

[MS-PUBCSOM]:

Publishing Client-Side Object Model Protocol

Intellectual Property Rights Notice for Open Specifications Documentation

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

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

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

Revision Summary

Date	Revision History	Revision Class	Comments
1/20/2012	0.1	New	Released new document.
4/11/2012	0.1	None	No changes to the meaning, language, or formatting of the technical content.
7/16/2012	0.1	None	No changes to the meaning, language, or formatting of the technical content.
9/12/2012	0.1	None	No changes to the meaning, language, or formatting of the technical content.
10/8/2012	1.0	Major	Significantly changed the technical content.
2/11/2013	1.0	None	No changes to the meaning, language, or formatting of the technical content.
7/30/2013	1.0	None	No changes to the meaning, language, or formatting of the technical content.
11/18/2013	1.1	Minor	Clarified the meaning of the technical content.
2/10/2014	1.1	None	No changes to the meaning, language, or formatting of the technical content.
4/30/2014	1.2	Minor	Clarified the meaning of the technical content.
7/31/2014	1.2	None	No changes to the meaning, language, or formatting of the technical content.
10/30/2014	1.3	Minor	Clarified the meaning of the technical content.
2/26/2016	2.0	Major	Significantly changed the technical content.
7/15/2016	2.0	None	No changes to the meaning, language, or formatting of the technical content.
12/15/2016	3.0	Major	Significantly changed the technical content.

Table of Contents

1	Introduction	10
1.1	Glossary	10
1.2	References	13
1.2.1	Normative References	13
1.2.2	Informative References	14
1.3	Overview	14
1.4	Relationship to Other Protocols	14
1.5	Prerequisites/Preconditions	15
1.6	Applicability Statement	15
1.7	Versioning and Capability Negotiation	15
1.8	Vendor-Extensible Fields	15
1.9	Standards Assignments.....	15
2	Messages.....	16
2.1	Transport	16
2.2	Message Syntax	16
3	Protocol Details.....	17
3.1	Server Details.....	17
3.1.1	Abstract Data Model.....	17
3.1.1.1	Parent Type.....	17
3.1.2	Timers	17
3.1.3	Initialization.....	17
3.1.4	Higher-Layer Triggered Events	17
3.1.5	Message Processing Events and Sequencing Rules	17
3.1.5.1	Microsoft.SharePoint.Client.Publishing.VariationLabel.....	17
3.1.5.1.1	Properties.....	18
3.1.5.1.1.1	Scalar Properties.....	18
3.1.5.1.1.1.1	DisplayName	18
3.1.5.1.1.1.2	IsSource	18
3.1.5.1.1.1.3	Language	18
3.1.5.1.1.1.4	Locale	18
3.1.5.1.1.1.5	Title.....	19
3.1.5.1.1.1.6	TopWebUrl	19
3.1.5.1.1.2	ObjectPath Properties	19
3.1.5.1.2	Methods	19
3.1.5.1.2.1	Scalar Methods	19
3.1.5.1.2.2	ObjectPath Methods	19
3.1.5.2	Microsoft.SharePoint.Client.Publishing.Variations	19
3.1.5.2.1	Properties.....	19
3.1.5.2.1.1	Scalar Properties.....	19
3.1.5.2.1.2	ObjectPath Properties	19
3.1.5.2.2	Methods	19
3.1.5.2.2.1	Scalar Methods	19
3.1.5.2.2.1.1	GetPeerUrl.....	19
3.1.5.2.2.1.2	UpdateListItems	20
3.1.5.2.2.2	ObjectPath Methods	20
3.1.5.2.2.2.1	GetLabels	20
3.1.5.3	Microsoft.SharePoint.Client.Publishing.Navigation.NavigationLinkType	20
3.1.5.3.1	Field Values	21
3.1.5.3.1.1	Root.....	21
3.1.5.3.1.2	FriendlyUrl	21
3.1.5.3.1.3	SimpleLink	21
3.1.5.4	Microsoft.SharePoint.Client.Publishing.Navigation.TaxonomyNavigation	21
3.1.5.4.1	Properties.....	21

3.1.5.4.1.1	Scalar Properties.....	21
3.1.5.4.1.2	ObjectPath Properties.....	21
3.1.5.4.2	Methods.....	21
3.1.5.4.2.1	Scalar Methods.....	21
3.1.5.4.2.1.1	FlushSiteFromCache	21
3.1.5.4.2.1.2	FlushTermSetFromCache.....	22
3.1.5.4.2.1.3	FlushWebFromCache.....	22
3.1.5.4.2.1.4	GetNavigationLcidForWeb	22
3.1.5.4.2.1.5	SetCrawlAsFriendlyUrlPage	23
3.1.5.4.2.2	ObjectPath Methods	23
3.1.5.4.2.2.1	GetTermSetForWeb	23
3.1.5.4.2.2.2	GetWebNavigationSettings	24
3.1.5.5	Microsoft.SharePoint.Client.Publishing.Navigation.NavigationTerm	24
3.1.5.5.1	Properties.....	24
3.1.5.5.1.1	Scalar Properties.....	25
3.1.5.5.1.1.1	AssociatedFolderUrl	25
3.1.5.5.1.1.2	ExcludeFromCurrentNavigation	25
3.1.5.5.1.1.3	ExcludeFromGlobalNavigation	25
3.1.5.5.1.1.4	HoverText	25
3.1.5.5.1.1.5	Id	25
3.1.5.5.1.1.6	IsDeprecated	26
3.1.5.5.1.1.7	LinkType	26
3.1.5.5.1.1.8	SimpleLinkUrl.....	26
3.1.5.5.1.1.9	TaxonomyName	26
3.1.5.5.1.1.10	IsPinned	26
3.1.5.5.1.1.11	IsPinnedRoot	27
3.1.5.5.1.1.12	IsReadOnly	27
3.1.5.5.1.1.13	CategoryImageUrl	27
3.1.5.5.1.2	ObjectPath Properties.....	27
3.1.5.5.1.2.1	CatalogTargetUrl	27
3.1.5.5.1.2.2	CatalogTargetUrlForChildTerms	28
3.1.5.5.1.2.3	FriendlyUrlSegment	28
3.1.5.5.1.2.4	Parent.....	28
3.1.5.5.1.2.5	TargetUrl.....	29
3.1.5.5.1.2.6	TargetUrlForChildTerms.....	29
3.1.5.5.1.2.7	Terms	29
3.1.5.5.1.2.8	TermSet.....	29
3.1.5.5.1.2.9	Title.....	30
3.1.5.5.1.2.10	View	30
3.1.5.5.1.2.11	ExcludedProviders	30
3.1.5.5.2	Methods.....	30
3.1.5.5.2.1	Scalar Methods.....	30
3.1.5.5.2.1.1	DeleteObject.....	30
3.1.5.5.2.1.2	GetResolvedAssociatedFolderUrl	30
3.1.5.5.2.1.3	GetResolvedDisplayUrl	31
3.1.5.5.2.1.4	GetResolvedTargetUrl	31
3.1.5.5.2.1.5	GetWebRelativeFriendlyUrl	31
3.1.5.5.2.1.6	Move	32
3.1.5.5.2.1.7	GetResolvedTargetUrlWithoutQuery	32
3.1.5.5.2.2	ObjectPath Methods	32
3.1.5.5.2.2.1	CreateTerm	32
3.1.5.5.2.2.2	GetAsEditable	33
3.1.5.5.2.2.3	GetTaxonomyTerm	33
3.1.5.5.2.2.4	GetWithNewView.....	33
3.1.5.5.2.2.5	GetAsResolvedByView.....	33
3.1.5.5.2.2.6	GetAsResolvedByWeb	34
3.1.5.5.2.2.7	GetTaxonomyTermStore.....	34
3.1.5.5.2.2.8	GetAllParentTerms.....	34

3.1.5.6	Microsoft.SharePoint.Client.Publishing.Navigation.NavigationTermCollection	35
3.1.5.6.1	Properties	35
3.1.5.6.1.1	Scalar Properties	35
3.1.5.6.1.2	ObjectPath Properties	35
3.1.5.6.2	Methods	35
3.1.5.6.2.1	Scalar Methods	35
3.1.5.6.2.2	ObjectPath Methods	35
3.1.5.7	Microsoft.SharePoint.Client.Publishing.Navigation.NavigationTermSet	35
3.1.5.7.1	Properties	36
3.1.5.7.1.1	Scalar Properties	36
3.1.5.7.1.1.1	Id	36
3.1.5.7.1.1.2	IsNavigationTermSet	36
3.1.5.7.1.1.3	Lcid	36
3.1.5.7.1.1.4	LinkType	36
3.1.5.7.1.1.5	TaxonomyName	36
3.1.5.7.1.1.6	TermGroupId	37
3.1.5.7.1.1.7	TermStoreId	37
3.1.5.7.1.1.8	IsReadOnly	37
3.1.5.7.1.1.9	LoadedFromPersistedData	37
3.1.5.7.1.2	ObjectPath Properties	37
3.1.5.7.1.2.1	CatalogTargetUrlForChildTerms	37
3.1.5.7.1.2.2	TargetUrlForChildTerms	37
3.1.5.7.1.2.3	Terms	38
3.1.5.7.1.2.4	Title	38
3.1.5.7.1.2.5	View	38
3.1.5.7.2	Methods	38
3.1.5.7.2.1	Scalar Methods	38
3.1.5.7.2.1.1	GetResolvedDisplayUrl	38
3.1.5.7.2.2	ObjectPath Methods	38
3.1.5.7.2.2.1	CreateTerm	38
3.1.5.7.2.2.2	FindTermForUrl	39
3.1.5.7.2.2.3	GetAllTerms	39
3.1.5.7.2.2.4	GetAsEditable	39
3.1.5.7.2.2.5	GetTaxonomyTermSet	39
3.1.5.7.2.2.6	GetWithNewView	40
3.1.5.7.2.2.7	GetAsResolvedByView	40
3.1.5.7.2.2.8	GetAsResolvedByWeb	40
3.1.5.7.2.2.9	GetTaxonomyTermStore	41
3.1.5.8	Microsoft.SharePoint.Client.Publishing.Navigation.NavigationTermSetItem	41
3.1.5.8.1	Properties	41
3.1.5.8.1.1	Scalar Properties	41
3.1.5.8.1.1.1	Id	41
3.1.5.8.1.1.2	LinkType	42
3.1.5.8.1.1.3	TaxonomyName	42
3.1.5.8.1.1.4	IsReadOnly	42
3.1.5.8.1.2	ObjectPath Properties	42
3.1.5.8.1.2.1	CatalogTargetUrlForChildTerms	42
3.1.5.8.1.2.2	TargetUrlForChildTerms	42
3.1.5.8.1.2.3	Terms	43
3.1.5.8.1.2.4	Title	43
3.1.5.8.1.2.5	View	43
3.1.5.8.2	Methods	43
3.1.5.8.2.1	Scalar Methods	43
3.1.5.8.2.1.1	GetResolvedDisplayUrl	43
3.1.5.8.2.2	ObjectPath Methods	44
3.1.5.8.2.2.1	CreateTerm	44
3.1.5.8.2.2.2	GetTaxonomyTermStore	45
3.1.5.9	Microsoft.SharePoint.Client.Publishing.Navigation.NavigationTermSetView	45

