxyReady

This message serves as a heartbeat check to see if the proxy **iframe** is ready for communication.

Office for the web **application side Call:**

```
postMessage request received by 'Office Extension Proxy Page' from http://xyz.contoso.com with data: {"_messageType":0,"_actionName":"OEM_isProxyReady","_conversationId":"-32e16b9b_-5757de2_1613757247387","_correlationId":0,"_origin":"http:// xyz.contoso.com","_data":{}},"_actionType":0,"_serializerVersion":1}
```

**\_data:** This data object is an empty object.

**SharePoint Proxy Iframe response:**

```
postMessage response received by Office for the web application (Word for example) from 'https://xyz.contoso.com' with data: {"_messageType":1,"_actionName":"OEM_isProxyReady","_conversationId":"-32e16b9b_-
```

```
5757de2_1613757247387","_correlationId":0,"_origin":"https://
xyz.contoso.com","_data":{"status":1,"result":true},"_errorCode":0,"_responseType":0,"_serializerVe
rsion":1}
```

**status:** 1 means succeeded, and 0 means failed.

**result:** The value true means ready, and false means not ready.

### 3.1.5.2 OEM\_getSPCatalogUrlAsync

This message gets the SharePoint Catalog url from SharePoint Server side.

Office for the web **application side Call:**

```
postMessage received by 'Office Extension Proxy Page' from 'http:// xyz.contoso.com ' with data:
{"_messageType":0,"_actionName":"OEM_getSPCatalogUrlAsync","_conversationId":"-32e16b9b_-
5757de2_1613757247387","_correlationId":2,"_origin":" xyz.contoso.com
","_data":{"webUrl":"https://
xyz.contoso.com","officeVersion":"0.0.0"},"_actionType":0,"_serializerVersion":1}
```

**webUrl:** The base SharePoint url.

**officeVersion:** It is "0.0.0".

#### SharePoint Proxy Iframe response:

```
postMessage received by Office for the web application from 'https://xyz.contoso.com' with data:
{"_messageType":1,"_actionName":"OEM_getSPCatalogUrlAsync","_conversationId":"-32e16b9b_-
5757de2_1613757247387","_correlationId":2,"_origin":"https://xyz.contoso.com","_data":{"status":1
,"result":"https://xyz.contoso.com/sites/catalog"},"_errorCode":0,"_responseType":0,"_serializerVersi
on":1}
```

**status:** 1 means succeeded, and 0 means failed.

**result:** The Corporate Catalog url value.

### 3.1.5.3 OEM\_getEntitlementSummaryAsync

This message returns a list of entitlements for the Add-ins inside the SharePoint Catalog.

Office for the web **application side Call:**

```
postMessage received by 'Office Extension Proxy Page' from 'http://xyz.contoso.com ' with data:
{"_messageType":0,"_actionName":"OEM_getEntitlementSummaryAsync","_conversationId":"44d8b3
ed_54b597be_1613757276215","_correlationId":1,"_origin":"http://xyz.contoso.com
","_data":{"webUrl":"https://xyz.contoso.com/sites/catalog","applicationName":"Document","officeExt
entionTarget":null,"clearCache":false,"supportedManifestVersions":{"1.0":true,"1.1":true},"officeVersi
on":"0.0.0"},"_actionType":0,"_serializerVersion":1}
```

