

# [MS-SPWFCSOM]:

## SharePoint Workflow Client-Side Object Model Protocol

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# 1 Introduction

The SharePoint Workflow Client-Side Object Model Protocol provides types, methods, and properties to enable a protocol client to manage and interact with workflow functionality on a collaboration 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:

**action:** A unit of work that can be performed by a workflow and is typically defined in a workflow markup file.

**activity:** An object that stores information about either an action or an activity model.

**application:** A participant that is responsible for beginning, propagating, and completing an atomic transaction. An application communicates with a transaction manager in order to begin and complete transactions. An application communicates with a transaction manager in order to marshal transactions to and from other applications. An application also communicates in application-specific ways with a resource manager in order to submit requests for work on resources.

**association form:** A form that provides parameters for a **workflow association**.

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

**collateral file:** Any file stored with a workflow definition. This file is intended to be used for management of the workflow definition, or to initiate and control of an instance of the workflow definition.

**content type:** A named and uniquely identifiable collection of settings and fields that store metadata for individual items in a SharePoint list. One or more content types can be associated with a list, which restricts the contents to items of those types.

**content type identifier:** A unique identifier that is assigned to a **content type**.

**Coordinated Universal Time (UTC):** A high-precision atomic time standard that approximately tracks Universal Time (UT). It is the basis for legal, civil time all over the Earth. Time zones around the world are expressed as positive and negative offsets from UTC. In this role, it is also referred to as Zulu time (Z) and Greenwich Mean Time (GMT). In these specifications, all references to UTC refer to the time at UTC-0 (or GMT).

**CSOM array:** An ordered collection of values that can be used in an **XML** request or **JSON** response text. The values are identified by their position and their position is determined by a zero-based integer index.

**CSOM Boolean:** A Boolean value that can be used in an **XML** request or **JSON** response text. A CSOM Boolean value is either "true" or "false".

**CSOM DateTime:** An Int64 value that represents the number of 100-nanosecond time intervals that have elapsed since 12:00:00, January 1, 0001. It can be used in an **XML** request or as a string in **JSON** response text. The value can represent time intervals through 23:59:59.9999999, December 31, 9999. It can also specify whether a local, **UTC**, or no time zone applies.



**CSOM dictionary:** An object that contains an unordered collection of key/value pairs that can be used in an **XML** request or **JSON** response text. Each key in a CSOM dictionary has a unique name.

**CSOM GUID:** A **GUID**, as described in [\[MS-DTYP\]](#), that can be used in an **XML** request or as a string in **JSON** response text.

**CSOM Int32:** A 32-bit, signed integer value, which is the INT32 type described in [\[MS-DTYP\]](#), that can be used in an **XML** request or as a number in **JSON** response text. The range of CSOM Int32 values is from "-2147483648" to "2147483647".

**CSOM Stream:** A series of bytes that is used to transfer data and that supports reading, writing, and seeking.

**CSOM String:** A representation of text as a series of Unicode characters. It can be used in an **XML** request or **JSON** response text.

**empty GUID:** A 128-bit, 16-byte identification number that is represented by all zeros.

**event:** (1) Any significant occurrence in a system or an application that requires users to be notified or an entry to be added to a log.

(2) An action or occurrence to which an application might respond. Examples include state changes, data transfers, key presses, and mouse movements.

**event receiver:** A structured modular component that enables built-in or user-defined managed code classes to act upon objects, such as list items, **lists**, or content types, when specific triggering actions occur.

**Extensible Application Markup Language (XAML):** A declarative XML-based language that is used to represent a tree of objects. XAML markup is stored in .xaml files or, for workflow schemas, .xoml files.

**field:** A container for metadata within a SharePoint list and associated list items.

**globally unique identifier (GUID):** A term used interchangeably with universally unique identifier (UUID) in Microsoft protocol technical documents (TDs). Interchanging the usage of these terms does not imply or require a specific algorithm or mechanism to generate the value. Specifically, the use of this term does not imply or require that the algorithms described in [\[RFC4122\]](#) or [\[C706\]](#) must be used for generating the **GUID**. See also universally unique identifier (UUID).

**item:** A unit of content that can be indexed and searched by a search application.

**JavaScript Object Notation (JSON):** A text-based, data interchange format that is used to transmit structured data, typically in Asynchronous JavaScript + XML (AJAX) web applications, as described in [\[RFC7159\]](#). The JSON format is based on the structure of ECMAScript (Jscript, JavaScript) objects.

**leaf name:** The segment of a URL that follows the last slash. If the resource is a directory, the leaf name can be an empty string.

**list:** A container within a SharePoint site that stores list items. A list has a customizable schema that is composed of one or more fields.

**list item:** An individual entry within a SharePoint list. Each list item has a schema that maps to fields in the list that contains the item, depending on the content type of the item.

**published:** A condition of portions of a workbook that are marked as being available to the user when that workbook is processed by a protocol server.

**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.

**solution package:** A compressed file that can be deployed to a server farm or a site. It can contain assemblies, resource files, site and feature definitions, templates, code access security policies, and Web Parts. Solution packages have a .wsp file name extension.

**Uniform Resource Locator (URL):** A string of characters in a standardized format that identifies a document or resource on the World Wide Web. The format is as specified in [\[RFC1738\]](#).

**workflow:** A structured modular component that enables the automated movement of documents or items through a specific sequence of actions or tasks that are related to built-in or user-defined business processes.

**workflow association:** An association of a workflow template to a specific list or content type.

**workflow host:** A service that runs XAML workflows.

**workflow identifier:** A GUID that is used to identify a workflow.

**workflow initiation form:** An implementation-specific file, typically an ASPX page, that is a part of a workflow. It contains fields and other elements that can be used to initiate a process for a list item, based on the rules and settings in a workflow template that is associated with the list that contains the item.

**workflow instance:** An instance of a workflow association that performs on a list item the process that is defined in a workflow template.

**workflow store:** A stored collection of workflow definitions, **workflow associations**, and files that are related to workflows.

**workflow subscription:** A relationship that determines the data a **workflow** uses and when the workflow will launch.

**XML:** The Extensible Markup Language, as described in [\[XML1.0\]](#).

**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-CSOMSPT] Microsoft Corporation, "[SharePoint Client-Side Object Model Protocol](#)".

[MS-CSOM] Microsoft Corporation, "[SharePoint Client Query Protocol](#)".

[MS-SPPTC] Microsoft Corporation, "[User Code Execution Protocol](#)".

[MS-WSSCAML] Microsoft Corporation, "[Collaborative Application Markup Language \(CAML\) Structure](#)".

[MS-WSSTS] Microsoft Corporation, "[Windows SharePoint Services](#)".

[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>

### 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>

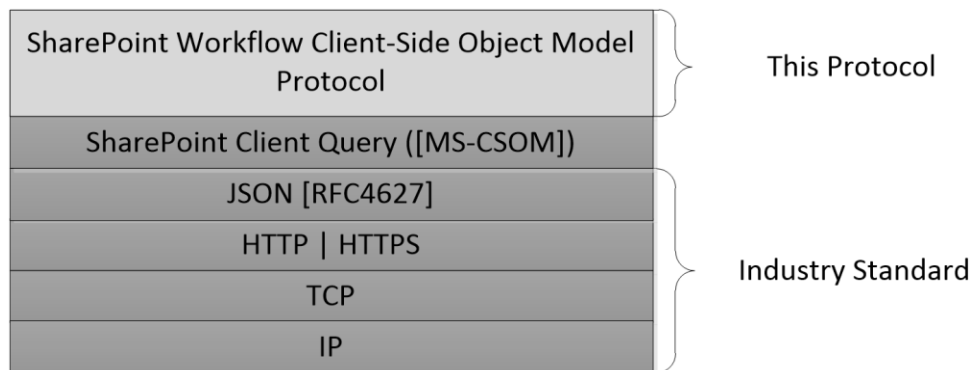
[RFC4627] Crockford, D., "The application/json Media Type for JavaScript Object Notation (JSON)", RFC 4627, July 2006, <http://www.rfc-editor.org/rfc/rfc4627.txt>

### 1.3 Overview

This protocol defines types, methods, and properties that protocol clients use to manage **workflows** on a **site** on a protocol server. The types, properties, and methods enable remote clients to manage **workflow associations**, to send workflow **events (2)**, to control or to query **workflow instances**, and to manage workflow definitions and **actions**.

