

# [MS-SPWFCSOM]: SharePoint Workflow Client-Side Object Model Protocol Specification

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## Revision Summary

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

## 1.1 Glossary

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

- application**
- authentication**
- Coordinated Universal Time (UTC)**
- GUID**
- XML**

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

- action**
- activity**
- CSOM array**
- CSOM Boolean**
- CSOM DateTime**
- CSOM dictionary**
- CSOM GUID**
- CSOM Int32**
- CSOM Stream**
- CSOM String**
- empty GUID**
- event**
- event receiver**
- Extensible Application Markup Language (XAML)**
- field**
- item**
- JavaScript Object Notation (JSON)**
- leaf name**
- list**
- list item**
- published**
- site**
- solution package**
- store**
- Uniform Resource Locator (URL)**
- workflow**
- workflow association**
- workflow identifier**
- workflow initiation form**
- workflow instance**

The following terms are specific to this document:



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

**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.

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

**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.

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

## 1.2 References

References to Microsoft Open Specifications documentation do not include a publishing year because links are to the latest version of the technical documents, which are updated frequently. References to other documents include a publishing year when one is available.

### 1.2.1 Normative References

We conduct frequent surveys of the normative references to assure their continued availability. If you have any issue with finding a normative reference, please contact [dochelp@microsoft.com](mailto:dochelp@microsoft.com). We will assist you in finding the relevant information. Please check the archive site, <http://msdn2.microsoft.com/en-us/library/E4BD6494-06AD-4aed-9823-445E921C9624>, as an additional source.

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

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

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

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

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

[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

[MS-GLOS] Microsoft Corporation, "[Windows Protocols Master Glossary](#)".

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

[RFC2616] Fielding, R., Gettys, J., Mogul, J., et al., "Hypertext Transfer Protocol -- HTTP/1.1", RFC 2616, June 1999, <http://www.ietf.org/rfc/rfc2616.txt>

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

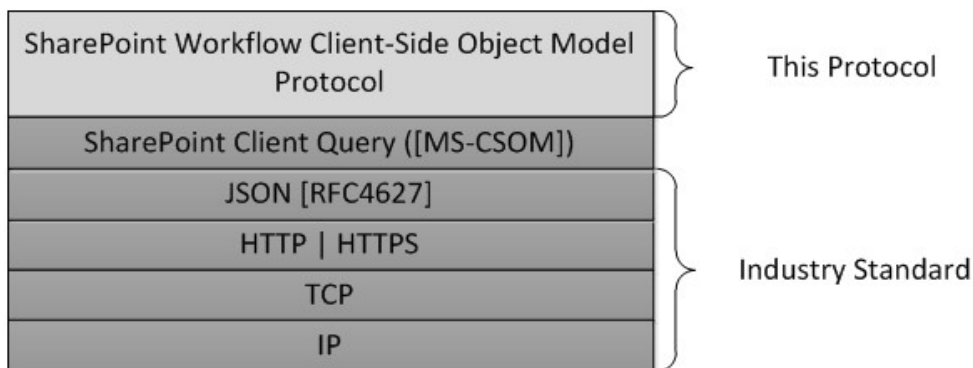
[RFC4627] Crockford, D., "The application/json Media Type for Javascript Object Notation (JSON)", RFC 4627, July 2006, <http://www.ietf.org/rfc/rfc4627.txt>

### 1.3 Overview

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

### 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 (2) on a site (2) that is identified by a **Uniform Resource Locator (URL)** that is recognized by protocol clients. This protocol assumes that **authentication (2)** has been performed by underlying protocols.

### 1.6 Applicability Statement

This protocol can be used by a protocol client to manage workflows (2) 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 (2).

- Localization: Localization-specific properties, such as the title of a **list (1)**, are returned by using the preferred language of the user, if available, or by using the default language of the site (2) 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 Specification, 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 (2), lists (1), **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 (2) 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 (2) 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 (2) 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 (2).

**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 (2) 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 (2).

**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 (2) 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 (2).

#### 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 (1) identifier limits the definition to be associable only to the specified list (1). If the **RestrictToType** is "List" but the **RestrictToScope** is null or the empty string, then the definition is associable to any list (1).