**webUrl:** The base SharePoint url.

**applicationName:** Office for the web application name. For example, Excel, Word, PowerPoint, etc.

**officeExtentionTarget:** The form of the extension. For example, Taskpane, InContent, etc.

**clearCache:** The Boolean to tell if there is needs to clear cache or not.

**supportedManifestVersions:** It only has two values "1.0" or "1.1".

**officeVersion:** It is "0.0.0".

### SharePoint Proxy Iframe response:

```
postMessage received by Office for the web application from 'https://xyz.contoso.com' with data:
{"_messageType":1,"_actionName":"OEM_getEntitlementSummaryAsync","_conversationId":"44d8b3ed_54b597be_1613757276215","_correlationId":1,"_origin":"https://xyz.contoso.com","_data":{"status":1,"result":{"officeExtensionUrl":"https://xyz.contoso.com/sites/catalog/_vti_bin/client.svc/web/lists(guid'47264a11-e7d0-4bf4-8cbd-5cacbcf3d801')","entitlements":[{"EncodedAbsUrl":"https://xyz.contoso.com/sites/catalog/wa104099688.xml","OfficeExtensionID":"5d49687c-66c4-4292-b9a7-1527a2fe9088","OfficeExtensionVersion":"1.3.0.0","AppInstanceID":null,"ProductID":null,"Title":"Wikipedia (SPCatalogListItem)","OfficeExtensionDescription":"Find and quote related information from Wikipedia.","OfficeExtensionDescriptionXML":"<Description DefaultValue='Find and quote related information from Wikipedia.'"}]},"xmlns":"http://schemas.microsoft.com/office/appforoffice/1.0"}}}
```

**status:** 1 means succeeded and 0 means failed.

**result:** The entitlements summary information for the Add-ins in the SharePoint Corporate Catalog.

**officeExtensionUrl:** The url that points to the item corresponding the Add-in in the Add-in list of the Sharepoint Corporate Catalog.

**entitlements:** An array of entitlement summaries for the Add-ins in the SharePoint Corporate Catalog.

**EncodedAbsUrl:** The encoded url to the manifest of the Add-in.

**OfficeExtensionID:** The Id in the manifest.

**OfficeExtensionVersion:** The version number in the manifest.

**AppInstanceID:** App Instance Id of the SharePoint Add-in. This will be null if the Add-in entitlement is not associated with a SharePoint App.

**ProductID:** The Id for the provider-hosted App. This will be null if the Add-in entitlement is not associated with a provider-hosted App.

**Title:** The display name in the manifest.

**OfficeExtensionDescription:** The description from the Add-in manifest.

**OfficeExtensionDescriptionXML:** The xml format of the description from the Add-in manifest.

### 3.1.5.4 OEM\_getManifestAsync

This communication is for retrieving an Add-in manifest. The result field from the response contains the manifest.

Office for the web **application side Call:**

```
postMessage received by 'Office Extension Proxy Page' from 'http://xyz.contoso.com ' with data:
{"_messageType":0,"_actionName":"OEM_getManifestAsync","_conversationId":"44d8b3ed_54b597be_1613757276215","_correlationId":3,"_origin":"http://xyz.contoso.com","_data":{"manifestUrl":"https://xyz.contoso.com/sites/catalog/wa104099688.xml","id":"5d49687c-66c4-4292-b9a7-1527a2fe9088","version":"1.3.0.0","officeVersion":"0.0.0"},"_actionType":0,"_serializerVersion":1}
```