3.1.5.9.1	Properties.....	45
3.1.5.9.1.1	Scalar Properties.....	45
3.1.5.9.1.1.1	ExcludeDeprecatedTerms	45
3.1.5.9.1.1.2	ExcludeTermsByPermissions	46
3.1.5.9.1.1.3	ExcludeTermsByProvider	46
3.1.5.9.1.1.4	ServerRelativeSiteUrl	46
3.1.5.9.1.1.5	ServerRelativeWebUrl	47
3.1.5.9.1.1.6	SiteMapProviderName	47
3.1.5.9.1.1.7	WebId.....	47
3.1.5.9.1.1.8	WebTitle.....	47
3.1.5.9.1.2	ObjectPath Properties	47
3.1.5.9.2	Methods	47
3.1.5.9.2.1	Scalar Methods.....	48
3.1.5.9.2.2	ObjectPath Methods	48
3.1.5.9.2.2.1	CreateEmptyInstance.....	48
3.1.5.9.2.2.2	GetCopy	48
3.1.5.9.2.2.3	CSOM Constructor	48
3.1.5.10	Microsoft.SharePoint.Client.Publishing.Navigation.StandardNavigationSettings	48
3.1.5.10.1	Properties.....	49
3.1.5.10.1.1	Scalar Properties.....	49
3.1.5.10.1.1.1	Source	49
3.1.5.10.1.1.2	TermSetId	49
3.1.5.10.1.1.3	TermStoreId	49
3.1.5.10.1.2	ObjectPath Properties	49
3.1.5.10.2	Methods	49
3.1.5.10.2.1	Scalar Methods.....	50
3.1.5.10.2.2	ObjectPath Methods	50
3.1.5.11	Microsoft.SharePoint.Client.Publishing.Navigation.StandardNavigationSource	50
3.1.5.11.1	Field Values	50
3.1.5.11.1.1	Unknown	50
3.1.5.11.1.2	PortalProvider.....	50
3.1.5.11.1.3	TaxonomyProvider	50
3.1.5.11.1.4	InheritFromParentWeb	50
3.1.5.12	Microsoft.SharePoint.Client.Publishing.Navigation.WebNavigationSettings	51
3.1.5.12.1	Properties.....	51
3.1.5.12.1.1	Scalar Properties.....	51
3.1.5.12.1.1.1	AddNewPagesToNavigation	51
3.1.5.12.1.1.2	CreateFriendlyUrlsForNewPages	51
3.1.5.12.1.2	ObjectPath Properties	51
3.1.5.12.1.2.1	CurrentNavigation	51
3.1.5.12.1.2.2	GlobalNavigation	51
3.1.5.12.2	Methods	52
3.1.5.12.2.1	Scalar Methods.....	52
3.1.5.12.2.1.1	Update.....	52
3.1.5.12.2.1.2	ResetToDefaults	52
3.1.5.12.2.2	ObjectPath Methods	52
3.1.5.12.2.2.1	CSOM Constructor	52
3.1.5.13	Microsoft.SharePoint.Client.Publishing.AddinPlugin	53
3.1.5.13.1	Properties.....	53
3.1.5.13.1.1	Scalar Properties.....	53
3.1.5.13.1.1.1	Description	53
3.1.5.13.1.1.2	Markup	53
3.1.5.13.1.1.3	Title.....	53
3.1.5.13.1.2	ObjectPath Properties	53
3.1.5.13.2	Methods	53
3.1.5.13.2.1	Scalar Methods.....	53
3.1.5.13.2.2	ObjectPath Methods	53
3.1.5.13.2.2.1	CSOM Constructor	53

3.1.5.14	Microsoft.SharePoint.Client.Publishing.AddinSettings	54
3.1.5.14.1	Properties.....	54
3.1.5.14.1.1	Scalar Properties.....	54
3.1.5.14.1.1.1	Description	54
3.1.5.14.1.1.2	Enabled.....	54
3.1.5.14.1.1.3	HeadScript	54
3.1.5.14.1.1.4	HtmlEndBody	54
3.1.5.14.1.1.5	HtmlStartBody	54
3.1.5.14.1.1.6	Id	54
3.1.5.14.1.1.7	MetaTagPagePropertyMappings	55
3.1.5.14.1.1.8	Namespace.....	55
3.1.5.14.1.1.9	Title.....	55
3.1.5.14.1.2	ObjectPath Properties.....	55
3.1.5.14.2	Methods	55
3.1.5.14.2.1	Scalar Methods.....	55
3.1.5.14.2.2	ObjectPath Methods	55
3.1.5.14.2.2.1	CSOM Constructor	55
3.1.5.15	Microsoft.SharePoint.Client.Publishing.CustomizableString	56
3.1.5.15.1	Properties.....	56
3.1.5.15.1.1	Scalar Properties.....	56
3.1.5.15.1.1.1	DefaultValue	56
3.1.5.15.1.1.2	UsesDefaultValue	56
3.1.5.15.1.1.3	Value	56
3.1.5.15.1.2	ObjectPath Properties.....	56
3.1.5.15.2	Methods	57
3.1.5.15.2.1	Scalar Methods.....	57
3.1.5.15.2.2	ObjectPath Methods	57
3.1.5.16	Microsoft.SharePoint.Client.Publishing.DesignPackage	57
3.1.5.16.1	Properties.....	57
3.1.5.16.1.1	Scalar Properties.....	57
3.1.5.16.1.2	ObjectPath Properties.....	57
3.1.5.16.2	Methods	57
3.1.5.16.2.1	Scalar Methods.....	57
3.1.5.16.2.1.1	Apply	57
3.1.5.16.2.1.2	ExportEnterprise	57
3.1.5.16.2.1.3	ExportSmallBusiness.....	58
3.1.5.16.2.1.4	Install	58
3.1.5.16.2.1.5	UnInstall	58
3.1.5.16.2.2	ObjectPath Methods	59
3.1.5.17	Microsoft.SharePoint.Client.Publishing.DesignPackageInfo	59
3.1.5.17.1	Properties.....	59
3.1.5.17.1.1	Scalar Properties.....	59
3.1.5.17.1.1.1	MajorVersion.....	59
3.1.5.17.1.1.2	MinorVersion.....	59
3.1.5.17.1.1.3	PackageGuid	59
3.1.5.17.1.1.4	PackageName	59
3.1.5.17.1.2	ObjectPath Properties.....	60
3.1.5.18	Microsoft.SharePoint.Client.Publishing.ImageRendition	60
3.1.5.18.1	Properties.....	60
3.1.5.18.1.1	Scalar Properties.....	60
3.1.5.18.1.1.1	Height.....	60
3.1.5.18.1.1.2	Id	60
3.1.5.18.1.1.3	IdCsom	60
3.1.5.18.1.1.4	Name.....	61
3.1.5.18.1.1.5	Version	61
3.1.5.18.1.1.6	Width.....	61
3.1.5.18.1.1.7	Group	61
3.1.5.18.1.2	ObjectPath Properties.....	61

3.1.5.19	Microsoft.SharePoint.Client.Publishing.Navigation.NavigationTermProviderName Collection.....	61
3.1.5.19.1	Properties.....	62
3.1.5.19.1.1	Scalar Properties.....	62
3.1.5.19.1.2	ObjectPath Properties.....	62
3.1.5.19.2	Methods.....	62
3.1.5.19.2.1	Scalar Methods.....	62
3.1.5.19.2.1.1	Add	62
3.1.5.19.2.1.2	Clear.....	62
3.1.5.19.2.1.3	Remove	62
3.1.5.19.2.2	ObjectPath Methods	62
3.1.5.20	Microsoft.SharePoint.Client.Publishing.PublishingPage	62
3.1.5.20.1	Properties.....	63
3.1.5.20.1.1	Scalar Properties.....	63
3.1.5.20.1.1.1	EndDate	63
3.1.5.20.1.1.2	StartDate	63
3.1.5.20.1.2	ObjectPath Properties.....	63
3.1.5.20.1.2.1	ListItem	63
3.1.5.20.2	Methods.....	63
3.1.5.20.2.1	Scalar Methods.....	63
3.1.5.20.2.1.1	AddFriendlyUrl	63
3.1.5.20.2.1.2	Schedule	64
3.1.5.20.2.2	ObjectPath Methods	65
3.1.5.20.2.2.1	GetPublishingPage.....	65
3.1.5.21	Microsoft.SharePoint.Client.Publishing.PublishingPageInformation	65
3.1.5.21.1	Properties.....	65
3.1.5.21.1.1	Scalar Properties.....	65
3.1.5.21.1.1.1	Name.....	65
3.1.5.21.1.2	ObjectPath Properties.....	66
3.1.5.21.1.2.1	Folder	66
3.1.5.21.1.2.2	PageLayoutListItem	66
3.1.5.22	Microsoft.SharePoint.Client.Publishing.PublishingWeb	66
3.1.5.22.1	Properties.....	66
3.1.5.22.1.1	Scalar Properties.....	66
3.1.5.22.1.2	ObjectPath Properties.....	66
3.1.5.22.1.2.1	Web.....	66
3.1.5.22.2	Methods.....	67
3.1.5.22.2.1	Scalar Methods.....	67
3.1.5.22.2.2	ObjectPath Methods	67
3.1.5.22.2.2.1	AddPublishingPage.....	67
3.1.5.22.2.2.2	GetPublishingWeb.....	67
3.1.5.23	Microsoft.SharePoint.Client.Publishing.ScheduledItem	68
3.1.5.23.1	Properties.....	68
3.1.5.23.1.1	Scalar Properties.....	68
3.1.5.23.1.1.1	EndDate	68
3.1.5.23.1.1.2	StartDate	68
3.1.5.23.1.2	ObjectPath Properties.....	68
3.1.5.23.1.2.1	ListItem	68
3.1.5.23.2	Methods.....	69
3.1.5.23.2.1	Scalar Methods.....	69
3.1.5.23.2.1.1	Schedule	69
3.1.5.23.2.2	ObjectPath Methods	69
3.1.5.24	Microsoft.SharePoint.Client.Publishing.SiteImageRenditions	69
3.1.5.24.1	Properties.....	69
3.1.5.24.1.1	Scalar Properties.....	69
3.1.5.24.1.2	ObjectPath Properties.....	69
3.1.5.24.2	Methods.....	69