### 1.4 Relationship to Other Protocols

This protocol is a set of types, properties, and methods that can be accessed by using the SharePoint Client Query Protocol as described in [\[MS-CSOM\]](#). This protocol uses JSON as described in [\[RFC4627\]](#) to format data returned to a protocol client. This protocol also uses HTTP, as described in [\[RFC2616\]](#), and HTTPS, as described in [\[RFC2818\]](#) as the transport. The dependencies for this protocol are shown in the following layering diagram.



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

### 1.5 Prerequisites/Preconditions

This protocol operates against **workflows** on a **site** that is identified by a **Uniform Resource Locator (URL)** that is recognized by protocol clients. This protocol assumes that **authentication** has been performed by underlying protocols.

### 1.6 Applicability Statement

This protocol can be used by a protocol client to manage **workflows** on a protocol server. This protocol is optimized to enable a protocol client to specify the exact set of data and operations to

perform in a single batch, making it a suitable solution when the connection speed between the protocol client and the protocol server is slow. This protocol is not suitable and is inefficient if both the protocol client and protocol server are on the same computer. In this case, the protocol client can use an API that does not require communication over a network.

## 1.7 Versioning and Capability Negotiation

- Security and Authentication Methods: This protocol operates in the context of the authenticated user that made a request to the service, and that it runs in the context of a particular **site**.
- Localization: Localization-specific properties, such as the title of a **list**, are returned by using the preferred language of the user, if available, or by using the default language of the site as a fallback. Certain properties can be read or written for specific locales, and are listed in the document.

## 1.8 Vendor-Extensible Fields

None.

## 1.9 Standards Assignments

None.

## 2 Messages

### 2.1 Transport

Messages are transported by using the SharePoint Client Query Protocol, as specified in [\[MS-CSOM\]](#).

### 2.2 Message Syntax

None.

## 3 Protocol Details

### 3.1 Server Details

#### 3.1.1 Abstract Data Model

This section describes a conceptual model of possible data organization that an implementation maintains to participate in this protocol. The described organization is provided to facilitate the explanation of how the protocol behaves. This specification does not mandate that implementations adhere to this model as long as their external behavior is consistent with that described in this specification.

This protocol deals with various structures associated with **sites**, **lists**, **items**, navigation, and other structures as specified in [\[MS-WSSTS\]](#).

#### 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

##### 3.1.5.1 Microsoft.SharePoint.Client.WorkflowServices.WorkflowDefinition

**TypeId:** {60320D36-4B4D-4BAC-A092-8F8B5610EDCD}

**ShortName:** SP.WorkflowServices.WorkflowDefinition

Represents a **workflow** definition and associated properties.

##### 3.1.5.1.1 Properties

##### 3.1.5.1.1.1 Scalar Properties

##### 3.1.5.1.1.1.1 Description

**Type:** **CSOM String**

**Accessibility:** Read/Write

Specifies the description for **WorkflowDefinition** (section [3.1.5.1](#)).

##### 3.1.5.1.1.1.2 DisplayName

**Type:** **CSOM String**

**Accessibility:** Read/Write

Specifies the display name for **WorkflowDefinition** (section [3.1.5.1](#)).

#### **3.1.5.1.1.1.3 Id**

**Type:** CSOM GUID

**Accessibility:** Read/Write

Specifies the **workflow identifier** for **WorkflowDefinition** (section [3.1.5.1](#)).

#### **3.1.5.1.1.1.4 Properties**

**Type:** CSOM dictionary

**Accessibility:** Read Only

Gets the custom properties for **WorkflowDefinition** (section [3.1.5.1](#)).

#### **3.1.5.1.1.1.5 Xaml**

**Type:** CSOM String

**Accessibility:** Read/Write

Specifies the **XAML** for **WorkflowDefinition** (section [3.1.5.1](#)).

#### **3.1.5.1.1.1.6 AssociationUrl**

**Type:** CSOM String

**Accessibility:** Read/Write

Specifies the **Uniform Resource Locator (URL)** of the **association form**.

#### **Remarks:**

If the value is null or empty, the **workflow** has no association form.

#### **3.1.5.1.1.1.7 FormField**

**Type:** CSOM String

**Accessibility:** Read/Write

Defines the **fields** of the **workflow initiation forms** and **association forms** as specified in [\[MS-WSSCAML\]](#) section 2.3.2.9.

#### **3.1.5.1.1.1.8 InitiationUrl**

**Type:** CSOM String

**Accessibility:** Read/Write

Specifies the **Uniform Resource Locator (URL)** of the **workflow initiation form**.

#### **Remarks:**

If the value is null or empty, the **workflow** has no workflow initiation form.

#### **3.1.5.1.1.1.9 RequiresAssociationForm**

**Type:** CSOM Boolean

**Accessibility:** Read/Write

Determines whether to automatically generate an **association form** for this **workflow**.

**Remarks:**

If the value is true, and the **AssociationUrl** (section [3.1.5.1.1.1.6](#)) is not already set, a default association form is automatically generated for the workflow when **SaveDefinition** (section [3.1.5.8.2.1.6](#)) is called.

### 3.1.5.1.1.1.10 RequiresInitiationForm

**Type:** CSOM Boolean

**Accessibility:** Read/Write

Determines whether to automatically generate a **workflow initiation form** for this **workflow**.

**Remarks:**

If the value is true, and the **InitiationUrl** (section [3.1.5.1.1.1.8](#)) is not already set, a default workflow initiation form is automatically generated for the workflow when **SaveDefinition** (section [3.1.5.8.2.1.6](#)) is called.

### 3.1.5.1.1.1.11 Published

**Type:** CSOM Boolean

**Accessibility:** Read Only

"true" if the **WorkflowDefinition** (section [3.1.5.1](#)) has been published to the external **workflow host**; "false" if the **WorkflowDefinition** is only saved on the **site**.

### 3.1.5.1.1.1.12 RestrictToScope

**Type:** CSOM String

**Accessibility:** Read/Write

Specifies the restricted scope of the **WorkflowDefinition** (section [3.1.5.1](#)).

**Remarks:**

**RestrictToScope** is a **GUID** value, used in conjunction with the **RestrictToType** property to further restrict the scope of the definition. For example, if the **RestrictToType** is "List", then setting the **RestrictToScope** to a particular **list** identifier limits the definition to be associable only to the specified list. If the **RestrictToType** is "List" but the **RestrictToScope** is null or the empty string, then the definition is associable to any list.

### 3.1.5.1.1.1.13 RestrictToType

**Type:** CSOM String

**Accessibility:** Read/Write

Specifies the restricted type of the **WorkflowDefinition** (section [3.1.5.1](#)).

**Remarks:**



**RestrictToType** determines the possible event source type for a **workflow** subscription that uses this definition. Possible values include "List", "Site", the empty string, or null. For example, a value of "List" indicates this definition is a **list** workflow and can only be associated to a list. An empty string or null value indicates this definition is a universal template, available to associate to any type.

#### 3.1.5.1.1.1.14 **DraftVersion**

Type: **CSOM String**

**Accessibility:** Read/Write

Identifier for a draft version of a **WorkflowDefinition** (section [3.1.5.1](#)).

#### **Remarks:**

If **SaveDefinition** (section [3.1.5.8.2.1.6](#)) is called with a **WorkflowDefinition** (section 3.1.5.1) identifier that matches the identifier of a **WorkflowDefinition** on the server, then the **DraftVersion** of the **WorkflowDefinition** MUST match the **DraftVersion** of the **WorkflowDefinition** on the server.

#### 3.1.5.1.1.2 **ObjectPath Properties**

None.

#### 3.1.5.1.2 **Methods**

##### 3.1.5.1.2.1 **Scalar Methods**

###### 3.1.5.1.2.1.1 **SetProperty**

**Return Type:** None

This method adds a key-value pair (propertyName, value) to the **WorkflowDefinition** (section [3.1.5.1](#)) object's property bag.

#### **Parameters:**

*propertyName:* Name of the property to add.

Type: **CSOM String**

*value:* Value of the property to add.

Type: CSOM String

###### 3.1.5.1.2.2 **ObjectPath Methods**

###### 3.1.5.1.2.2.1 **CSOM Constructor**

Creates an instance of the **WorkflowDefinition** (section [3.1.5.1](#)) object.

**Parameters:** None

#### 3.1.5.2 **Microsoft.SharePoint.Client.WorkflowServices.WorkflowInstance**

**TypeId:** {AEC0FE18-F5E5-4C65-A9D3-550B4169B1BC}

**ShortName:** SP.WorkflowServices.WorkflowInstance

Represents a **workflow instance**.