**manifestUrl:** The url for the manifest of the Add-in.

**id:** AssetId or MarketPlace Id for the Add-in.

**version:** Add-in manifest version.

**officeVersion:** It SHOULD be "0.0.0".

### SharePoint Proxy Iframe response:

postMessage received by Office for the web application from 'https://xyz.contoso.com' with data:  
{ "\_messageType":1,"\_actionName":"OEM\_getManifestAsync","\_conversationId":"44d8b3ed\_54b597be\_1613757276215","\_correlationId":3,"\_origin":"https://xyz.contoso.com","\_data":{"status":1,"result":{"manifest":"<?xml version='1.0' encoding='UTF-8'?><OfficeApp xmlns='http://schemas.microsoft.com/office/appforoffice/1.0' xmlns:xsi='http://www.w3.org/2001/XMLSchema-instance' xsi:type='TaskPaneApp'><Id>5d49687c-66c4-4292-b9a7-1527a2fe9088</Id><Version>1.3.0.0</Version><ProviderName>Microsoft Corporation</ProviderName><DefaultLocale>en-US</DefaultLocale><DisplayName DefaultValue='Wikipedia (SPCatalog)'></DisplayName><Description DefaultValue='Find and quote related information from Wikipedia.'></Description><IconUrl DefaultValue='https://wikipedia.firstpartyapps.oaspapps.com/wikipedia/images/wikipedia\_32x32.png'></IconUrl><SupportUrl DefaultValue='https://answers.microsoft.com/en-us/office/forum/office\_home-office\_store'></SupportUrl><Capabilities><Capability Name='Workbook' /><Capability Name='Presentation' /><Capability Name='Document' /><Capability Name='Notebook' /></Capabilities><DefaultSettings><SourceLocation DefaultValue='https://xyz.contoso.com/apps/mainpage/wikipedia'></SourceLocation></DefaultSettings><Permissions>ReadWriteDocument</Permissions></OfficeApp>","cached":true}}, "\_errorCode":0,"\_responseType":0,"\_serializerVersion":1}

**status:** 1 means succeeded, and 0 means failed.

**result:** The manifest field contains the content of the Add-in manifest in a string.

### 3.1.5.5 OEM\_getSPAppWebUrlFromPageUrlAsync

The communication provides a pageUrl in the request and the response returns a SharePoint Application Web url. It returns null if the page is not associated with a SharePoint App.

Office for the web **application side Call:**

postMessage received by 'Office Extension Proxy Page' from 'https://word-edit.officeapps.live.com' with data:  
{ "\_messageType":0,"\_actionName":"OEM\_getSPAppWebUrlFromPageUrlAsync","\_conversationId":"-6f32a83a\_-7fc589ee\_1613802697620","\_correlationId":1,"\_origin":"https://word-edit.officeapps.live.com","\_data":{"pageUrl":"https://contoso-04de068c645e71.sharepoint.com/SharePointAddIn1/Lists/MyDocumentLibrary/Document.docx","baseUrl":"https:// contoso-04de068c645e71.sharepoint.com/SharePointAddIn1/","clearCache":false},"\_actionType":0,"\_serializerVersion":1}

**pageUrl:** The url to the document that is opened.

**baseUrl:** The SharePoint base url.

**clearCache:** The Boolean to tell if there is need to clear cache or not.

### SharePoint Proxy Iframe response:

postMessage received by Office for the web application from 'https:// contoso-04de068c645e71.sharepoint.com' with data:

```
{"_messageType":1,"_actionName":"OEM_getSPAppWebUrlFromPageUrlAsync","_conversationId":"-6f32a83a_-7fc589ee_1613802697620","_correlationId":1,"_origin":"https://contoso-04de068c645e71.sharepoint.com/SharePointAddIn1/_layouts/15/OfficeExtensionManager.aspx?-6f32a83a_-7fc589ee_1613802697620#&_flights=undefined&_serializer_version=1&_xdm_Info=-6f32a83a_-7fc589ee_1613802697620|__officeExtensionProxy3|https://word-edit.officeapps.live.com","_data":{"status":1,"result":"https://contoso-04de068c645e71.sharepoint.com/SharePointAddIn1"},"_errorCode":0,"_responseType":0}
```

**status:** 1 means succeeded, and 0 means failed.

**result:** The WebUrl returned from SharePoint.

### 3.1.5.6 OEM\_getSPAppInstanceInfoByIdAsync

This communication is for the Office for the web application to retrieve app instance information with an app instance id from SharePoint.