3.1.5.24.2.1	Scalar Methods	69
3.1.5.24.2.1.1	GetRenditions	69
3.1.5.24.2.1.2	SetRenditions.....	69
3.1.5.24.2.2	ObjectPath Methods	70
3.1.5.25	Microsoft.SharePoint.Client.Publishing.SiteServicesAddins	70
3.1.5.25.1	Properties.....	70
3.1.5.25.1.1	Scalar Properties.....	70
3.1.5.25.1.2	ObjectPath Properties	70
3.1.5.25.2	Methods	70
3.1.5.25.2.1	Scalar Methods	70
3.1.5.25.2.1.1	DeletePlugin	70
3.1.5.25.2.1.2	DeleteSettings	71
3.1.5.25.2.1.3	SetPlugin.....	71
3.1.5.25.2.1.4	SetSettings.....	71
3.1.5.25.2.2	ObjectPath Methods	71
3.1.5.25.2.2.1	GetPlugin	71
3.1.5.25.2.2.2	GetSettings	72
3.1.5.26	Microsoft.SharePoint.Client.Publishing.PageLayoutCreationInformation	72
3.1.5.26.1	Properties.....	72
3.1.5.26.1.1	Scalar Properties.....	72
3.1.5.26.1.1.1	AssociatedContentTypeId	72
3.1.5.26.1.1.2	MasterPageUrl.....	72
3.1.5.26.1.1.3	NewPageLayoutEditablePath	72
3.1.5.26.1.1.4	NewPageLayoutNameWithoutExtension	73
3.1.5.26.1.2	ObjectPath Properties	73
3.1.5.26.1.2.1	Web.....	73
3.1.5.27	Microsoft.SharePoint.Client.Publishing.PublishingSite	73
3.1.5.27.1	Properties.....	73
3.1.5.27.1.1	Scalar Properties.....	73
3.1.5.27.1.2	ObjectPath Properties	73
3.1.5.27.2	Methods	73
3.1.5.27.2.1	Scalar Methods.....	73
3.1.5.27.2.1.1	CreatePageLayout	73
3.1.5.27.2.2	ObjectPath Methods	74
3.1.6	Timer Events.....	74
3.1.7	Other Local Events.....	74
4	Protocol Examples	75
4.1	Create a New Navigation Hierarchy	75
4.2	Resolve URLs.....	80
4.3	Changing a View	84
5	Security	90
5.1	Security Considerations for Implementers	90
5.2	Index of Security Parameters	90
6	Appendix A: Product Behavior	91
7	Change Tracking.....	92
8	Index.....	94

1 Introduction

The Publishing Client-Side Object Model Protocol defines types, methods, and properties that a protocol client uses to manage publishing **Web sites** on a protocol server, for example operations involving the navigation hierarchy or URLs.

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:

Boolean: An operation or expression that can be evaluated only as either true or false.

catalog friendly URL: A web address that is designed to be easily readable by both people and search engine web crawler programs. This type of URL has additional segments appended to control the webpage content.

catalog friendly URL suffix: The additional segment that is appended to a friendly **Uniform Resource Locator (URL)** in order to construct a **catalog friendly URL**.

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

current navigation menu: The navigation menu that appears vertically on the left side of the default **master page** and shows the set of current **navigation nodes**.

deprecated term: A term that persists in the term store but cannot be used in future applications of metadata.

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

empty string: A string object or variable that is initialized with the value "".

global navigation menu: The navigation menu that appears horizontally at the top of the default **master page** and shows the set of **navigation nodes** from the site map provider's root node.

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

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

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 [\[RFC4627\]](#). The JSON format is based on the structure of ECMAScript (Jscript, JavaScript) objects.

language code identifier (LCID): A 32-bit number that identifies the user interface human language dialect or variation that is supported by an application or a client computer.

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.

locale: A collection of rules and data that are specific to a language and a geographical area. A locale can include information about sorting rules, date and time formatting, numeric and monetary conventions, and character classification.

major version: An iteration of a software component, document, or list item that is ready for a larger group to see, or has changed significantly from the previous major version. For an item on a SharePoint site, the **minor version** is always "0" (zero) for a major version.

master page: An ASP.NET file that has a predefined layout that can include static text, HTML elements, and server controls.

minor version: An iteration of a software component, document, or list item that is in progress or has changed only slightly from the previous version. For an item on a SharePoint site, the minor version number is never "0" (zero) and is incremented for each new version of an item, unless a **major version** is explicitly published. When minor versioning is disabled on a SharePoint site, only major version numbers are incremented, and the minor version is always "0" (zero).

navigation node: An element in the navigational structure of a site. The element is a link or a series of links to a specific page in the site.

page: A file that consists of HTML and can include references to graphics, scripts, or dynamic content such as Web Parts.

page layout: A dynamic web template that is stored as a document. It contains content placeholders that bind to fields (3) of a publishing page. A page layout has an associated content type that determines which publishing pages it can be bound to.

parent site: The site that is above the current site in the hierarchy of the site collection.

pinned term: A term in a **term set** that cannot be directly moved or deleted.

portal site map provider: A **site map provider** that uses the location of objects, such as pages, in the file system as its source data for constructing a site map.

published version: The version of a list item that is approved and can be seen by all users. The user interface (UI) version number for a published version is incremented to the next positive major version number and the minor version is "0" (zero). See also **major version** and **minor version**.

publishing page: A document that binds to a page layout to generate an HTML page for display to a reader. Publishing pages have specific fields that contain the content that is displayed in an HTML page.

root node: The highest-ranking or uppermost node in a hierarchy of information.

server-relative URL: A relative URL that does not specify a scheme or host, and assumes a base URI of the root of the host, as described in [\[RFC3986\]](#).

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.

site collection: A set of **websites** that are in the same content database, have the same owner, and share administration settings. A site collection can be identified by a GUID or the **URL** of the top-level site for the site collection. Each site collection contains a top-level site, can contain one or more subsites, and can have a shared navigational structure.

site map provider: An object that provides a hierarchy of nodes that represent navigation for a **site**.

site subscription: A logical grouping of **site collections** that share a common set of features and service data.

site template: An XML-based definition of site settings, including formatting, lists, views, and elements such as text, graphics, page layout, and styles. Site templates are stored in .stp files in the content database.

site-relative URL: A URL that is relative to the site that contains a resource and does not begin with a leading slash (/).

solution gallery: A gallery (1) that is used to store solution packages.

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.

static CSOM method: A class method that is accessed through the type name rather than an instance of the class.

switchable site map provider: A **site map provider** that uses other site map providers as its source data when constructing a site map.

taxonomy navigation: A hierarchy of navigation menus that represents the navigation menus in terms and term sets and are independent of where their underlying objects, such as pages, are located.

taxonomy site map provider: A **site map provider** that uses **taxonomy navigation** as its source data for constructing a site map.

term: A concept or an idea that is stored and can be used as metadata.

term set: A collection of terms that are arranged into and stored as a hierarchy or a flat list.

term store: A database in which managed metadata is stored in the form of **term sets** and **terms**.

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 [\[RFC1738\]](#).

URI query: The portion of a Uniform Resource Identifier (URI) that, in conjunction with the data in the path component, identifies a resource within the scope of a URI's scheme and naming authority, if any, as described in [RFC3986]. A query component is indicated by the first question mark (?) character and is terminated by a number sign (#) or the end of the URI.

variation label: A hierarchy of **sites**, typically in one language and are identified by the **URL** name of the site at the top of the hierarchy and often contain recognizable locale identifiers such as "en-us", "en-uk", and "fr-fr".

variations: An application that facilitates translation and related management processes for **websites** and publishing pages. It can be used to copy content from one site, which is referred to as the source variation site, to one or more other sites, which are referred to as target variation sites. After the content is copied, it can be translated into different languages for those target variation sites.

website: 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 site.

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

1.2 References

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

1.2.1 Normative References

We conduct frequent surveys of the normative references to assure their continued availability. If you have any issue with finding a normative reference, please contact dochelp@microsoft.com. We will assist you in finding the relevant information.

[ISO-3166] International Organization for Standardization, "Codes for the representation of names of countries and their subdivisions -- Part1: Country codes", ISO 3166-1:2013, November 2013, http://www.iso.org/iso/home/store/catalogue_tc/catalogue_detail.htm?csnumber=63545

Note There is a charge to download the specification.

[ISO-639-1] International Organization for Standardization, "Codes for the representation of names of languages -- Part 1: Alpha-2 code", ISO 639-1:2002, 2002, http://www.iso.org/iso/catalogue_detail?csnumber=22109

Note There is a charge to download the specification.

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

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

[MS-EMMCOSM] Microsoft Corporation, "[Enterprise Managed Metadata Client-Side Object Model Protocol](#)".

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

[RFC1766] Alvestrand, H., "Tags for the Identification of Languages", RFC 1766, March 1995, <http://www.ietf.org/rfc/rfc1766.txt>

[RFC2119] Bradner, S., "Key words for use in RFCs to Indicate Requirement Levels", BCP 14, RFC 2119, March 1997, <http://www.rfc-editor.org/rfc/rfc2119.txt>

[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>

[RFC3986] Berners-Lee, T., Fielding, R., and Masinter, L., "Uniform Resource Identifier (URI): Generic Syntax", STD 66, RFC 3986, January 2005, <http://www.rfc-editor.org/rfc/rfc3986.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>

1.2.2 Informative References

None.

1.3 Overview

This protocol defines types, methods, and properties that a protocol client uses to manage publishing **Web sites** on a protocol server. For example, a protocol client can retrieve a tree of menu entries from the protocol server. The menu data could be used to provide custom rendering for various scenarios, such as custom menus for a mobile device. Also, a protocol client can update the managed navigation data on the protocol server. This enables a protocol client to modify URLs, the hierarchy, and other aspects of menu navigation.

1.4 Relationship to Other Protocols

The Publishing Client-Side Object Model 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 **JavaScript Object Notation (JSON)** as described in [\[RFC4627\]](#) to format data returned to a protocol client. This protocol also uses **Hypertext Transfer Protocol (HTTP)**, as described in [\[RFC2616\]](#), and **Hypertext Transfer Protocol over Secure Sockets Layer (HTTPS)**, as described in [\[RFC2818\]](#). The dependencies for this protocol are shown in the following layering diagram.