### 3.1.5.2.1 Properties

#### 3.1.5.2.1.1 Scalar Properties

##### 3.1.5.2.1.1.1 InstanceCreated

**Type:** CSOM DateTime

**Accessibility:** Read Only

Gets the **Coordinated Universal Time (UTC)** when this **WorkflowInstance** (section [3.1.5.2](#)) was created.

##### 3.1.5.2.1.1.2 LastUpdated

**Type:** CSOM DateTime

**Accessibility:** Read Only

Gets the **Coordinated Universal Time (UTC)** when this **WorkflowInstance** (section [3.1.5.2](#)) state was last persisted.

##### 3.1.5.2.1.1.3 Properties

**Type:** CSOM dictionary

**Accessibility:** Read Only

Specifies the properties of this **WorkflowInstance** (section [3.1.5.2](#)).

##### 3.1.5.2.1.1.4 Status

**Type:** Microsoft.SharePoint.Client.WorkflowServices.WorkflowStatus

**Accessibility:** Read Only

Specifies the runtime status of this **WorkflowInstance** (section [3.1.5.2](#)).

##### 3.1.5.2.1.1.5 UserStatus

**Type:** CSOM String

**Accessibility:** Read/Write

Specifies the custom status set by **workflow** authors of this **WorkflowInstance** (section [3.1.5.2](#)).

##### 3.1.5.2.1.1.6 WorkflowSubscriptionId

**Type:** CSOM GUID

**Accessibility:** Read Only

Gets the unique identifier of the subscription that instantiates the **WorkflowInstance** (section [3.1.5.2](#)).

##### 3.1.5.2.1.1.7 Id

**Type:** CSOM GUID

**Accessibility:** Read Only

Gets the unique identifier of the **WorkflowInstance** (section [3.1.5.2](#)).

### 3.1.5.2.1.1.8 FaultInfo

**Type:** CSOM String

**Accessibility:** Read Only

Contains the error string or exception information if the workflow faults.

### 3.1.5.2.1.2 ObjectPath Properties

None.

### 3.1.5.2.2 Methods

#### 3.1.5.2.2.1 Scalar Methods

None.

#### 3.1.5.2.2.2 ObjectPath Methods

None.

## 3.1.5.3 Microsoft.SharePoint.Client.WorkflowServices.WorkflowInstanceCollection

**TypeId:** {AEC0FE18-F5E5-4C65-A9D3-550B4169B1BB}

**ShortName:** SP.WorkflowServices.WorkflowInstanceCollection

A collection of **WorkflowInstance** (section [3.1.5.2](#)) objects.

### 3.1.5.3.1 Properties

#### 3.1.5.3.1.1 Scalar Properties

None.

#### 3.1.5.3.1.2 ObjectPath Properties

None.

### 3.1.5.3.2 Methods

#### 3.1.5.3.2.1 Scalar Methods

None.

#### 3.1.5.3.2.2 ObjectPath Methods

None.

### 3.1.5.4 Microsoft.SharePoint.Client.WorkflowServices.WorkflowServicesManager

**TypeId:** {4CCC7F0E-BF7E-4477-999C-6458A73D0039}

**ShortName:** SP.WorkflowServices.WorkflowServicesManager

Describes the **workflow host** configuration states and provides service objects that interact with the **workflow**.

#### 3.1.5.4.1 Properties

##### 3.1.5.4.1.1 Scalar Properties

###### 3.1.5.4.1.1.1 AppId

**Type:** CSOM String

**Accessibility:** Read Only

The current **application** identifier.

###### 3.1.5.4.1.1.2 IsConnected

**Type:** CSOM Boolean

**Accessibility:** Read Only

Indicates whether this **workflow** service is actively connected to a **workflow host**.

###### 3.1.5.4.1.1.3 ScopePath

**Type:** CSOM String

**Accessibility:** Read Only

Returns the path of the current scope in the **workflow host**.

###### 3.1.5.4.1.1.4 ServiceHealthStatus

**Type:** Microsoft.SharePoint.Client.WorkflowServices.WorkflowServiceHealthStatus

**Accessibility:** Read Only

Returns the status of the current scope in the **workflow host**.

##### 3.1.5.4.1.2 ObjectPath Properties

###### 3.1.5.4.1.2.1 Current

**Type:** Microsoft.SharePoint.Client.WorkflowServices.WorkflowServicesManager

**Accessibility:** Read Only

Returns the **WorkflowServicesManager** (section [3.1.5.4](#)) for the current **Web** ([\[MS-CSOMSPT\]](#) section 3.2.5.143) context.

#### 3.1.5.4.2 Methods

##### 3.1.5.4.2.1 Scalar Methods

### 3.1.5.4.2.1.1 IsIntegratedApp

**Return Type:** CSOM Boolean

Indicates whether the current **Web** ([\[MS-CSOMSPT\]](#) section 3.2.5.143) is an integrated **application**.

**Parameters:** None

### 3.1.5.4.2.2 ObjectPath Methods

#### 3.1.5.4.2.2.1 GetWorkflowDeploymentService

**Return Type:** Microsoft.SharePoint.Client.WorkflowServices.WorkflowDeploymentService

Returns the **WorkflowDeploymentService** (section [3.1.5.8](#)), which manages **WorkflowDefinition** (section [3.1.5.1](#)) objects and activities.

**Parameters:** None

#### 3.1.5.4.2.2.2 GetWorkflowInstanceService

**Return Type:** Microsoft.SharePoint.Client.WorkflowServices.WorkflowInstanceService

Returns the **WorkflowInstanceService** (section [3.1.5.9](#)), which manages **workflow instances**.

**Parameters:** None

#### 3.1.5.4.2.2.3 GetWorkflowInteropService

**Return Type:** Microsoft.SharePoint.Client.WorkflowServices.InteropService

Returns the **InteropService** (section [3.1.5.7](#)), which provides methods to start or to wait for other **workflows**.

**Parameters:** None

#### 3.1.5.4.2.2.4 GetWorkflowSubscriptionService

**Return Type:** Microsoft.SharePoint.Client.WorkflowServices.WorkflowSubscriptionService

Returns the **WorkflowSubscriptionService** (section [3.1.5.10](#)), which manages **workflow subscriptions**.

**Parameters:** None

#### 3.1.5.4.2.2.5 CSOM Constructor

Creates an instance of the **WorkflowServicesManager** (section [3.1.5.4](#)) scoped to the specified **Web** ([\[MS-CSOMSPT\]](#) section 3.2.5.143).

**Parameters:**

*web*: The **Web** in which the **WorkflowServicesManager** will operate. The **WorkflowServicesManager** can be used to return instances of objects that allow management and interaction with **workflow** services, and these will be scoped to the **Web** specified by this constructor.

Type: Microsoft.SharePoint.Client.Web

### 3.1.5.5 Microsoft.SharePoint.Client.WorkflowServices.WorkflowSubscription

**TypeId:** {D185EDE6-C3C3-4D37-9E8C-2382DEB37708}

**ShortName:** SP.WorkflowServices.WorkflowSubscription

Represents a **workflow subscription**. Updating this subscription will asynchronously update the subscription in the external **workflow host**.

#### 3.1.5.5.1 Properties

##### 3.1.5.5.1.1 Scalar Properties

###### 3.1.5.5.1.1.1 DefinitionId

**Type:** **CSOM GUID**

**Accessibility:** Read/Write

Specifies the identifier of the **WorkflowDefinition** (section [3.1.5.1](#)) that this **WorkflowSubscription** (section [3.1.5.5](#)) will use.

###### 3.1.5.5.1.1.2 EventSourceId

**Type:** **CSOM GUID**

**Accessibility:** Read/Write

Specifies a unique identifier for the logical source of the event. Used by the **EnumerateSubscriptionsByEventSource** (section [3.1.5.10.2.2.3](#)).

###### 3.1.5.5.1.1.3 Id

**Type:** **CSOM GUID**

**Accessibility:** Read/Write

Gets or sets the unique identifier of this **WorkflowSubscription** (section [3.1.5.5](#)).

###### 3.1.5.5.1.1.4 Name

**Type:** **CSOM String**

**Accessibility:** Read/Write

Gets or sets the display name of this **WorkflowSubscription** (section [3.1.5.5](#)).

###### 3.1.5.5.1.1.5 PropertyDefinitions

**Type:** **CSOM dictionary**

**Accessibility:** Read Only

Specifies the set of properties that will be available to the **workflow instance** at runtime.