Office for the web **application side call:**

postMessage received by 'Office Extension Proxy Page' from 'https://word-edit.officeapps.live.com' with data:

```
{"_messageType":0,"_actionName":"OEM_getSPAppInstanceInfoByIdAsync","_conversationId":"-6f32a83a_-7fc589ee_1613802697620","_correlationId":1,"_origin":"https://word-edit.officeapps.live.com","_data":{"webUrl":"https://contoso-04de068c645e71.sharepoint.com/SharePointAddIn1/Lists/MyDocumentLibrary/Document.docx"},"appInstanceId":"ae5a0359-d9ba-478f-98e5-8774e8dc2d09","clearCache":false},"_actionType":0,"_serializerVersion":1}
```

**webUrl:** The Web Url returned from SharePoint.

**appInstanceId:** The id of the app instance the Add-in manifest belongs to.

**clearCache:** The Boolean to tell if needs to clear cache or not.

### SharePoint Proxy Iframe response:

postMessage received by Office for the web application from 'https://contoso-04de068c645e71.sharepoint.com' with data:

```
{"_messageType":1,"_actionName":"OEM_getSPAppInstanceInfoByIdAsync","_conversationId":"-6f32a83a_-7fc589ee_1613802697620","_correlationId":1,"_origin":"https://contoso-04de068c645e71.sharepoint.com/SharePointAddIn1/_layouts/15/OfficeExtensionManager.aspx?-6f32a83a_-7fc589ee_1613802697620#&_flights=undefined&_serializer_version=1&_xdm_Info=-6f32a83a_-7fc589ee_1613802697620|__officeExtensionProxy3|https://word-edit.officeapps.live.com","_data":{"status":1,"value":{"AppPrincipalId:" 57e1347f-adf0-488a-a91f-14da854b2377", AppWebFullUrl:"\\", RemoteAppUrl:"\\"}"},"_errorCode":0,"_responseType":0}
```

**status:** 1 means succeeded, and 0 means failed.

**value:** The SPapp instance information.

### 3.1.5.7 OEM\_getSPTokenByProductIdAsync

This communication is for Office for the web application to retrieve SP token with Product Id from SharePoint.

Office for the web **application side call:**

postMessage received by 'Office Extension Proxy Page' from 'https://word-edit.officeapps.live.com' with data:

```
{"_messageType":0,"_actionName":"OEM_getSPTokenByProductIdAsync","_conversationId":"-6f32a83a_-7fc589ee_1613802697620","_correlationId":1,"_origin":"https://word-edit.officeapps.live.com","_data":{"webUrl":"https://contoso-04de068c645e71.sharepoint.com/SharePointAddIn1/Lists/MyDocumentLibrary/Document.docx","productId":"48c98433-1be3-4c9b-94bc-5581277c36d8","clearCache":false},"_actionType":0,"_serializerVersion":1}
```

**webUrl:** The Web Url returned from SharePoint

**productId:** The Product Id for a provider-hosted Add-in.

**clearCache:** The Boolean to tell if there is need to clear cache or not.

### SharePoint Proxy Iframe response:

postMessage received by Office for the web application from 'https://contoso-04de068c645e71.sharepoint.com' with data:

```
{"_messageType":1,"_actionName":"OEM_getSPTokenByProductIdAsync","_conversationId":"-6f32a83a_-7fc589ee_1613802697620","_correlationId":1,"_origin":"https://contoso-04de068c645e71.sharepoint.com/SharePointAddIn1/_layouts/15/OfficeExtensionManager.aspx?-6f32a83a_-7fc589ee_1613802697620#&_flights=undefined&_serializer_version=1&_xdm_Info=-6f32a83a_-7fc589ee_1613802697620|__officeExtensionProxy3|https://word-edit.officeapps.live.com","_data":{"status":1,"value":"etokenvaluestring"},"_errorCode":0,"_responseType":0}
```

**status:** 1 means succeeded, and 0 means failed.

**value:** The token returned from SharePoint.

### 3.1.6 Timer Events

None.