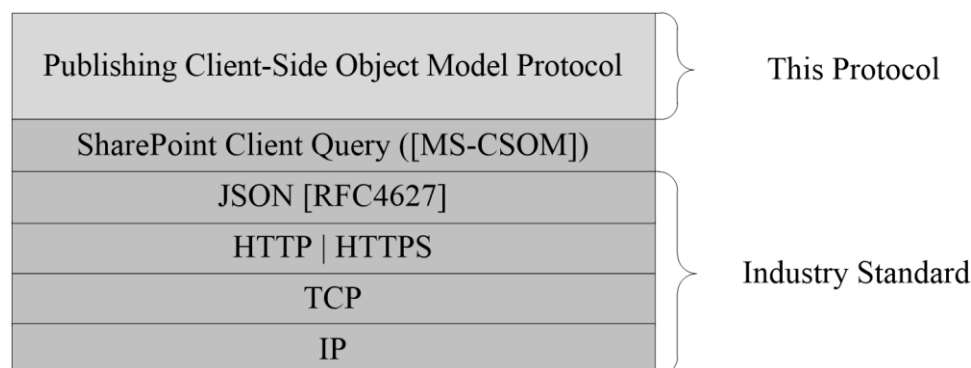


Figure 1: This protocol in relation to other protocols

1.5 Prerequisites/Preconditions

This protocol operates against a **site** that is identified by a **Uniform Resource Locator (URL)** that is known 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 publishing **Web sites** on a protocol server, for example operations involving the navigation hierarchy or URLs. 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 suitable for situations where the connection speed between the protocol client and the protocol server can be 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 client uses an API that does not require communication over a network.

1.7 Versioning and Capability Negotiation

None.

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 document does not mandate that implementations adhere to this model as long as their external behavior is consistent with that described in this document.

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

This protocol also deals with **terms**, **term sets**, and other Enterprise managed metadata as specified in [\[MS-EMMCSON\]](#). Changes by types in this protocol that affect underlying terms do not apply until the protocol client calls the **TermStore.CommitAll** ([MS-EMMCSON] section 3.1.5.23.2.1.1) method.

3.1.1.1 Parent Type

This protocol deals with various types that are logically derived from a parent type. The following table lists the relationship between such types.

Parent type	Derived type(s)
Microsoft.SharePoint.Client.Publishing.Navigation.NavigationTermSetItem (section 3.1.5.8)	Microsoft.SharePoint.Client.Publishing.Navigation.NavigationTerm (section 3.1.5.5) Microsoft.SharePoint.Client.Publishing.Navigation.NavigationTermSet (section 3.1.5.7)

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.Publishing.VariationLabel

TypeId: {FD2E4D24-40A9-4E14-9233-05AFE7BCA149}

ShortName: SP.Publishing.VariationLabel

Represents a **variation label**.

3.1.5.1.1 Properties

3.1.5.1.1.1 Scalar Properties

3.1.5.1.1.1.1 DisplayName

Type: CSOM String

Accessibility: Read Only

Gets the UI display name of the label.

Remarks:

The default value for this property is the value of the **Title** (section [3.1.5.1.1.1.5](#)) property.

3.1.5.1.1.1.2 IsSource

Type: CSOM Boolean

Accessibility: Read Only

Gets whether the **VariationLabel** (section [3.1.5.1](#)) is set as the source label.

Remarks:

Returns true if the **VariationLabel** is a source label; otherwise, false. A source label represents the **site** or pages that are the source of authoring and publishing and are used to copy changes to target variation sites.

3.1.5.1.1.1.3 Language

Type: CSOM String

Accessibility: Read Only

Gets the language of the **VariationLabel** (section [3.1.5.1](#)).

Remarks:

This property specifies the language value in the format "languagecode2-country/regioncode2" as specified in [\[RFC1766\]](#), where "languagecode2" is a lowercase two-letter code derived as specified in [\[ISO-639-1\]](#) and "country/regioncode2" is an uppercase two-letter code derived as specified in [\[ISO-3166\]](#).

3.1.5.1.1.1.4 Locale

Type: CSOM String

Accessibility: Read Only

Gets the **locale** of the **VariationLabel** (section [3.1.5.1](#)).

Remarks:

The locale is specified in the format of the **language code identifier (LCID)**.

3.1.5.1.1.1.5 Title

Type: CSOM String

Accessibility: Read Only

Gets the title of the **VariationLabel** (section [3.1.5.1](#)), that is the unique string identifier of the label.

3.1.5.1.1.1.6 TopWebUrl

Type: CSOM String

Accessibility: Read Only

Gets the **URL** of the top **site** that is used to publish the hierarchy of sites and pages associated with this **VariationLabel** (section [3.1.5.1](#)).

3.1.5.1.1.2 ObjectPath Properties

None.

3.1.5.1.2 Methods

3.1.5.1.2.1 Scalar Methods

None.

3.1.5.1.2.2 ObjectPath Methods

None.

3.1.5.2 Microsoft.SharePoint.Client.Publishing.Variations

TypeId: {1339CD8A-5DC8-4932-9BB3-32A5BC2C0D48}

ShortName: SP.Publishing.Variations

The **Variations** class exposes essential information for managing **variations**.

3.1.5.2.1 Properties

3.1.5.2.1.1 Scalar Properties

None.

3.1.5.2.1.2 ObjectPath Properties

None.

3.1.5.2.2 Methods

3.1.5.2.2.1 Scalar Methods

3.1.5.2.2.1.1 GetPeerUrl

This method is a **static CSOM method**.

Return Type: CSOM String

Retrieves the **URL** of the object that corresponds to the requested page in the specified label.

Parameters:

currentUrl: The **server-relative URL** of the page whose corresponding object in the specified label is requested.

Type: CSOM String

labelTitle: The *Title* of the target label that the page is requested in.

Type: CSOM String

Remarks:

This method returns the server-relative URL of the corresponding page in the indicated label if there is one. If the server-relative URL is not found, then this method returns the corresponding **Web site** URL in that label. Finally, if the Web site URL is not found, then this method returns the corresponding URL of the label.

3.1.5.2.2.1.2 UpdateListItems

This method is a **static CSOM method**.

Return Type: None

Copies the content of the selected items into all variation labels that the **list** is nominated to.

Parameters:

listId: Identifies the list that contains the items referenced in the *itemIds* parameter.

Type: **CSOM GUID**

itemIds: An array of list item identifiers to update in the target labels that this list is nominated to.

Type: **CSOM array** of **CSOM Int32**

Remarks:

When a variation is created, the entire hierarchy of **Web sites** is copied to the new variation for translation. Lists are excluded unless a user nominates them to the new variation. Items in lists that are nominated are updated by this method.

3.1.5.2.2.2 ObjectPath Methods

3.1.5.2.2.2.1 GetLabels

This method is a **static CSOM method**.

Return Type: **CSOM array** of Microsoft.SharePoint.Client.Publishing.VariationLabel

Returns the list of **VariationLabels** (section [3.1.5.1](#)) that are available for the **Web site** in the context.

Parameters: None

3.1.5.3 Microsoft.SharePoint.Client.Publishing.Navigation.NavigationLinkType

ShortName: SP.Publishing.Navigation.NavigationLinkType

Flag: false

NavigationLinkType is an enumeration that describes the type of **navigation node** for the **NavigationTerm** (section [3.1.5.5](#)) class.

3.1.5.3.1 Field Values

3.1.5.3.1.1 Root

Value: 0

The **navigation node** is a **root node** in the navigation tree that corresponds to the **NavigationTermSet** (section [3.1.5.7](#)) class.

3.1.5.3.1.2 FriendlyUrl

Value: 1

The **navigation node** defines a friendly URL that maps to an existing **page** on the **site**.

3.1.5.3.1.3 SimpleLink

Value: 2

The **navigation node** has a **URL** that is not restricted in any way and is not required to map to an existing **page** on the **site**. This value is also used to define a navigation node with no associated URL.

3.1.5.4 Microsoft.SharePoint.Client.Publishing.Navigation.TaxonomyNavigation

TypeId: {F3724139-55ED-4C05-8576-2C3830831C10}

ShortName: SP.Publishing.Navigation.TaxonomyNavigation

Provides common operations related to the **NavigationTermSet** (section [3.1.5.7](#)), **NavigationTerm** (section [3.1.5.5](#)), and **WebNavigationSettings** (section [3.1.5.12](#)) classes, as well as basic management and querying of the taxonomy navigation cache.

3.1.5.4.1 Properties

3.1.5.4.1.1 Scalar Properties

None.

3.1.5.4.1.2 ObjectPath Properties

None.

3.1.5.4.2 Methods

3.1.5.4.2.1 Scalar Methods

3.1.5.4.2.1.1 FlushSiteFromCache

This method is a **static CSOM method**.

Return Type: None

Removes the indicated **site** and all of its associated **Web sites** from the taxonomy navigation cache. Note this method does not flush the associated navigation **term sets**.

Parameters:

site: The site to remove from the taxonomy navigation cache.

Type: Microsoft.SharePoint.Client.Site

The *site* ([\[MS-CSOMSPT\]](#) section 3.2.5.119) parameter is used to locate the taxonomy navigation cache item to flush.

3.1.5.4.2.1.2 FlushTermSetFromCache

This method is a **static CSOM method**.

Return Type: None

Removes the indicated **term set** from the taxonomy navigation cache, for a specific **site subscription**.

Parameters:

webForPermissions: A **Web site** used for permissions checks.

Type: Microsoft.SharePoint.Client.Web

The *webForPermissions* parameter ([\[MS-CSOMSPT\]](#) section 3.2.5.143) is used to provide a user identity that will be used to determine whether the caller has permissions to flush the cache. This parameter also identifies the site subscription whose cache will be flushed.

termStoreId: The identifier of the **term store** that contains the term set.

Type: **CSOM GUID**

termSetId: The identifier of the term set to flush from the taxonomy navigation cache.

Type: CSOM GUID

3.1.5.4.2.1.3 FlushWebFromCache

This method is a **static CSOM method**.

Return Type: None

Removes the indicated **Web site** from the taxonomy navigation cache.

Parameters:

web: A Web site associated with the taxonomy navigation cache.

Type: Microsoft.SharePoint.Client.Web

The *web* parameter ([\[MS-CSOMSPT\]](#) section 3.2.5.143) is used to identify the taxonomy navigation cache item to flush.