###### 3.1.5.5.1.1.6 Enabled

**Type:** **CSOM Boolean**

**Accessibility:** Read/Write

Enables or disables this **WorkflowSubscription** (section [3.1.5.5](#)). When "false", new instances of the subscription cannot be started, but existing instances will continue to run.

### 3.1.5.5.1.1.7 StatusFieldName

**Type:** CSOM String

**Accessibility:** Read/Write

Gets or sets the name of the **workflow** status **field** on the **list**.

#### Remarks:

Only used for list workflows. If the value is null or the empty string, then a new status field will be created on the specified list when calling **PublishSubscriptionForList** (section [3.1.5.10.2.1.3](#)), and **StatusFieldName** is then set to the name of the new status field.

### 3.1.5.5.1.1.8 EventTypes

**Type:** CSOM array of CSOM String

**Accessibility:** Read/Write

Specifies the list of **event (1)** types that this **WorkflowSubscription** (section [3.1.5.5](#)) monitors.

For **list** events, these map to an **SPEventReceiverType** enumeration value, as specified in [\[MS-SPPTC\]](#) section 2.2.1.5.

### 3.1.5.5.1.1.9 ManualStartBypassesActivationLimit

**Type:** CSOM Boolean

**Accessibility:** Read/Write

If the value is **true**, then multiple **workflow** instances can be manually started on the same **list item** at the same time. Otherwise, the maximum number of **workflow instances** is limited. Only applicable on **list** workflows.

### 3.1.5.5.1.1.10 ParentContentTypeId

**Type:** CSOM String

**Accessibility:** Read/Write

Specifies the parent **content type identifier** workflow can be activated with.

### 3.1.5.5.1.2 ObjectPath Properties

None.

## 3.1.5.5.2 Methods

### 3.1.5.5.2.1 Scalar Methods

#### 3.1.5.5.2.1.1 SetProperty

**Return Type:** None

Specifies the properties for the **PropertyDefinitions** (section [3.1.5.5.1.1.5](#)).

**Parameters:**

*name*: The name of the property.

Type: **CSOM String**

*value*: The value of the property.

Type: CSOM String

**3.1.5.5.2.1.2 GetExternalVariable**

**Return Type:** **CSOM String**

Returns the value associated with the external variable name.

**Parameters:**

*name*: The name of the external variable.

Type: CSOM String

**3.1.5.5.2.1.3 SetExternalVariable**

**Return Type:** None

Specifies the default value for this external variable.

**Parameters:**

*name*: The name of the external variable.

Type: **CSOM String**

*value*: The value of the external variable.

Type: CSOM String

**3.1.5.5.2.2 ObjectPath Methods****3.1.5.5.2.2.1 CSOM Constructor**

Creates an instance of the **WorkflowSubscription** (section [3.1.5.5](#)) object.

**Parameters:** None

**3.1.5.6 Microsoft.SharePoint.Client.WorkflowServices.WorkflowSubscriptionCollection**

**TypeId:** {D185EDE6-C3C3-4D37-9E8C-2382DEB37707}

**ShortName:** SP.WorkflowServices.WorkflowSubscriptionCollection

A collection of **WorkflowSubscription** (section [3.1.5.5](#)) objects.

**3.1.5.6.1 Properties****3.1.5.6.1.1 Scalar Properties**

None.



### 3.1.5.6.1.2 ObjectPath Properties

None.

### 3.1.5.6.2 Methods

#### 3.1.5.6.2.1 Scalar Methods

##### 3.1.5.6.2.1.1 Sort

**Return Type:** None

Sorts the workflow subscriptions in this collection.

**Parameters:** None

#### 3.1.5.6.2.2 ObjectPath Methods

None.

### 3.1.5.7 Microsoft.SharePoint.Client.WorkflowServices.InteropService

**TypeId:** {AEDA1AE7-A445-429D-AD92-1D6B00DF7102}

**ShortName:** SP.WorkflowServices.InteropService

Allows the **workflows** to call other workflows.

#### 3.1.5.7.1 Properties

##### 3.1.5.7.1.1 Scalar Properties

None.

##### 3.1.5.7.1.2 ObjectPath Properties

###### 3.1.5.7.1.2.1 Current

**Type:** Microsoft.SharePoint.Client.WorkflowServices.InteropService

**Accessibility:** Read Only

Gets the current **InteropService** (section [3.1.5.7](#)) for this request.

#### 3.1.5.7.2 Methods

##### 3.1.5.7.2.1 Scalar Methods

###### 3.1.5.7.2.1.1 CancelWorkflow

**Return Type:** None

Stops a **workflow**.

**Parameters:**

*instanceId*: Identifier of the workflow to cancel.

Type: **CSOM GUID**

### 3.1.5.7.2.1.2 DisableEvents

**Return Type:** None

Removes **workflow** events from an object.

**Parameters:**

*listId*: Identifier of a list on which to remove workflow events. Use an **empty GUID** to specify events that SHOULD be disabled at the higher web scope.

Type: **CSOM GUID**

*itemGuid*: **GUID** that identifies a list item. Use an empty GUID to ignore the parameter.

Type: CSOM GUID

### 3.1.5.7.2.1.3 EnableEvents

**Return Type:** None

Enables **workflow** events on an object.

**Parameters:**

*listId*: Optional identifier of a list on which to enable workflow events. Use an **empty GUID** to specify events will be enabled at the higher web scope.

Type: **CSOM GUID**

*itemGuid*: **GUID** that identifies a list item. Use an empty GUID to ignore the parameter.

Type: CSOM GUID

### 3.1.5.7.2.1.4 StartWorkflow

**Return Type:** **CSOM GUID**

Starts a **workflow**.

**Parameters:**

*associationName*: The association name of the workflow to start.

Type: **CSOM String**

*correlationId*: **GUID** that represents this request.

Type: CSOM GUID

*listId*: Identifier of a list on which to start. Use an **empty GUID** to specify this is a **site** workflow that runs at the scope of the web rather than a specific list.

Type: CSOM GUID

*itemGuid*: GUID that identifies a list item. Use an empty GUID for site workflows.

Type: CSOM GUID

*workflowParameters*: Parameters passed to the new workflow.

Type: **CSOM dictionary**

### 3.1.5.7.2.2 ObjectPath Methods

None.

## 3.1.5.8 Microsoft.SharePoint.Client.WorkflowServices.WorkflowDeploymentService

**TypeId:** {3573A52F-3A27-4700-A08E-822C191C2C5D}

**ShortName:** SP.WorkflowServices.WorkflowDeploymentService

Manages the **WorkflowDefinition** (section [3.1.5.1](#)) objects and **activity** authoring.

### 3.1.5.8.1 Properties

#### 3.1.5.8.1.1 Scalar Properties

None.

#### 3.1.5.8.1.2 ObjectPath Properties

None.

### 3.1.5.8.2 Methods

#### 3.1.5.8.2.1 Scalar Methods

##### 3.1.5.8.2.1.1 DeleteDefinition

**Return Type:** None

Deletes a **WorkflowDefinition** (section [3.1.5.1](#)).

**Parameters:**

*definitionId*: Identifier of the **WorkflowDefinition** (section 3.1.5.1).

Type: **CSOM GUID**

##### 3.1.5.8.2.1.2 DeprecateDefinition

**Return Type:** None

Marks a **WorkflowDefinition** (section [3.1.5.1](#)) object as deprecated.

**Parameters:**

*definitionId*: Identifier of the definition to deprecate.

Type: **CSOM GUID**

##### 3.1.5.8.2.1.3 GetActivitySignatures

**Return Type:** **CSOM dictionary**

Returns a collection of **XML** that represents the signature of a **XAML** (section [3.1.5.1.1.1.5](#)) class.

**Parameters:**

*lastChanged*: The time to check for latest changes. Any signatures older than this time are excluded.

Type: **CSOM DateTime**

#### **3.1.5.8.2.1.4 GetDesignerActions**

**Return Type:** **CSOM String**

Returns the list of valid **workflow actions** for this server.

**Parameters:**

*web*: The **site** from which to read the workflow actions.

Type: Microsoft.SharePoint.Client.Web

#### **3.1.5.8.2.1.5 PublishDefinition**

**Return Type:** None

Publishes a **WorkflowDefinition** (section [3.1.5.1](#)) to the **workflow store**.

**Parameters:**

*definitionId*: The identifier of the definition to publish.