### 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 (2) 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 (1) workflow (2) and can only be associated to a list (1). 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 (2) 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 WorkflowSubscriptionName

**Type:** CSOM String

**Accessibility:** Read Only

Gets the name of the subscription that instantiated this **WorkflowInstance** (section [3.1.5.2](#)).

### 3.1.5.2.1.1.8 Id

**Type:** CSOM GUID

**Accessibility:** Read Only

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

### 3.1.5.2.1.1.9 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 (2).

#### **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 (2) 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.

### 3.1.5.4.1.2 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

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 (2).

**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 (2) 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 (2) status field (2) on the list (1).

#### 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 (1) 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 (2) 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 (1) workflows.

### 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

#### 3.1.5.5.2.2 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

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 (2) to invoke other workflows (2).

#### 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 (2).

**Parameters:**

*instanceId*: Identifier of the workflow (2) to cancel.

Type: CSOM GUID



### 3.1.5.7.2.1.2 DisableEvents

**Return Type:** None

Removes workflow (2) events from an object.

**Parameters:**

*listId*: Identifier of a list on which to remove workflow (2) 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 (2) events on an object.

**Parameters:**

*listId*: Optional identifier of a list on which to enable workflow (2) events. Use an empty GUID to specify events should 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 (2).

**Parameters:**

*associationName*: The association name of the workflow (2) 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 (2) workflow (2) 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 (2) workflows (2).

Type: CSOM GUID

*workflowParameters*: Parameters passed to the new workflow (2).

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 (1)** 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 (2) actions (2) for this server.

**Parameters:**

*web:* The site (2) from which to read the workflow (2) actions (2).

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 (1) against the workflow store. Returns the error message encountered during validation, or null if successful.

**Parameters:**

*activityXaml*: The activity (1) 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*: ID of the definition to package

Type: CSOM GUID

*packageDefaultFilename*: the default filename 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**

### 3.1.5.8.2.2 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 **store** that match the specified parameters.

**Parameters:**

*publishedOnly*: "true" if only **published** workflows (2) should be returned.

Type: CSOM Boolean

### 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

None.

### 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 (2) 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 (2) 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 (2) 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

### 3.1.5.9.2.2 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 (1) 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 (2) workflow instances for the current site (2).

**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 (1) 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 (2) workflow instances for the current site (2), 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 (2).

#### 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 (2), 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 (2) and if necessary an **event receiver** on the specified list (1). 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 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

### 3.1.5.10.2.1.5 UnregisterInterestInList

**Return Type:** None

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

**Parameters:**

*listId*: GUID of the list (1) 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 [3.1.5.6.1.1.2](#)) 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 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

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 (2) 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 (2) instance was suspended.

#### **3.1.5.12.1.4 Canceling**

**Value:** 3

The workflow (2) instance received a cancel command and is responding to the request.

#### **3.1.5.12.1.5 Canceled**

**Value:** 4

The workflow (2) instance has been canceled.

#### **3.1.5.12.1.6 Terminated**

**Value:** 5

The workflow (2) instance has been terminated.

#### **3.1.5.12.1.7 Completed**

**Value:** 6

The workflow (2) 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 (2) instance is in an invalid state.

### **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 (2) 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 (2) 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=microsoftcorlib"&#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=microsoftcorlib" &#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=microsoftcorlib"&#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"&gt;&#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 released service packs:

- Microsoft® SharePoint® Server 2013

Exceptions, if any, are noted below. If a service pack or Quick Fix Engineering (QFE) number appears with the product version, behavior changed in that service pack or QFE. The new behavior also applies to subsequent service packs of the product unless otherwise specified. If a product edition appears with the product version, behavior is different in that product edition.

Unless otherwise specified, any statement of optional behavior in this specification that is prescribed using the terms SHOULD or SHOULD NOT implies product behavior in accordance with the SHOULD or SHOULD NOT prescription. Unless otherwise specified, the term MAY implies that the product does not follow the prescription.

## 7 Change Tracking

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Section	Tracking number (if applicable) and description	Major change (Y or N)	Change type
<a href="#">1 Introduction</a>	Updated all preliminary information in the document.	Y	Content updated.

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