3.1.5.4.2.1.4 GetNavigationLcidForWeb

This method is a **static CSOM method**.

Return Type: **CSOM Int32**

Returns the **language code identifier (LCID)** that is in use for **taxonomy navigation** when retrieving a **Term** ([MS-EMMCOSM] section 3.1.5.16) object for the specified **Web site**. The client SHOULD assign this LCID as the **TermStore.WorkingLanguage** ([MS-EMMCOSM] section 3.1.5.23.1.1.6) when making changes to taxonomy navigation.

Parameters:

web: The Web site ([MS-CSOMSPT] section 3.2.5.143) from which to retrieve the LCID.

Type: Microsoft.SharePoint.Client.Web

3.1.5.4.2.1.5 SetCrawlAsFriendlyUrlPage

This method is a **static CSOM method**.

Return Type: CSOM Boolean

This method assigns a **Boolean** property stored with the specified **publishing page**: If this property is true, then the search crawler will omit the page's physical **URL** from the search index, because the search index already contains one or more friendly URLs for the page. If this property is false, then the page is indexed in the normal manner.

If the update was performed successfully, or if the page property was already in the specified state, then the return value MUST be true. The return value MUST be false otherwise, including cases such as: the *navigationTerm* is null, the *navigationTerm* is not a friendly URL, the target page is invalid, the target page cannot be found, the caller does not have permissions to perform the change, and so on.

Parameters:

navigationTerm: A navigation term indicating the publishing page to be updated.

Type: Microsoft.SharePoint.Client.Publishing.Navigation.NavigationTerm

The *navigationTerm* property SHOULD have **NavigationTerm.LinkType** property (section 3.1.5.5.1.1.7) equal to **NavigationLinkType.FriendlyUrl** (section 3.1.5.3.1.2), and its **NavigationTerm.TargetUrl** property (section 3.1.5.5.1.2.5) is used to identify the publishing page to be updated. (The page is specified in this way because it is convenient for a specific editing surface.)

crawlAsFriendlyUrlPage: The new value of the publishing page property.

Type: CSOM Boolean

3.1.5.4.2.2 ObjectPath Methods

3.1.5.4.2.2.1 GetTermSetForWeb

This method is a **static CSOM method**.

Return Type: Microsoft.SharePoint.Client.Publishing.Navigation.NavigationTermSet

Returns a cached **NavigationTermSet** (section 3.1.5.7) object for the specified **Web site**. If the object is not already in the taxonomy navigation cache, it will be added.

Parameters:

web: The Web site ([MS-CSOMSPT] section 3.2.5.143) from which to retrieve the **NavigationTermSet** object

Type: Microsoft.SharePoint.Client.Web

siteMapProviderName: The name of the **site map provider** associated with the **NavigationTermSet**.

Type: **CSOM String**

includeInheritedSettings: If true, then the returned term set MAY be inherited from a parent Web site, for example as specified by the **StandardNavigationSource.InheritFromParentWeb** setting (section [3.1.5.11.1.4](#)). If false, then this method will only return term sets bound to the Web site indicated by the *web* parameter.

Type: **CSOM Boolean**

3.1.5.4.2.2.2 GetWebNavigationSettings

This method is a **static CSOM method**.

Return Type: Microsoft.SharePoint.Client.Publishing.Navigation.WebNavigationSettings

Returns a cached **WebNavigationSettings** (section [3.1.5.12](#)) object. If the object is not already in the taxonomy navigation cache, it will be added. This method returns null if there are no navigation settings defined for the **Web site**, or if the settings data is not valid (such as a user entering a wrong value for a setting).

Parameters:

web: The Web site ([\[MS-CSOMSPT\]](#) section 3.2.5.143) from which to retrieve the navigation settings.

Type: Microsoft.SharePoint.Client.Web

Remarks:

Because the object is fetched from the cache, this method is more efficient than explicitly constructing an instance of **WebNavigationSettings**.

3.1.5.5 Microsoft.SharePoint.Client.Publishing.Navigation.NavigationTerm

TypeId: {74B7367A-E303-43E8-891E-DAC764C96E53}

ShortName: SP.Publishing.Navigation.NavigationTerm

Specifies navigation behavior and properties for a **term** that is used for **taxonomy navigation**. The **NavigationTerm** class is based on the **Term** class ([\[MS-EMMCOSM\]](#) section 3.1.5.16).

NavigationTerm inherits from the **NavigationTermSetItem** class (section [3.1.5.8](#)).

Remarks:

The properties of the **NavigationTerm** class MAY be stored in **TermSet.CustomProperties** ([\[MS-EMMCOSM\]](#) section 3.1.5.20.1.1.3). However, this protocol intends that the properties be accessed through the **NavigationTerm** class for clarity and efficiency.

Each **NavigationTerm** object belongs to a **NavigationTermSet** object (section [3.1.5.7](#)).

The **NavigationTerm** object has two modes: an "editable" mode that is required in order to make updates to the object, and a "read-only" mode that, when used, improves performance by retrieving the object from the taxonomy navigation cache. The read-only mode is indicated by the **NavigationTermSetItem.IsReadOnly** property (section [3.1.5.8.1.1.4](#)).

If the **NavigationTerm** is read-only and the protocol client attempts to assign any property or call any method that would change the object state, then the protocol server MUST return an **InvalidOperationException** error.

3.1.5.5.1 Properties

3.1.5.5.1.1 Scalar Properties

3.1.5.5.1.1.1 AssociatedFolderUrl

Type: CSOM String

Accessibility: Read/Write

Gets or sets a **URL** value that is used to associate certain page URLs with this object, associating it with a particular location in the **site map provider** hierarchy.

Remarks:

This property is used to help calculate the current node for a site map provider. The current node indicates a page's location in the navigation hierarchy, for example as displayed by a breadcrumb control "Investor Relations > News > Press Releases". Typically the current node is determined by searching the navigation hierarchy to find a node whose link matches the URL of the page being viewed, for example "/Pages/PressReleases/January2010.aspx". If a current node cannot be found (for example, the January2010.aspx page is not linked by any **navigation node**), then the breadcrumb would be empty. This problem could be solved by assigning the containing folder "/Pages/PressReleases" to the **AssociatedFolderUrl** property of the "Press Releases" term; the breadcrumb will now show "Investor Relations > News > Press Releases" for any page in that folder (unless the page is explicitly linked by a navigation node).

3.1.5.5.1.1.2 ExcludeFromCurrentNavigation

Type: CSOM Boolean

Accessibility: Read/Write

Gets or sets whether this navigation term (and its child terms) will be hidden from the **current navigation menu**. The current navigation menu (also called the "left nav") is the contextual navigation pane typically on the left side of the page.

3.1.5.5.1.1.3 ExcludeFromGlobalNavigation

Type: CSOM Boolean

Accessibility: Read/Write

Gets or sets a value that indicates whether this navigation term (and its child terms) will be hidden from the **global navigation menu**. Global navigation (also called "top nav") is the unchanging menu bar along the top of the page.

3.1.5.5.1.1.4 HoverText

Type: CSOM String

Accessibility: Read/Write

Gets or sets an informational description that is typically displayed by menu and bread crumb controls when the cursor hovers over the navigation link.

3.1.5.5.1.1.5 Id

Type: CSOM GUID

Accessibility: Read Only

See **Microsoft.SharePoint.Client.Publishing.Navigation.NavigationTermSetItem.ID**, specified in section [3.1.5.8.1.1.1](#).

3.1.5.5.1.1.6 IsDeprecated

Type: CSOM Boolean

Accessibility: Read Only

Gets a value that indicates whether the underlying **term** is a **deprecated term**.

Remarks:

This property returns the underlying **Term.IsDeprecated** ([\[MS-EMMCSON\]](#) section 3.1.5.16.1.1.6) property. It is true if the term is deprecated; otherwise, false.

3.1.5.5.1.1.7 LinkType

Type: Microsoft.SharePoint.Client.Publishing.Navigation.NavigationLinkType

Accessibility: Read/Write

See **Microsoft.SharePoint.Client.Publishing.Navigation.NavigationTermSetItem.LinkType**, specified in section [3.1.5.8.1.1.2](#).

3.1.5.5.1.1.8 SimpleLinkUrl

Type: CSOM String

Accessibility: Read/Write

Gets or sets a **URL** that this **NavigationTerm** (section [3.1.5.5](#)) object links to.

Remarks:

This property is only used when **LinkType** (section [3.1.5.5.1.1.7](#)) is set to **NavigationLinkType.SimpleLink** (section [3.1.5.3.1.3](#)). If the protocol client attempts to assign the property for a different link type, then the protocol server MAY return an **InvalidOperationException** error.

3.1.5.5.1.1.9 TaxonomyName

Type: CSOM String

Accessibility: Read Only

See **Microsoft.SharePoint.Client.Publishing.Navigation.NavigationTermSetItem.TaxonomyName**, specified in section [3.1.5.8.1.1.3](#).

3.1.5.5.1.1.10 IsPinned

Type: CSOM Boolean

Accessibility: Read Only

Gets a value that indicates whether the **term** is pinned.

Remarks:

Returns true if the term is a **pinned term**; otherwise false. This property returns the **Term.IsPinned** property ([\[MS-EMMCSON\]](#) section 3.1.5.16.1.1.15) for the underlying term.

3.1.5.5.1.1.11 IsPinnedRoot

Type: CSOM Boolean

Accessibility: Read Only

Gets a value that indicates whether the **term** is the root of a subtree of pinned terms.

Remarks:

Returns true if the term is the root of a hierarchy of pinned terms; otherwise, false. This property returns the **Term.IsPinnedRoot** ([\[MS-EMMCSON\]](#) section 3.1.5.16.1.1.20) property for the underlying term.

3.1.5.5.1.1.12 IsReadOnly

Type: CSOM Boolean

Accessibility: Read Only

See **Microsoft.SharePoint.Client.Publishing.Navigation.NavigationTermSetItem.IsReadOnly**, specified in section [3.1.5.8.1.1.4](#).

3.1.5.5.1.1.13 CategoryImageUrl

Type: CSOM String

Accessibility: Read/Write

Specifies the **URL** for an image resource that can be used by controls on the target **publishing page**. The usage of this property is application-defined.

3.1.5.5.1.2 ObjectPath Properties

3.1.5.5.1.2.1 CatalogTargetUrl

Type: Microsoft.SharePoint.Client.Publishing.CustomizableString

Accessibility: Read Only

Gets the target **URL** used when performing URL rewriting for **catalog friendly URLs** based on this **term**.