Type: **CSOM GUID**

#### **3.1.5.8.2.1.6 SaveDefinition**

**Return Type:** **CSOM GUID**

Returns the unique identifier of the **WorkflowDefinition** (section [3.1.5.1](#)) in the **workflow store**.

**Parameters:**

*definition*: The definition to save.

Type: Microsoft.SharePoint.Client.WorkflowServices.WorkflowDefinition

#### **3.1.5.8.2.1.7 ValidateActivity**

**Return Type:** **CSOM String**

Validates the **activity** against the **workflow store**. Returns the error message encountered during validation, or null if successful.

**Parameters:**

*activityXaml*: The activity to validate.

Type: CSOM String

#### **3.1.5.8.2.1.8 DeleteCollateral**

**Return Type:** None

Deletes the **URL** of a **collateral file** for a **WorkflowDefinition** (section [3.1.5.1](#)).

**Parameters:**

*workflowDefinitionId*: Identifier of the **WorkflowDefinition** (section 3.1.5.1).

Type: **CSOM GUID**

*leafFileName*: The **leaf name** of the collateral file.

Type: **CSOM String**

### 3.1.5.8.2.1.9 GetCollateralUri

**Return Type:** **CSOM String**

Retrieves the **URL** of a **collateral file** for a **WorkflowDefinition** (section [3.1.5.1](#)).

**Parameters:**

*workflowDefinitionId*: Identifier of the **WorkflowDefinition** (section 3.1.5.1).

Type: **CSOM GUID**

*leafFileName*: The **leaf name** of the collateral file.

Type: CSOM String

### 3.1.5.8.2.1.10 PackageDefinition

**Return Type:** **CSOM String**

Returns a **Uniform Resource Locator (URL)** to the **solution package** generated from a single **WorkflowDefinition** (section [3.1.5.1](#)).

**Parameters:**

*definitionId*: The ID of the definition to package.

Type: **CSOM GUID**

*packageDefaultFilename*: The default file name to choose for the new package.

Type: CSOM String

*packageTitle*: The package title.

Type: CSOM String

*packageDescription*: The package description.

Type: CSOM String

### 3.1.5.8.2.1.11 SaveCollateral

**Return Type:** None

Saves the **collateral file** for a **WorkflowDefinition** (section [3.1.5.1](#)).

**Parameters:**

*workflowDefinitionId*: Identifier of the **WorkflowDefinition** (section 3.1.5.1).

Type: **CSOM GUID**

*leafFileName*: The **leaf name** of the collateral file.

Type: **CSOM String**

*fileContent*: File content of the collateral file.

Type: **CSOM Stream**

### **3.1.5.8.2.1.12 IsIntegratedApp**

**Return Type:** **CSOM Boolean**

Indicates whether the current **Web** ([\[MS-CSOMSPT\]](#) section 3.2.5.143) is an integrated **application**.

**Parameters:** None

### **3.1.5.8.2.2 ObjectPath Methods**

#### **3.1.5.8.2.2.1 GetDefinition**

**Return Type:** Microsoft.SharePoint.Client.WorkflowServices.WorkflowDefinition

Returns a **WorkflowDefinition** (section [3.1.5.1](#)) from the **workflow store**.

**Parameters:**

*definitionId*: The identifier of the definition to retrieve.

Type: **CSOM GUID**

#### **3.1.5.8.2.2.2 EnumerateDefinitions**

**Return Type:** Microsoft.SharePoint.Client.WorkflowServices.WorkflowDefinitionCollection

Returns the **WorkflowDefinition** (section [3.1.5.1](#)) objects from the **workflow store** that match the specified parameters.

**Parameters:**

*publishedOnly*: "true" if only **published workflows** will be returned.

Type: **CSOM Boolean**

#### **3.1.5.8.2.2.3 EnumerateIntegratedApps**

**Return Type:** **CSOM array** of Microsoft.SharePoint.Client.AppInstance

Returns a list of instances of the integrated **application** in the current **Web** ([\[MS-CSOMSPT\]](#) section 3.2.5.143).

**Parameters:** None

### **3.1.5.9 Microsoft.SharePoint.Client.WorkflowServices.WorkflowInstanceService**

**TypeId:** {71252277-2470-4022-BCAF-C4657AA118C3}

**ShortName:** SP.WorkflowServices.WorkflowInstanceService

Manages and reads **workflow instances** from the **workflow host**.

#### **3.1.5.9.1 Properties**

### 3.1.5.9.1.1 Scalar Properties

None.

### 3.1.5.9.1.2 ObjectPath Properties

#### 3.1.5.9.1.2.1 Current

**Type:** Microsoft.SharePoint.Client.WorkflowServices.WorkflowInstanceService

**Accessibility:** Read Only

Returns the current instance of the **WorkflowInstanceService** (section [3.1.5.9](#))

### 3.1.5.9.2 Methods

#### 3.1.5.9.2.1 Scalar Methods

##### 3.1.5.9.2.1.1 CancelWorkflow

**Return Type:** None

Sends a cancel message to a **workflow** specified by the given instance.

**Parameters:**

*instance:* The **WorkflowInstance** (section [3.1.5.2](#)) to cancel.

Type: Microsoft.SharePoint.Client.WorkflowServices.WorkflowInstance

##### 3.1.5.9.2.1.2 StartWorkflow

**Return Type:** CSOM GUID

Starts a **WorkflowInstance** (section [3.1.5.2](#)) specified by the given **workflow subscription** and payload.

**Parameters:**

*subscription:* The **WorkflowSubscription** (section [3.1.5.5](#)) from which to start a new **WorkflowInstance** (section [3.1.5.2](#)).

Type: Microsoft.SharePoint.Client.WorkflowServices.WorkflowSubscription

*payload:* Parameters to pass into the **WorkflowInstance** (section [3.1.5.2](#)).

Type: **CSOM dictionary**

##### 3.1.5.9.2.1.3 TerminateWorkflow

**Return Type:** None

Terminates a **workflow** specified by the given **workflow instance** ).

**Parameters:**

*instance:* The **WorkflowInstance** (section [3.1.5.2](#)) to terminate.

Type: Microsoft.SharePoint.Client.WorkflowServices.WorkflowInstance

#### 3.1.5.9.2.1.4 PublishCustomEvent

**Return Type:** None

Sends a custom event and its payload to a **workflow** specified by the given **workflow instance**.

**Parameters:**

*instance:* The **WorkflowInstance** (section [3.1.5.2](#)) to receive the custom event.

Type: Microsoft.SharePoint.Client.WorkflowServices.WorkflowInstance

*eventName:* Name of the custom event.

Type: **CSOM String**

*payload:* Payload of the custom event.

Type: CSOM String

#### 3.1.5.9.2.1.5 CountInstances

**Return Type:** **CSOM Int32**

Returns a count of all the **workflow instances** of the specified **WorkflowSubscription** (section [3.1.5.5](#)).

**Parameters:**

*parentSubscription:* The parent **workflow subscription** of the instances to count.

Type: Microsoft.SharePoint.Client.WorkflowServices.WorkflowSubscription

#### 3.1.5.9.2.1.6 CountInstancesWithStatus

**Return Type:** **CSOM Int32**

Returns a count of the **workflow instances** of the specified **WorkflowSubscription** (section [3.1.5.5](#)) with the specified status.

**Parameters:**

*parentSubscription:* The parent **workflow subscription** of the instances to count.

Type: Microsoft.SharePoint.Client.WorkflowServices.WorkflowSubscription

*status:* Only instances with this status (section [3.1.5.12](#)) value are counted. If the value is **WorkflowStatus.NotSpecified** (section [3.1.5.12.1.8](#)), instances in all statuses are counted.

Type: Microsoft.SharePoint.Client.WorkflowServices.WorkflowStatus

#### 3.1.5.9.2.1.7 StartWorkflowOnListItem

**Return Type:** **CSOM GUID**

Starts a **WorkflowInstance** (section [3.1.5.2](#)) specified by the given **workflow subscription** on the given **list item**, and passes additional parameters.

**Parameters:**



*subscription*: The **WorkflowSubscription** (section [3.1.5.5](#)) from which to start a new **WorkflowInstance** (section 3.1.5.2).

Type: Microsoft.SharePoint.Client.WorkflowServices.WorkflowSubscription

*itemId*: The identifier of an existing list item on which to start a new **WorkflowInstance** (section 3.1.5.2).

Type: **CSOM Int32**

*payload*: Parameters to pass into the **WorkflowInstance** (section 3.1.5.2).