### 3.1.7 Other Local Events

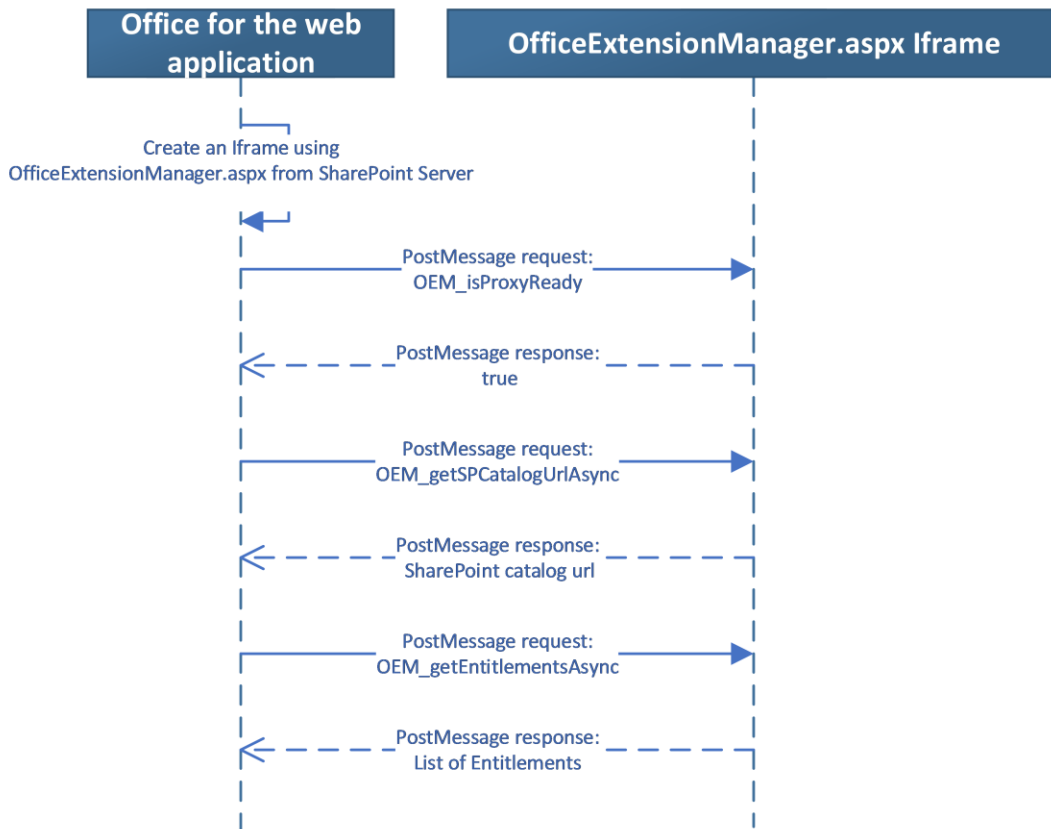
None.

## 4 Protocol Examples

This section provides specific examples for how the communication between the Microsoft Office for the web application and Microsoft SharePoint Server side codebase. It will demonstrate how the protocol works in more specific details.

### 4.1 Get Add-in Entitlement list

The Office for the web application side needs to get the list of Entitlements from a SharePoint Add-in catalog.





## **5 Security**

### **5.1 Security Considerations for Implementers**

### **5.2 Index of Security Parameters**

## 6 Appendix A: Full JSON Schema

For ease of implementation, the following is the full JSON schema for this protocol.

### Request:

```
{
  "_messageType": {"type": "integer", "default": 0, "optional": false},
  "_actionName": {"type": "string", "default": ""},
  "_conversationId": {"type": "string", "default": ""},
  "_correlationId": {"type": "integer", "default": 0, "optional": false},
  "_origin": {"type": "string", "default": ""},
  "_data": {"type": "object", "default": {}},
  "_actionType": {"type": "integer", "default": 0, "optional": false},
  "_serializerVersion": {"type": "integer", "default": 1, "optional": false},
}
```

### Response:

```
{
  "_messageType": {"type": "integer", "default": 1, "optional": false},
  "_actionName": {"type": "string", "default": ""},
  "_conversationId": {"type": "string", "default": ""},
  "_correlationId": {"type": "integer", "default": 0, "optional": false},
  "_origin": {"type": "string", "default": ""},
  "_data": {"type": "object", "default": {}},
  "_errorCode": {"type": "integer", "default": 0, "optional": false},
  "_responseType": {"type": "integer", "default": 0, "optional": false},
  "_serializerVersion": {"type": "integer", "default": 1, "optional": false},
}
```