Remarks:

Normally the protocol server performs URL rewriting to render the friendly URL for a navigation term using the page specified by the **TargetUrl** property (section [3.1.5.5.1.2.5](#)). For example, for the term "Cameras" the URLs might look like this:

friendly URL:	http://example.com/products/cameras
target URL:	/store/Pages/TopicTemplate.aspx

However, if a **catalog friendly URL suffix** is appended, then the **CatalogTargetUrl** property will be used instead. Continuing the example term "Cameras":

catalog friendly URL: http://example.com/products/cameras/nice-pix-35mm/sku12345

URL suffix: nice-pix-35mm/sku12345

catalog target URL: /store/Pages/CatalogItemTemplate.aspx

Typically catalog friendly URLs are used for products such as the hypothetical "Nice Pix 35mm camera" in the preceding example, which do not have a corresponding navigation term, but belong to the category represented by that term. However, the interpretation of the catalog friendly URL suffix is left to the target URL and other usage scenarios are possible.

If the **CatalogTargetUrl** value is an **empty string**, then URL rewriting will not be performed for the term and the catalog friendly URL MAY result in an HTTP 404 error.

The protocol server MAY support implementation-specific relative URL syntaxes such as "~site/Pages/TopicTemplate.aspx" or "~sitecollection/Pages/TopicTemplate.aspx".

The **CatalogTargetUrl** property is a **CustomizableString** (section [3.1.5.15](#)) object. The default value is inherited from the **CatalogTargetUrlForChildTerms.Value** (section [3.1.5.5.1.2.2](#)) property of the immediate parent node.

This property is only used when the **LinkType** (section [3.1.5.5.1.1.7](#)) is **NavigationLinkType.FriendlyUrl** (section [3.1.5.3.1.2](#)). If the protocol client attempts to assign the property for a different link type, then the protocol server MAY return an **InvalidOperationException** error.

3.1.5.5.1.2.2 CatalogTargetUrlForChildTerms

Type: Microsoft.SharePoint.Client.Publishing.CustomizableString

Accessibility: Read Only

See

Microsoft.SharePoint.Client.Publishing.Navigation.NavigationTermSetItem.CatalogTargetUrlForChildTerms, specified in section [3.1.5.8.1.2.1](#).

3.1.5.5.1.2.3 FriendlyUrlSegment

Type: Microsoft.SharePoint.Client.Publishing.CustomizableString

Accessibility: Read Only

Gets a friendly URL segment for the node represented by the **NavigationTerm** (section [3.1.5.5](#)) object.

Remarks:

This property is a **CustomizableString** (section [3.1.5.15](#)) object. The default value can be based on the **Term.Name** ([\[MS-EMMSOM\]](#) section 3.1.5.16.1.1.12) property. The value MUST exclude reserved characters as specified in [\[RFC3986\]](#), and the value MUST not be percent-encoded as specified in [\[RFC3986\]](#).

This property is only used when the **LinkType** (section [3.1.5.5.1.1.7](#)) is **NavigationLinkType.FriendlyUrl** (section [3.1.5.3.1.2](#)). If the protocol client attempts to assign the property for a different link type, then the protocol server MAY return an **InvalidOperationException** error.

3.1.5.5.1.2.4 Parent

Type: Microsoft.SharePoint.Client.Publishing.Navigation.NavigationTerm

Accessibility: Read Only

Gets the parent **NavigationTerm** (section [3.1.5.5](#)) object.

Remarks:

If this **NavigationTerm** object is a top-level term in the **NavigationTermSet** (section [3.1.5.7](#)), then null is returned.

3.1.5.5.1.2.5 TargetUrl

Type: Microsoft.SharePoint.Client.Publishing.CustomizableString

Accessibility: Read Only

Gets the **URL** of a **publishing page** that will be used to render the friendly URL.

Remarks:

The protocol server performs URL rewriting to render the friendly URL for a navigation **term** using the page specified by the **TargetUrl** property. For example, for the term "Cameras" the URLs might look like this:

friendly URL: http://example.com/products/cameras

target URL: /store/Pages/TopicTemplate.aspx

The protocol server MAY support implementation-specific relative URL syntaxes such as "~site/Pages/TopicTemplate.aspx" or "~sitecollection/Pages/TopicTemplate.aspx".

The **TargetUrl** property is a **CustomizableString** (section [3.1.5.15](#)) object. The default value is inherited from the **TargetUrlForChildTerms.Value** (section [3.1.5.5.1.2.6](#)) property of the immediate parent node.

This property is only used when the **LinkType** (section [3.1.5.5.1.1.7](#)) is **NavigationLinkType.FriendlyUrl** (section [3.1.5.3.1.2](#)). If the protocol client attempts to assign the property for a different link type, then the protocol server MAY return an **InvalidOperationException** error.

3.1.5.5.1.2.6 TargetUrlForChildTerms

Type: Microsoft.SharePoint.Client.Publishing.CustomizableString

Accessibility: Read Only

See

Microsoft.SharePoint.Client.Publishing.Navigation.NavigationTermSetItem.TargetUrlForChildTerms, specified in section [3.1.5.8.1.2.2](#).

3.1.5.5.1.2.7 Terms

Type: Microsoft.SharePoint.Client.Publishing.Navigation.NavigationTermCollection

Accessibility: Read Only

See **Microsoft.SharePoint.Client.Publishing.Navigation.NavigationTermSetItem.Terms**, specified in section [3.1.5.8.1.2.3](#).

3.1.5.5.1.2.8 TermSet

Type: Microsoft.SharePoint.Client.Publishing.Navigation.NavigationTermSet

Accessibility: Read Only

Gets the associated **NavigationTermSet** (section [3.1.5.7](#)) object that this **NavigationTerm** (section [3.1.5.5](#)) object belongs to.

3.1.5.5.1.2.9 Title

Type: Microsoft.SharePoint.Client.Publishing.CustomizableString

Accessibility: Read Only

See **Microsoft.SharePoint.Client.Publishing.Navigation.NavigationTermSetItem.Title**, specified in section [3.1.5.8.1.2.4](#).

3.1.5.5.1.2.10 View

Type: Microsoft.SharePoint.Client.Publishing.Navigation.NavigationTermSetView

Accessibility: Read Only

See **Microsoft.SharePoint.Client.Publishing.Navigation.NavigationTermSetItem.View**, specified in section [3.1.5.8.1.2.5](#).

3.1.5.5.1.2.11 ExcludedProviders

Type: Microsoft.SharePoint.Client.Publishing.Navigation.NavigationTermProviderNameCollection

Accessibility: Read Only

A collection of **site map provider** names that will exclude this navigation term from their results when **NavigationTermSetView.ExcludeTermsByProvider** (section [3.1.5.9.1.1.3](#)) is true. This collection includes the names corresponding to **NavigationTerm.ExcludeFromGlobalNavigation** (section [3.1.5.5.1.1.3](#)) and **NavigationTerm.ExcludeFromCurrentNavigation** (section [3.1.5.5.1.1.2](#)).

3.1.5.5.2 Methods

3.1.5.5.2.1 Scalar Methods

3.1.5.5.2.1.1 DeleteObject

Return Type: None

Deletes this **NavigationTerm** (section [3.1.5.5](#)) object and its child objects from the **TermStore** ([**MS-EMMC**SOM] section 3.1.5.23) object.

Remarks:

This operation is equivalent to calling the **Term.DeleteObject** method ([**MS-EMMC**SOM] section 3.1.5.16.2.1.2) for the underlying **term**.

Parameters: None

3.1.5.5.2.1.2 GetResolvedAssociatedFolderUrl

Return Type: **CSOM String**

Uses the **NavigationTerm.View** (section [3.1.5.5.1.2.10](#)) property to calculate and return a resolved **server-relative URL** from the **NavigationTerm.AssociatedFolderUrl** (section [3.1.5.5.1.1.1](#)) property.

Remarks:

This property returns null if no associated folder URL is specified.

Parameters: None

3.1.5.5.2.1.3 GetResolvedDisplayUrl

Return Type: CSOM String

See

Microsoft.SharePoint.Client.Publishing.Navigation.NavigationTermSetItem.GetResolvedDisplayUrl, specified in section [3.1.5.8.2.1.1](#).

Parameters:

browserQueryString: Optional. If it is provided, this query string is used as the query string part of the resulting URL. If this parameter is not **null** or an empty string, it MUST be prefixed with the ? character.

Type: CSOM String

3.1.5.5.2.1.4 GetResolvedTargetUrl

Return Type: CSOM String

Uses the **NavigationTerm.View** (section [3.1.5.5.1.2.10](#)) property to calculate and return a resolved **server-relative URL** from the **NavigationTerm.TargetUrl** (section [3.1.5.5.1.2.5](#)) property.

Remarks:

This property is only used when the **LinkType** (section [3.1.5.5.1.1.7](#)) is **NavigationLinkType.FriendlyUrl** (section [3.1.5.3.1.2](#)).

Parameters:

browserQueryString: A query string that, if specified, is merged into the resulting URL.

Type: CSOM String

remainingUrlSegments: Specifies a **catalog friendly URL suffix**, as an array of URL segments. The segments will be assigned as the value of the "UrlSuffix=" **URI query** parameter.

Type: **CSOM array** of CSOM String

If *remainingUrlSegments* is specified, then the **NavigationTerm.CatalogTargetUrl** (section [3.1.5.5.1.2.1](#)) property is used as the basis for the returned **URL** instead of the **NavigationTerm.TargetUrl** property.

3.1.5.5.2.1.5 GetWebRelativeFriendlyUrl

Return Type: CSOM String

Returns a friendly URL relative to the **Web site** in use.

Remarks:

This method is intended for advanced operations that need to consider the underlying technical details for how a **URL** is calculated. A protocol client can also call **GetResolvedDisplayUrl** (section [3.1.5.5.2.1.3](#)) to obtain a friendly URL. **GetWebRelativeFriendlyUrl** returns the portion of the friendly URL that SHOULD be appended to the **Web.Url** ([\[MS-CSOMSPT\]](#) section 3.2.5.143.1.1.22). It does not include any query parameters.

Parameters: None

3.1.5.5.2.1.6 Move

Return Type: None

Moves this **NavigationTerm** (section [3.1.5.5](#)) object to be a child of the specified **NavigationTerm** or **NavigationTermSet** (section [3.1.5.7](#)).

Parameters:

newParent: The **NavigationTerm** or **NavigationTermSet** that becomes the new parent of this **NavigationTerm** object.

Type: Microsoft.SharePoint.Client.Publishing.Navigation.NavigationTermSetItem

Remarks:

If this **NavigationTerm** object is editable, then this method performs an operation analogous to **Term.Move** ([\[MS-EMMCOSM\]](#) section 3.1.5.16.2.1.7).