Type: **CSOM dictionary**

### 3.1.5.9.2.1.8 GetDebugInfo

**Return Type:** **CSOM String**

Retrieves the debug information for the specified **WorkflowInstance** (section [3.1.5.2](#)) in **JavaScript Object Notation (JSON)** format.

**Parameters:**

*instance*: The **workflow instance** to get debug information for.

Type: Microsoft.SharePoint.Client.WorkflowServices.WorkflowInstance

### 3.1.5.9.2.1.9 ResumeWorkflow

**Return Type:** None

Resumes a **workflow instance**.

**Parameters:**

*instance*: The workflow instance to resume.

Type: Microsoft.SharePoint.Client.WorkflowServices.WorkflowInstance

### 3.1.5.9.2.1.10 SuspendWorkflow

**Return Type:** None

Suspends a **workflow instance**.

**Parameters:**

*instance*: The workflow instance to suspend.

Type: Microsoft.SharePoint.Client.WorkflowServices.WorkflowInstance

### 3.1.5.9.2.1.11 StartWorkflowOnListItemBySubscriptionId

**Return Type:** **CSOM GUID**

Starts a **WorkflowInstance** (section [3.1.5.2](#)) specified by the given **workflow instance** id on the given **list item**, and passes additional parameters.

**Parameters:**

*subscriptionId*: The guid of **WorkflowSubscription** (section [3.1.5.5](#)) from which to start a **WorkflowInstance** (section 3.1.5.2).

Type: CSOM GUID

*itemId*: The identifier of an existing list item on which to start a new **WorkflowInstance** (section 3.1.5.2).

Type: **CSOM Int32**

*payload*: Parameters to pass into the **WorkflowInstance** (section 3.1.5.2).

Type: **CSOM dictionary**

### 3.1.5.9.2.2 ObjectPath Methods

#### 3.1.5.9.2.2.1 Enumerate

**Return Type:** Microsoft.SharePoint.Client.WorkflowServices.WorkflowInstanceCollection

Gets a collection of **workflow instances** started by the specified **workflow subscription**.

**Parameters:**

*parentSubscription*: The **WorkflowSubscription** (section [3.1.5.5](#)) that started the workflow instances.

Type: Microsoft.SharePoint.Client.WorkflowServices.WorkflowSubscription

#### 3.1.5.9.2.2.2 GetInstance

**Return Type:** Microsoft.SharePoint.Client.WorkflowServices.WorkflowInstance

Returns a **WorkflowInstance** (section [3.1.5.2](#)) from an external **workflow store** matching a specified **workflow instance** identifier.

**Parameters:**

*instanceId*: Unique identifier of the **WorkflowInstance** (section 3.1.5.2).

Type: **CSOM GUID**

#### 3.1.5.9.2.2.3 EnumerateInstancesForListItem

**Return Type:** Microsoft.SharePoint.Client.WorkflowServices.WorkflowInstanceCollection

Returns the **workflow instances** for the specified **list item**.

**Parameters:**

*listId*: The identifier of the **list** to which the item belongs.

Type: **CSOM GUID**

*itemId*: The identifier of the item to get the instances for.

Type: **CSOM Int32**

#### 3.1.5.9.2.2.4 EnumerateInstancesForSite

**Return Type:** Microsoft.SharePoint.Client.WorkflowServices.WorkflowInstanceCollection

Returns the **site workflow instances** for the current site.

**Parameters:** None

### 3.1.5.9.2.2.5 EnumerateInstancesForListItemWithOffset

**Return Type:** Microsoft.SharePoint.Client.WorkflowServices.WorkflowInstanceCollection

Returns the collection of up to 100 **workflow instances** for the specified list item, starting from the specified offset.

**Parameters:**

*listId:* The identifier of the **list** to which the item belongs.

Type: **CSOM GUID**

*itemId:* The identifier of the item to get the workflow instances for.

Type: **CSOM Int32**

*offset:* The number of workflow instances to skip before returning the next 100 instances.

Type: CSOM Int32

### 3.1.5.9.2.2.6 EnumerateInstancesForSiteWithOffset

**Return Type:** Microsoft.SharePoint.Client.WorkflowServices.WorkflowInstanceCollection

Returns the collection of up to 100 **site workflow instances** for the current site, starting from the specified offset.

**Parameters:**

*offset:* The number of workflow instances to skip before returning the next 100 instances.

Type: **CSOM Int32**

### 3.1.5.9.2.2.7 EnumerateWithOffset

**Return Type:** Microsoft.SharePoint.Client.WorkflowServices.WorkflowInstanceCollection

Returns a collection of up to 100 **workflow instances** started by the specified subscription, starting from the specified offset.

**Parameters:**

*parentSubscription:* The subscription that started the workflow instances to get.

Type: Microsoft.SharePoint.Client.WorkflowServices.WorkflowSubscription

*offset:* The number of workflow instances to skip before returning the next 100 instances.

Type: **CSOM Int32**

## 3.1.5.10 Microsoft.SharePoint.Client.WorkflowServices.WorkflowSubscriptionService

**TypeId:** {FC956693-2419-4950-8963-52EBC3E46501}

**ShortName:** SP.WorkflowServices.WorkflowSubscriptionService

Manages **workflow subscriptions** for a **workflow**.

### 3.1.5.10.1 Properties

#### 3.1.5.10.1.1 Scalar Properties

None.

#### 3.1.5.10.1.2 ObjectPath Properties

##### 3.1.5.10.1.2.1 Current

**Type:** Microsoft.SharePoint.Client.WorkflowServices.WorkflowSubscriptionService

**Accessibility:** Read Only

Returns the current **WorkflowSubscriptionService** (section [3.1.5.10](#)) object.

### 3.1.5.10.2 Methods

#### 3.1.5.10.2.1 Scalar Methods

##### 3.1.5.10.2.1.1 DeleteSubscription

**Return Type:** None

Deletes the specified **WorkflowSubscription** (section [3.1.5.5](#)).

**Parameters:**

*subscriptionId*: The identifier of the subscription to delete.

Type: **CSOM GUID**

##### 3.1.5.10.2.1.2 PublishSubscription

**Return Type:** **CSOM GUID**

Creates a **workflow subscription** for a **workflow**, and returns the unique identifier of the new subscription.

**Parameters:**

*subscription*: The **WorkflowSubscription** (section [3.1.5.5](#)) data to publish.

Type: Microsoft.SharePoint.Client.WorkflowServices.WorkflowSubscription

##### 3.1.5.10.2.1.3 PublishSubscriptionForList

**Return Type:** **CSOM GUID**

Creates a **workflow subscription** for a **workflow** and if necessary an **event receiver** on the specified **list**. Also writes an **EventSourceId** (section [3.1.5.5.1.1.2](#)) that matches the list as the **event (2)** source. Returns the unique identifier of the new subscription.

**Parameters:**

*subscription*: The **WorkflowSubscription** (section [3.1.5.5](#)) data to publish.

Type: Microsoft.SharePoint.Client.WorkflowServices.WorkflowSubscription

*listId*: Identifier for the specified list.

Type: CSOM GUID

#### **3.1.5.10.2.1.4 RegisterInterestInHostWebList**

**Return Type:** None

Creates an **event receiver** on a **list** for the specified **event (2)** on the host web if necessary.

**Parameters:**

*listId*: **GUID** of the list to ensure the event receiver on.

Type: **CSOM GUID**

*eventName*: The name of the event (2) the receiver is for.

Type: **CSOM String**

#### **3.1.5.10.2.1.5 RegisterInterestInList**

**Return Type:** None

Ensures that an **event receiver** will monitor a list for the specified **event (2)**.

**Parameters:**

*listId*: **GUID** that specifies the list to monitor via an event receiver.

Type: **CSOM GUID**

*eventName*: The name of the event (2) to monitor.

Type: **CSOM String**

#### **3.1.5.10.2.1.6 UnregisterInterestInHostWebList**

**Return Type:** None

Removes an **event receiver** from the **list** on the host web for the specified **event (2)**.

**Parameters:**

*listId*: **GUID** of the list containing the event receiver to be unregistered.

Type: **CSOM GUID**

*eventName*: The name of the event (2) to be removed.

Type: **CSOM String**

#### **3.1.5.10.2.1.7 UnregisterInterestInList**

**Return Type:** None

Removes monitoring for an **event receiver** on the specified list with the specified event.

**Parameters:**

*listId*: **GUID** of the **list** containing the event receiver to be unregistered.

Type: **CSOM GUID**

*eventName*: The name of the **event (2)** to be removed.