### OEM\_isProxyReady data schema:

Request data:

```
{}
```

Response data:

```
{
  "status": {"type": "integer", "default": 1, "optional": false},
}
```

```
"result":{"type":"boolean","default":true,"optional":false},
}
```

#### **OEM\_getSPCatalogUriAsync data schema:**

Request data:

```
{
  "webUrl":{"type":"string","optional":false},
  "officeVersion":{"type":"string","default":"0.0.0","optional":false},
}
```

Response data:

```
{
  "status":{"type":"integer","default":1,"optional":false},
  "result":{"type":"string","optional":true},
}
```

#### **OEM\_getEntitlementSummaryAsync data schema:**

Request data:

```
{
  "webUrl":{"type":"string","optional":false},
  "applicationName":{"type":"string","optional":false},
  "officeExtentionTarget":{"type":"string","optional":true},
  "clearCache":{"type":"boolean","optional":false},
  "supportedManifestVersions":
    {
      "1.0":{"type":"boolean","optional":false},
      "1.1":{"type":"boolean","optional":false},
    },
  "officeVersion":{"type":"string","default":"0.0.0","optional":false},
}
```

Response data:

```
{
  "status":{"type":"integer","default":1,"optional":false},
  "result":
    {
```

```

"officeExtensionUrl":{"type":"string","optional":false},
"entitlements":
[
  {
    "EncodedAbsUrl":{"type":"string","optional":false},
    "OfficeExtensionID":{"type":"string","optional":false},
    "OfficeExtensionVersion":{"type":"string","optional":false},
    "AppInstanceID":{"type":"string","optional":true},
    "ProductID":{"type":"string","optional":true},
    "Title":{"type":"string","optional":false},
    "OfficeExtensionDescription":{"type":"string","optional":true},
    "OfficeExtensionDescriptionXML":{"type":"string","optional":true},
  }
]
},
}

```

#### **OEM\_getManifestAsync data schema:**

Request data:

```

{
  "manifestUrl":{"type":"string","optional":false},
  "id":{"type":"string","optional":false},
  "version":{"type":"string","optional":false},
  "officeVersion":{"type":"string","default":"0.0.0","optional":false},
}

```

Response data:

```

{
  "status":{"type":"integer","default":1,"optional":false},
  "result":
  {
    "manifest":{"type":"string","optional":true},
  },
}

```

**OEM\_getSPAppWebUrlFromPageUrlAsync data schema:**

Request data:

```
{  
  "pageUrl":{"type":"string","optional":false},  
  "baseUrl":{"type":"string","optional":false},  
  "clearCache":{"type":"boolean","optional":false},  
}
```

Response data:

```
{  
  "status":{"type":"integer","default":1,"optional":false},  
  "result":{"type":"string","optional":true},  
}
```

**OEM\_getSPAppInstanceInfoByIdAsync data schema:**

Request data:

```
{  
  "webUrl":{"type":"string","optional":false},  
  "appInstanceId":{"type":"string","optional":false},  
  "clearCache":{"type":"boolean","optional":false},  
}
```

Response data:

```
{  
  "status":{"type":"integer","default":1,"optional":false},  
  "value":{"type":"string","optional":true},  
}
```

**OEM\_getSPTokenByProductIdAsync data schema:**

Request data:

```
{  
  "webUrl":{"type":"string","optional":false},  
  "productId":{"type":"string","optional":false},  
  "clearCache":{"type":"boolean","optional":false},  
}
```

Response data:

```
{  
  "status":{"type":"integer","default":1,"optional":false},  
  "value":{"type":"string","optional":true},  
}
```

## 7 Appendix B: Product Behavior

The information in this specification is applicable to the following Microsoft products or supplemental software. References to product versions include updates to those products.