3.1.5.5.2.1.7 GetResolvedTargetUrlWithoutQuery

Return Type: **CSOM String**

This method is similar to **NavigationTerm.GetResolvedTargetUrl** (section [3.1.5.5.2.1.4](#)) except that the returned **URL** does not include the query string, and the **NavigationTerm.CatalogTargetUrl** property (section [3.1.5.5.1.2.1](#)) is not considered. If there is no target URL, or if **NavigationTerm.LinkType** (section [3.1.5.5.1.1.7](#)) is not **NavigationLinkType.FriendlyUrl** (section [3.1.5.3.1.2](#)), then the return value is the empty string. This method never returns a null string.

Parameters: None

3.1.5.5.2.2 ObjectPath Methods

3.1.5.5.2.2.1 CreateTerm

Return Type: Microsoft.SharePoint.Client.Publishing.Navigation.NavigationTerm

See **Microsoft.SharePoint.Client.Publishing.Navigation.NavigationTermSetItem.CreateTerm**, specified in section [3.1.5.8.2.2.1](#).

Parameters:

termName: Default label for the LCID.

Type: **CSOM String**

linkType: LCID to create the label on.

Type: Microsoft.SharePoint.Client.Publishing.Navigation.NavigationLinkType

termId: GUID for the term.

Type: **CSOM GUID**

3.1.5.5.2.2.2 GetAsEditable

Return Type: Microsoft.SharePoint.Client.Publishing.Navigation.NavigationTerm

Returns an editable copy of this **NavigationTerm** (section [3.1.5.5](#)) object.

Remarks:

After calling this method, the protocol client can update properties on the returned **NavigationTerm** object. Save the changes by calling the **TermStore.CommitAll** ([\[MS-EMMCSON\]](#) section 3.1.5.23.2.1.1) method.

Parameters:

taxonomySession: The container for all of the associated **TermStore** ([\[MS-EMMCSON\]](#) section 3.1.5.23) objects for a **site collection**.

Type: Microsoft.SharePoint.Client.Taxonomy.TaxonomySession

This parameter is defined in [\[MS-EMMCSON\]](#) section 3.1.5.15.

3.1.5.5.2.2.3 GetTaxonomyTerm

Return Type: Microsoft.SharePoint.Client.Taxonomy.Term

If this **NavigationTerm** (section [3.1.5.5](#)) object is in the "editable" mode, then this method returns the underlying **Term** ([\[MS-EMMCSON\]](#) section 3.1.5.16) object.

If the protocol client calls this method when the **NavigationTerm** object is read-only, then the protocol server MUST return an **InvalidOperationException** error.

Parameters: None

3.1.5.5.2.2.4 GetWithNewView

Return Type: Microsoft.SharePoint.Client.Publishing.Navigation.NavigationTerm

This method returns a **NavigationTerm** (section [3.1.5.5](#)) object that refers to the same underlying **term**, but replaces its view with the **NavigationTermSetView** (section [3.1.5.9](#)) object specified by *newView*. For example, to enable security trimming while traversing the navigation hierarchy, a *newView* could be provided with **NavigationTermSetView.ExcludeTermsByPermissions** (section [3.1.5.9.1.1.2](#)) changed to true.

Parameters:

newView: The **NavigationTermSetView** object to apply to the **NavigationTerm** (section 3.1.5.5) object.

Type: Microsoft.SharePoint.Client.Publishing.Navigation.NavigationTermSetView

3.1.5.5.2.2.5 GetAsResolvedByView

This method is a **static CSOM method**.

Return Type: Microsoft.SharePoint.Client.Publishing.Navigation.NavigationTerm

This method returns a **NavigationTerm** (section [3.1.5.5](#)) object that is editable and bound to the specified *term* object, using the specified *view*.

Parameters:

term: The **Term** ([\[MS-EMMCSON\]](#) section 3.1.5.16) object that the new **NavigationTerm** object will be bound to.

Type: Microsoft.SharePoint.Client.Taxonomy.Term

view: The **NavigationTermSetView** (section [3.1.5.9](#)) used to resolve the properties of the new **NavigationTerm** object.

Type: Microsoft.SharePoint.Client.Publishing.Navigation.NavigationTermSetView

Remarks:

This method supports editing of **NavigationTerm** objects that are not yet in use by a **Web site**. If a **NavigationTerm** object is in use, then a simpler approach is to call the **GetAsEditable** (section [3.1.5.5.2.2.2](#)) method to obtain a copy of the **NavigationTerm** object that can be edited.

3.1.5.5.2.2.6 GetAsResolvedByWeb

This method is a **static CSOM method**.

Return Type: Microsoft.SharePoint.Client.Publishing.Navigation.NavigationTerm

This method returns a **NavigationTerm** (section [3.1.5.5](#)) object that is editable and bound to the specified *term* object, using a new **NavigationTermSetView** (section [3.1.5.9](#)) instance that is constructed from the provided *web*.

Parameters:

term: The **Term** ([\[MS-EMMCSON\]](#) section 3.1.5.16) object that the new **NavigationTerm** object will be bound to.

Type: Microsoft.SharePoint.Client.Taxonomy.Term

web: The **Web site** ([\[MS-CSOMSPT\]](#) section 3.2.5.143) that will be used to construct the **NavigationTermSetView** (section 3.1.5.9) object.

Type: Microsoft.SharePoint.Client.Web

siteMapProviderName: The name of the **site map provider** to be used for the new **NavigationTerm** object.

Type: **CSOM String**

This method supports editing of **NavigationTerm** objects that are not yet in use by a Web site. If a **NavigationTerm** object is in use, then the preferred approach is to call the **GetAsEditable** (section [3.1.5.5.2.2.2](#)) method to obtain a copy of the **NavigationTerm** object that can be edited.

3.1.5.5.2.2.7 GetTaxonomyTermStore

Return Type: Microsoft.SharePoint.Client.Taxonomy.TermStore

See

Microsoft.SharePoint.Client.Publishing.Navigation.NavigationTermSetItem.GetTaxonomyTermStore, specified in section [3.1.5.8.2.2.2](#).

Parameters: None

3.1.5.5.2.2.8 GetAllParentTerms

Return Type: Microsoft.SharePoint.Client.Publishing.Navigation.NavigationTermCollection

Returns the **NavigationTerm.Parent** (section [3.1.5.5.1.2.4](#)) object and all of its parents. If there is no parent, then the collection will be empty.

Parameters: None

3.1.5.6 Microsoft.SharePoint.Client.Publishing.Navigation.NavigationTermCollection

TypeId: {E651F3AF-BF88-44BA-8208-798EBF7D4F1F}

ShortName: SP.Publishing.Navigation.NavigationTermCollection

Represents a collection of **NavigationTerm** (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.Publishing.Navigation.NavigationTermSet

TypeId: {5ED5AE4C-8E92-4E56-AF6E-D349611614D8}

ShortName: SP.Publishing.Navigation.NavigationTermSet

Specifies navigation behavior and properties for a **term set** that is used for **taxonomy navigation**. The **NavigationTermSet** class is based on the **TermSet** class ([\[MS-EMMC SOM\]](#) section 3.1.5.20). **NavigationTermSet** inherits from the **NavigationTermSetItem** class (section [3.1.5.8](#)).

Remarks:

The properties of the **NavigationTermSet** class MAY be stored in **TermSet.CustomProperties** ([\[MS-EMMC SOM\]](#) section 3.1.5.20.1.1.3). However, this protocol intends that the properties be accessed through the **NavigationTermSet** class for clarity and efficiency.

The **NavigationTermSet** object has two modes: an "editable" mode that is required in order to make updates to the object, and a "read-only" mode that, when used, improves performance by retrieving the object from the taxonomy navigation cache. The read-only mode is indicated by the **NavigationTermSetItem.IsReadOnly** property (section [3.1.5.8.1.1.4](#)). Use the **GetAsEditable** (section [3.1.5.7.2.2.4](#)) method to obtain an editable instance.

If the **NavigationTermSet** is read-only and the protocol client attempts to assign any property or call any method that would change the object state, then the protocol server MUST return an **InvalidOperationException** error.

3.1.5.7.1 Properties

3.1.5.7.1.1 Scalar Properties

3.1.5.7.1.1.1 Id

Type: **CSOM GUID**

Accessibility: Read Only

See **Microsoft.SharePoint.Client.Publishing.Navigation.NavigationTermSetItem.Id**, specified in section [3.1.5.8.1.1.1](#).

3.1.5.7.1.1.2 IsNavigationTermSet

Type: **CSOM Boolean**

Accessibility: Read/Write

Gets or sets a value that indicates whether the underlying **term set** is intended to be used for **taxonomy navigation**.

Remarks:

True if the term set is intended to be used for taxonomy navigation; otherwise, false. This property is used by to affect the appearance of the term set in administrative screens. A value of true does not guarantee that the term set is currently in use by any **taxonomy site map provider**, nor does a value of false guarantee that the term set is not in use.

3.1.5.7.1.1.3 Lcid

Type: **CSOM Int32**

Accessibility: Read Only

Gets the **language code identifier (LCID)** that is used when accessing properties on the **NavigationTermSet** (section [3.1.5.7](#)) object that have multiple representations based on language or culture.

3.1.5.7.1.1.4 LinkType

Type: **Microsoft.SharePoint.Client.Publishing.Navigation.NavigationLinkType**

Accessibility: Read/Write

See **Microsoft.SharePoint.Client.Publishing.Navigation.NavigationTermSetItem.LinkType**, specified in section [3.1.5.8.1.1.2](#).

3.1.5.7.1.1.5 TaxonomyName

Type: **CSOM String**

Accessibility: Read Only

See

Microsoft.SharePoint.Client.Publishing.Navigation.NavigationTermSetItem.TaxonomyName, specified in section [3.1.5.8.1.1.3](#).

3.1.5.7.1.1.6 TermGroupId

Type: **CSOM GUID**

Accessibility: Read Only

Gets the underlying **TermGroup.Id** ([\[MS-EMMCOSOM\]](#) section 3.1.5.18.1.1.3) value.

3.1.5.7.1.1.7 TermStoreId

Type: **CSOM GUID**

Accessibility: Read Only

Gets the underlying **TermStore.Id** ([\[MS-EMMCOSOM\]](#) section 3.1.5.23.1.1.2) value.

3.1.5.7.1.1.8 IsReadOnly

Type: **CSOM Boolean**

Accessibility: Read Only

See **Microsoft.SharePoint.Client.Publishing.Navigation.NavigationTermSetItem.IsReadOnly**, specified in section [3.1.5.8.1.1.4](#).