Type: **CSOM String**

### 3.1.5.10.2.2 ObjectPath Methods

#### 3.1.5.10.2.2.1 EnumerateSubscriptions

**Return Type:** Microsoft.SharePoint.Client.WorkflowServices.WorkflowSubscriptionCollection

Retrieves a **WorkflowSubscriptionCollection** (section [3.1.5.6](#)) that contains all of the **workflow subscriptions** on the **Web** ([\[MS-CSOMSPT\]](#) section 3.2.5.143).

**Parameters:** None

#### 3.1.5.10.2.2.2 EnumerateSubscriptionsByDefinition

**Return Type:** Microsoft.SharePoint.Client.WorkflowServices.WorkflowSubscriptionCollection

Retrieves a **WorkflowSubscriptionCollection** (section [3.1.5.6](#)) based on a **WorkflowDefinition** (section [3.1.5.1](#)).

**Parameters:**

*definitionId*: Identifier of a **WorkflowDefinition** (section 3.1.5.1) object.

Type: **CSOM GUID**

#### 3.1.5.10.2.2.3 EnumerateSubscriptionsByEventSource

**Return Type:** Microsoft.SharePoint.Client.WorkflowServices.WorkflowSubscriptionCollection

Retrieves a **WorkflowSubscriptionCollection** (section [3.1.5.6](#)) based on the specified **EventSourceId** (section [3.1.5.5.1.1.2](#)).

**Parameters:**

*eventSourceId*: The unique identifier of the **EventSource** (section 3.1.5.5.1.1.2) for the subscriptions.

Type: **CSOM GUID**

#### 3.1.5.10.2.2.4 EnumerateSubscriptionsByList

**Return Type:** Microsoft.SharePoint.Client.WorkflowServices.WorkflowSubscriptionCollection

Retrieves a **WorkflowSubscriptionCollection** (section [3.1.5.6](#)) based on the specified list.

**Parameters:**

*listId*: The unique identifier of the list on which to filter the subscriptions.

Type: **CSOM GUID**

#### 3.1.5.10.2.2.5 EnumerateSubscriptionsByListAndParentContentType

**Return Type:** Microsoft.SharePoint.Client.WorkflowServices.WorkflowSubscriptionCollection

Retrieves a **WorkflowSubscriptionCollection** (section [3.1.5.6](#)) based on the specified **list** and parent **content type**.

**Parameters:**

*listId*: The unique identifier of the list on which to filter the subscriptions.

Type: **CSOM GUID**

*parentContentTypeId*: The parent **content type identifier**.

Type: Microsoft.SharePoint.Client.ContentTypeId

*includeNoContentTypeSpecified*: True if subscriptions to the list with no content type specified is returned together.

Type: **CSOM Boolean**

### 3.1.5.10.2.2.6 EnumerateSubscriptionsByListWithContentType

**Return Type:** Microsoft.SharePoint.Client.WorkflowServices.WorkflowSubscriptionCollection

Retrieves a **WorkflowSubscriptionCollection** (section [3.1.5.6](#)) based on the specified **list**.

**Parameters:**

*listId*: The unique identifier of the list on which to filter the subscriptions.

Type: **CSOM GUID**

*includeContentTypeSpecified*: True if subscriptions to the list with no **content type** specified is returned together.

Type: **CSOM Boolean**

### 3.1.5.10.2.2.7 GetSubscription

**Return Type:** Microsoft.SharePoint.Client.WorkflowServices.WorkflowSubscription

Retrieves an instance of the **WorkflowSubscription** (section [3.1.5.5](#)) based on its unique identifier.

**Parameters:**

*subscriptionId*: The unique identifier of the subscription.

Type: **CSOM GUID**

## 3.1.5.11 Microsoft.SharePoint.Client.WorkflowServices.WorkflowDefinitionCollection

**TypeId:** {66F013C8-F126-4F84-BC22-8FD0E9A3E7D3}

**ShortName:** SP.WorkflowServices.WorkflowDefinitionCollection

Represents a collection of **WorkflowDefinition** (section [3.1.5.1](#)) objects.

### 3.1.5.11.1 Properties

#### 3.1.5.11.1.1 Scalar Properties

None.

### **3.1.5.11.1.2 ObjectPath Properties**

None.

### **3.1.5.11.2 Methods**

#### **3.1.5.11.2.1 Scalar Methods**

##### **3.1.5.11.2.1.1 Sort**

**Return Type:** None

Sorts the **workflow** definitions in this collection.

**Parameters:** None

#### **3.1.5.11.2.2 ObjectPath Methods**

None.

### **3.1.5.12 Microsoft.SharePoint.Client.WorkflowServices.WorkflowStatus**

**ShortName:** SP.WorkflowServices.WorkflowStatus

**Flag:** false

An enumeration that represents the runtime status of a workflow instance.

#### **3.1.5.12.1 Field Values**

##### **3.1.5.12.1.1 NotStarted**

**Value:** 0

The **workflow** instance has not started.

##### **3.1.5.12.1.2 Started**

**Value:** 1

The workflow instance has started.

##### **3.1.5.12.1.3 Suspended**

**Value:** 2

The **workflow** instance was suspended.

##### **3.1.5.12.1.4 Canceling**

**Value:** 3

The **workflow** instance received a cancel command and is responding to the request.

##### **3.1.5.12.1.5 Canceled**



**Value:** 4

The **workflow** instance has been canceled.

#### **3.1.5.12.1.6 Terminated**

**Value:** 5

The **workflow** instance has been terminated.

#### **3.1.5.12.1.7 Completed**

**Value:** 6

The **workflow** instance has finished running and is in the completed state.

#### **3.1.5.12.1.8 NotSpecified**

**Value:** 7

No status has been specified.

#### **3.1.5.12.1.9 Invalid**

**Value:** 8

The **workflow** instance is in an invalid state.

### **3.1.5.13 Microsoft.SharePoint.Client.WorkflowServices.WorkflowServiceHealthStatus**

**ShortName:** SP.WorkflowServices.WorkflowServiceHealthStatus

**Flag:** false

An enumeration that represents the status of the current scope in a **workflow** instance.

#### **3.1.5.13.1 Field Values**

##### **3.1.5.13.1.1 Active**

**Value:** 0

The **workflow** instance is active.

##### **3.1.5.13.1.2 NoScope**

**Value:** 1

The **workflow** instance has not been created yet.

##### **3.1.5.13.1.3 NotConnected**

**Value:** 2

The **workflow** instance is not connected.

##### **3.1.5.13.1.4 Suspended**

**Value:** 3

The **workflow** instance is suspended.

#### **3.1.5.13.1.5 Throttled**

**Value:** 4

The **workflow** instance is throttled.

#### **3.1.5.13.1.6 Unknown**

**Value:** 5

The **workflow** instance status is unrecognized.

#### **3.1.5.13.1.7 Unregistered**

**Value:** 6

The **workflow** instance is unregistered.

### **3.1.6 Timer Events**

None.

### **3.1.7 Other Local Events**

None.

## 4 Protocol Examples

### 4.1 Associate Workflow

In this example, a **published workflow** definition is associated with a list.

#### Request:

```
<Request AddExpandoFieldTypeSuffix="true" SchemaVersion="15.0.0.0" LibraryVersion="15.0.0.0"
ApplicationName=".NET Library"
xmlns="http://schemas.microsoft.com/sharepoint/clientquery/2009">
  <Actions>
    <SetProperty Id="78" ObjectPathId="74" Name="DefinitionId">
      <Parameter Type="Guid">{3988dd69-2ffa-45b5-b3f0-5735d4150110}</Parameter>
    </SetProperty>
    <SetProperty Id="79" ObjectPathId="74" Name="EventSourceId">
      <Parameter Type="Guid">{96424cc8-dc44-409d-ad9e-87236ee608a2}</Parameter>
    </SetProperty>
    <SetProperty Id="80" ObjectPathId="74" Name="EventSource">
      <Parameter Type="String">e3137044-d96b-4989-ad80-aed34f0cc10b/375160a8-0ab6-46f2-9b3d-
b987684b30e3/96424cc8-dc44-409d-ad9e-87236ee608a2</Parameter>
    </SetProperty>
    <SetProperty Id="81" ObjectPathId="74" Name="EventType">
      <Parameter Type="String">WorkflowStart</Parameter>
    </SetProperty>
    <SetProperty Id="82" ObjectPathId="74" Name="Name">
      <Parameter Type="String">testWorkflowAssociation1</Parameter>
    </SetProperty>
    <Method Name="PublishSubscription" Id="83" ObjectPathId="30">
      <Parameters>
        <Parameter ObjectPathId="74" />
      </Parameters>
    </Method>
  </Actions>
  <ObjectPaths>
    <Identity Id="74" Name="50e607f0-ceab-4a8c-90c5-81e2f2ba78d9:00000000-0000-0000-0000-
000000000000" />
    <Method Id="30" ParentId="25" Name="GetWorkflowSubscriptionService" />
    <Constructor Id="25" TypeId="{4ccc7f0e-bf7e-4477-999c-6458a73d0039}">
      <Parameters>
        <Parameter ObjectPathId="7" />
      </Parameters>
    </Constructor>
    <Identity Id="7" Name="740c6a0b-85e2-48a0-a494-e0f1759d4aa7:web:375160a8-0ab6-46f2-9b3d-
b987684b30e3" />
  </ObjectPaths>
</Request>
```