- Microsoft Office 2013
- Microsoft SharePoint Server 2013
- Microsoft Office 2016
- Microsoft SharePoint Server 2016
- Microsoft Office 2019
- Microsoft SharePoint Server 2019
- Microsoft Office 2021
- Microsoft SharePoint Server Subscription Edition

Exceptions, if any, are noted in this section. If an update version, service pack or Knowledge Base (KB) number appears with a product name, the behavior changed in that update. The new behavior also applies to subsequent updates 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.

## 8 Change Tracking

This section identifies changes that were made to this document since the last release. Changes are classified as Major, Minor, or None.

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.
- A document revision that captures changes to protocol functionality.

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 **None** means that no new technical changes were introduced. Minor editorial and formatting changes may have been made, but the relevant technical content is identical to the last released version.

The changes made to this document are listed in the following table. For more information, please contact [dochelp@microsoft.com](mailto:dochelp@microsoft.com).

Section	Description	Revision class
<a href="#">1.5</a> Prerequisites/Preconditions	Deleted "should" from description.	Minor
<a href="#">2.2.7</a> officeVersion	Changed "should" to "SHOULD" and deleted "always" from officeVersion description.	Major
<a href="#">2.2.8</a> _actionType	Changed "should" to "SHOULD" and deleted "always" from _actionType description.	Major
<a href="#">2.2.11</a> _serializerVersion	Changed "Always 1" to "This SHOULD be 1" for _serializerVersion description.	Major
<a href="#">3.1.3</a> Initialization	Changed "must" to "MUST".	Major
<a href="#">3.1.5.2</a> OEM_getSPCatalogUrlAsync	Deleted always from officeVersion description.	Minor
<a href="#">3.1.5.3</a> OEM_getEntitlementSummaryAsync	Changed "extentionTarget" to "officeExtentionTarget".	Minor
3.1.5.3 OEM_getEntitlementSummaryAsync	Added the description for 'result'.	Minor
<a href="#">3.1.5.4</a> OEM_getManifestAsync	Changed "should" to "SHOULD".	Major
<a href="#">6</a> Appendix A: Full JSON Schema	Changed "officeVersion":{"type":"string","optional":false} to "officeVersion":{"type":"string","default":"0.0.0","optional":false}	Minor



## 9 Index

–

[\\_actionName message](#) 8  
[\\_actionType message](#) 9  
[\\_conversationId message](#) 8  
[\\_correlationId message](#) 8  
[\\_data message](#) 8  
[\\_errorCode message](#) 9  
[\\_messageType message](#) 8  
[\\_origin message](#) 8  
[\\_responseType message](#) 9  
[\\_serializerVersion message](#) 9

### A

[Applicability](#) 6

### C

[Capability negotiation](#) 6  
[Change tracking](#) 24

### F

[Fields - vendor-extensible](#) 6  
[Full JSON schema](#) 18

### G

[Glossary](#) 5

### I

[Informative references](#) 5  
[Introduction](#) 5

### J

[JSON schema](#) 18

### M

Messages

[\\_actionName](#) 8  
[\\_actionType](#) 9  
[\\_conversationId](#) 8  
[\\_correlationId](#) 8  
[\\_data](#) 8  
[\\_errorCode](#) 9  
[\\_messageType](#) 8  
[\\_origin](#) 8  
[\\_responseType](#) 9  
[\\_serializerVersion](#) 9  
[officeVersion](#) 8  
[transport](#) 8

### N

[Normative references](#) 5

### O

[officeVersion message](#) 8  
[Overview \(synopsis\)](#) 5

### P

[Preconditions](#) 6  
[Prerequisites](#) 6  
[Product behavior](#) 23

### R

[References](#) 5  
[informative](#) 5  
[normative](#) 5  
[Relationship to other protocols](#) 6

### S

[Standards assignments](#) 7

### T

[Tracking changes](#) 24  
[Transport](#) 8

### V

[Vendor-extensible fields](#) 6  
[Versioning](#) 6