#### Response:

```
[
{
"SchemaVersion":"15.0.0.0","LibraryVersion":"15.0.3427.1000","ErrorInfo":null
},83,"\\Guid(b72d25f3-8327-41d5-836d-ad956da3eb45)\\/"
]
```

### 4.2 Publish Definition

In this example, a saved **workflow** definition is **published**.

#### Request:

```

<Request AddExpandoFieldTypeSuffix="true" SchemaVersion="15.0.0.0" LibraryVersion="15.0.0.0"
ApplicationName=".NET Library"
xmlns="http://schemas.microsoft.com/sharepoint/clientquery/2009">
  <Actions>
    <Method Name="PublishDefinition" Id="24" ObjectPathId="14">
      <Parameters>
        <Parameter Type="Guid">{3988dd69-2ffa-45b5-b3f0-5735d4150110}</Parameter>
      </Parameters>
    </Method>
  </Actions>
  <ObjectPaths>
    <Method Id="14" ParentId="11" Name="GetWorkflowDeploymentService" />
    <Constructor Id="11" TypeId="{4ccc7f0e-bf7e-4477-999c-6458a73d0039}">
      <Parameters>
        <Parameter ObjectPathId="7" />
      </Parameters>
    </Constructor>
    <Identity Id="7" Name="740c6a0b-85e2-48a0-a494-e0f1759d4aa7:web:375160a8-0ab6-46f2-9b3d-
b987684b30e3" />
  </ObjectPaths>
</Request>

```

## Response:

```

[
  {
    "SchemaVersion":"15.0.0.0","LibraryVersion":"15.0.3427.1000","ErrorInfo":null
  }
]

```

## 4.3 Save Definition

In this example, a **WorkflowDefinition** (section [3.1.5.1](#)) is saved.

### Request:

```

<Request AddExpandoFieldTypeSuffix="true" SchemaVersion="15.0.0.0" LibraryVersion="15.0.0.0"
ApplicationName=".NET Library"
xmlns="http://schemas.microsoft.com/sharepoint/clientquery/2009">
  <Actions>
    <SetProperty Id="20" ObjectPathId="16" Name="DisplayName">
      <Parameter Type="String">csomTest2</Parameter>
    </SetProperty>
    <SetProperty Id="21" ObjectPathId="16" Name="Id">
      <Parameter Type="Guid">{3988dd69-2ffa-45b5-b3f0-5735d4150110}</Parameter>
    </SetProperty>
    <SetProperty Id="22" ObjectPathId="16" Name="Xaml">
      <Parameter Type="String">
        <lt;p:Activity mva:VisualBasic.Settings="Assembly references and imported namespaces
for internal implementation" &#xD;
xmlns:mva="clr-
namespace:Microsoft.VisualBasic.Activities;assembly=System.Activities"&#xD;
xmlns:p="http://schemas.microsoft.com/netfx/2009/xaml/activities"&#xD;
xmlns:s="clr-namespace:System;assembly=microsoftlib"&#xD;
xmlns:mv="clr-namespace:Microsoft.VisualBasic;assembly=System" &#xD;
xmlns:s1="clr-namespace:System;assembly=System" &#xD;
xmlns:s2="clr-namespace:System;assembly=System.Xml" &#xD;
xmlns:s3="clr-namespace:System;assembly=System.Core" &#xD;
xmlns:scg="clr-namespace:System.Collections.Generic;assembly=System" &#xD;
xmlns:scg1="clr-namespace:System.Collections.Generic;assembly=System.ServiceModel"
&#xD;
xmlns:scg2="clr-namespace:System.Collections.Generic;assembly=System.Core" &#xD;
xmlns:scg3="clr-namespace:System.Collections.Generic;assembly=microsoftlib" &#xD;
xmlns:sd="clr-namespace:System.Data;assembly=System.Data" &#xD;

```

```

xmlns:sl="clr-namespace:System.Linq;assembly=System.Core" &#xD;
xmlns:st="clr-namespace:System.Text;assembly=microsoftlib" &#xD;
xmlns:sad="clr-namespace:System.Activities.Debugger;assembly=System.Activities" &#xD;
xmlns:sapx="clr-
namespace:System.Activities.Presentation.Xaml;assembly=System.Activities.Presentation" &#xD;
xmlns:x="http://schemas.microsoft.com/winfx/2006/xaml" &#xD;
&lt;/p:Activity&gt;
  </Parameter>
</SetProperty>
<Method Name="SaveDefinition" Id="23" ObjectPathId="14">
  <Parameters>
    <Parameter ObjectPathId="16" />
  </Parameters>
</Method>
</Actions>
<ObjectPaths>
  <Identity Id="16" Name="98b53367-9eab-45ad-ae5a-6e041f4b3be8:8290b9e3-2772-45fb-8bee-
e502ed37cef3" />
  <Method Id="14" ParentId="11" Name="GetWorkflowDeploymentService" />
  <Constructor Id="11" TypeId="{4ccc7f0e-bf7e-4477-999c-6458a73d0039}">
    <Parameters>
      <Parameter ObjectPathId="7" />
    </Parameters>
  </Constructor>
  <Identity Id="7" Name="740c6a0b-85e2-48a0-a494-e0f1759d4aa7:web:375160a8-0ab6-46f2-9b3d-
b987684b30e3" />
</ObjectPaths>
</Request>

```

## Response:

```

[
{
"SchemaVersion":"15.0.0.0","LibraryVersion":"15.0.3427.1000","ErrorInfo":null
},23,"\\Guid(3988dd69-2ffa-45b5-b3f0-5735d4150110)\"
]

```

## 4.4 Start Workflow

In this example, a **workflow instance** is triggered from an existing **workflow association**.

### Request:

```

<Request AddExpandoFieldTypeSuffix="true" SchemaVersion="15.0.0.0" LibraryVersion="15.0.0.0"
ApplicationName=".NET Library"
xmlns="http://schemas.microsoft.com/sharepoint/clientquery/2009">
  <Actions>
    <Method Name="StartWorkflow" Id="150" ObjectPathId="87">
      <Parameters>
        <Parameter ObjectPathId="131" />
        <Parameter Type="Dictionary">
          <Property Name="ListId" Type="Guid">{96424cc8-dc44-409d-ad9e-
87236ee608a2}</Property>
        </Parameter>
      </Parameters>
    </Method>
  </Actions>
  <ObjectPaths>
    <Method Id="87" ParentId="84" Name="GetWorkflowInstanceService" />
    <Identity Id="131" Name="50e607f0-ceab-4a8c-90c5-81e2f2ba78d9:b72d25f3-8327-41d5-836d-
ad956da3eb45" />
    <Constructor Id="84" TypeId="{4ccc7f0e-bf7e-4477-999c-6458a73d0039}">
      <Parameters>
        <Parameter ObjectPathId="7" />

```

```
</Parameters>
</Constructor>
<Identity Id="7" Name="740c6a0b-85e2-48a0-a494-e0f1759d4aa7:web:375160a8-0ab6-46f2-9b3d-
b987684b30e3" />
</ObjectPaths>
</Request>
```

## Response:

```
[
{
"SchemaVersion":"15.0.0.0","LibraryVersion":"15.0.3427.1000","ErrorInfo":null
},150,"\\Guid(4f5dc953-22c4-40ad-8ae8-75c3af9bf339)\"
]
```

## **5 Security**

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

None.

### **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 updates to those products.

- Microsoft SharePoint Server 2013
- Microsoft SharePoint Server 2016
- Microsoft SharePoint Server 2019

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.



## 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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