3.1.5.7.1.1.9 LoadedFromPersistedData

Type: **CSOM Boolean**

Accessibility: Read Only

Indicates whether the **term set** was loaded from persisted storage, rather than obtained from the taxonomy service. If true, this indicates that the contents of the **NavigationTermSet** might be outdated, and cannot be relied upon for security purposes.

3.1.5.7.1.2 ObjectPath Properties

3.1.5.7.1.2.1 CatalogTargetUrlForChildTerms

Type: Microsoft.SharePoint.Client.Publishing.CustomizableString

Accessibility: Read Only

See

Microsoft.SharePoint.Client.Publishing.Navigation.NavigationTermSetItem.CatalogTargetUrlForChildTerms, specified in section [3.1.5.8.1.2.1](#).

3.1.5.7.1.2.2 TargetUrlForChildTerms

Type: Microsoft.SharePoint.Client.Publishing.CustomizableString

Accessibility: Read Only

See

Microsoft.SharePoint.Client.Publishing.Navigation.NavigationTermSetItem.TargetUrlForChildTerms, specified in section [3.1.5.8.1.2.2](#).

3.1.5.7.1.2.3 Terms

Type: Microsoft.SharePoint.Client.Publishing.Navigation.NavigationTermCollection

Accessibility: Read Only

See **Microsoft.SharePoint.Client.Publishing.Navigation.NavigationTermSetItem.Terms**, specified in section [3.1.5.8.1.2.3](#).

3.1.5.7.1.2.4 Title

Type: Microsoft.SharePoint.Client.Publishing.CustomizableString

Accessibility: Read Only

See **Microsoft.SharePoint.Client.Publishing.Navigation.NavigationTermSetItem.Title**, specified in section [3.1.5.8.1.2.4](#).

3.1.5.7.1.2.5 View

Type: Microsoft.SharePoint.Client.Publishing.Navigation.NavigationTermSetView

Accessibility: Read Only

See **Microsoft.SharePoint.Client.Publishing.Navigation.NavigationTermSetItem.View**, specified in section [3.1.5.8.1.2.5](#).

3.1.5.7.2 Methods

3.1.5.7.2.1 Scalar Methods

3.1.5.7.2.1.1 GetResolvedDisplayUrl

Return Type: CSOM String

See

Microsoft.SharePoint.Client.Publishing.Navigation.NavigationTermSetItem.GetResolvedDisplayUrl, specified in section [3.1.5.8.2.1.1](#).

Parameters:

browserQueryString: Optional. If it is provided, this query string is used as the query string part of the resulting URL. If this parameter is not **null** or an empty string, it MUST be prefixed with the ? character.

Type: CSOM String

3.1.5.7.2.2 ObjectPath Methods

3.1.5.7.2.2.1 CreateTerm

Return Type: Microsoft.SharePoint.Client.Publishing.Navigation.NavigationTerm

See **Microsoft.SharePoint.Client.Publishing.Navigation.NavigationTermSetItem.CreateTerm**, specified in section [3.1.5.8.2.2.1](#).

Parameters:

termName: Default label for the LCID.

Type: **CSOM String**

linkType: LCID to create the label on.

Type: Microsoft.SharePoint.Client.Publishing.Navigation.NavigationLinkType

termId: GUID for the term.

Type: **CSOM GUID**

3.1.5.7.2.2.2 FindTermForUrl

Return Type: Microsoft.SharePoint.Client.Publishing.Navigation.NavigationTerm

This method is used for example by breadcrumb controls to determine the location of the current page in the navigation hierarchy. It searches all child **NavigationTerm** objects for a **navigation node** whose hyperlink **URL** matches the specified URL. The matching algorithm used by the protocol server is implementation-defined, and MAY ignore certain query parameters or character casing/encoding differences, and MAY normalize relative URL syntaxes (for example `"/Pages/Example.aspx"` or `"~site/Pages/Example.aspx"`), but MUST honor the **NavigationTerm.AssociatedFolderUrl** property (section [3.1.5.5.1.1.1](#)). If a match is not found, then null is returned.

Parameters:

url: The URL to search for.

Type: **CSOM String**

3.1.5.7.2.2.3 GetAllTerms

Return Type: Microsoft.SharePoint.Client.Publishing.Navigation.NavigationTermCollection

Returns a collection of the complete tree of child **NavigationTerm** (section [3.1.5.5](#)) objects in the **NavigationTermSet** (section [3.1.5.7](#)).

Parameters: None

3.1.5.7.2.2.4 GetAsEditable

Return Type: Microsoft.SharePoint.Client.Publishing.Navigation.NavigationTermSet

Returns an editable copy of the **NavigationTermSet** (section [3.1.5.7](#)) object.

Parameters:

taxonomySession: A **TaxonomySession** ([\[MS-EMMCSON\]](#) section 3.1.5.15) object that is used to help construct the editable underlying **Term** object ([\[MS-EMMCSON\]](#) section 3.1.5.16).

Type: Microsoft.SharePoint.Client.Taxonomy.TaxonomySession

3.1.5.7.2.2.5 GetTaxonomyTermSet

Return Type: Microsoft.SharePoint.Client.Taxonomy.TermSet

Returns the underlying **TermSet** ([\[MS-EMMCSON\]](#) section 3.1.5.20) object.

Remarks:

If the **NavigationTermSet** (section [3.1.5.7](#)) object is in the "editable" mode, then this method returns the underlying **TermSet** object. If the protocol client calls this method when the **NavigationTerm** object is read-only, then the protocol server MUST return an **InvalidOperationException** error.

Parameters: None

3.1.5.7.2.2.6 GetWithNewView

Return Type: Microsoft.SharePoint.Client.Publishing.Navigation.NavigationTermSet

Returns a **NavigationTermSet** (section [3.1.5.7](#)) object that will reflect the **NavigationTermSetView** (section [3.1.5.9](#)) object specified by *newView*.

Parameters:

newView: The **NavigationTermSetView** object to apply to the **NavigationTermSet** (section [3.1.5.7](#)) object.

Type: Microsoft.SharePoint.Client.Publishing.Navigation.NavigationTermSetView

3.1.5.7.2.2.7 GetAsResolvedByView

This method is a **static CSOM method**.

Return Type: Microsoft.SharePoint.Client.Publishing.Navigation.NavigationTermSet

Creates and returns a **NavigationTermSet** (section [3.1.5.7](#)) object that can be edited.

Parameters:

termSet: The **TermSet** ([\[MS-EMMC SOM\]](#) section 3.1.5.20) object that the new **NavigationTermSet** object will be bound to.

Type: Microsoft.SharePoint.Client.Taxonomy.TermSet

view: The **NavigationTermSetView** (section [3.1.5.9](#)) used to resolve the properties of the new **NavigationTermSet** object.

Type: Microsoft.SharePoint.Client.Publishing.Navigation.NavigationTermSetView

Remarks:

This method supports editing of **NavigationTermSet** objects that are not yet in use by a **Web site**. If a **NavigationTermSet** object is in use, then a simpler approach is to call the **GetAsEditable** (section [3.1.5.7.2.2.4](#)) method to obtain a copy of the **NavigationTermSet** object that can be edited.

3.1.5.7.2.2.8 GetAsResolvedByWeb

This method is a **static CSOM method**.

Return Type: Microsoft.SharePoint.Client.Publishing.Navigation.NavigationTermSet

Creates and returns a **NavigationTermSet** (section [3.1.5.7](#)) object that can be edited.

Parameters:

termSet: The **TermSet** ([\[MS-EMMC SOM\]](#) section 3.1.5.20) object that the new **NavigationTermSet** object will be bound to.

Type: Microsoft.SharePoint.Client.Taxonomy.TermSet

web: The **Web site** ([\[MS-CSOMSPT\]](#) section 3.2.5.143) that is a context for **URLs** for the new **NavigationTermSet** object.

Type: Microsoft.SharePoint.Client.Web

siteMapProviderName: The name of the **site map provider** to be used for the new **NavigationTermSet** object.

Type: **CSOM String**

Remarks:

This method supports editing of **NavigationTermSet** objects that are not yet in use by a Web site. If a **NavigationTermSet** object is in use, then the preferred approach is to call the **GetAsEditable** (section [3.1.5.7.2.2.4](#)) method to obtain a copy of the **NavigationTermSet** object that can be edited.

3.1.5.7.2.2.9 GetTaxonomyTermStore

Return Type: Microsoft.SharePoint.Client.Taxonomy.TermStore

See

Microsoft.SharePoint.Client.Publishing.Navigation.NavigationTermSetItem.GetTaxonomyTermStore, specified in section [3.1.5.8.2.2.2](#).

Parameters: None

3.1.5.8 Microsoft.SharePoint.Client.Publishing.Navigation.NavigationTermSetItem

TypeId: {F99351D7-E3F3-4185-A0CA-D0426FF83FDE}

ShortName: SP.Publishing.Navigation.NavigationTermSetItem

The **NavigationTermSetItem** class is an abstract base class for the **NavigationTermSet** (section [3.1.5.7](#)) and **NavigationTerm** (section [3.1.5.5](#)) classes.

Remarks:

The **NavigationTermSetItem** class is analogous to the **TermSetItem** ([\[MS-EMMCOSM\]](#) section 3.1.5.22) class.

The **NavigationTerm** and **NavigationTermSet** objects have two modes: an "editable" mode that is required in order to make updates to the object, and a "read-only" mode that, when used, improves performance by retrieving the object from the taxonomy navigation cache. The read-only mode is indicated by the **NavigationTermSetItem.IsReadOnly** property (section [3.1.5.8.1.1.4](#)).

If the **NavigationTermSetItem** is read-only and the protocol client attempts to assign any property or call any method that would change the object state, then the protocol server MUST return an **InvalidOperationException** error.

3.1.5.8.1 Properties

3.1.5.8.1.1 Scalar Properties

3.1.5.8.1.1.1 Id

Type: **CSOM GUID**

Accessibility: Read Only

Gets the underlying **Term.Id** ([\[MS-EMMCSON\]](#) section 3.1.5.16.1.1.4) or **TermSet.Id** ([MS-EMMCSON] section 3.1.5.20.1.1.6) property.

3.1.5.8.1.1.2 LinkType

Type: Microsoft.SharePoint.Client.Publishing.Navigation.NavigationLinkType

Accessibility: Read/Write

Gets or sets a value that indicates what kind of link is used by the **navigation node** that the **taxonomy site map provider** creates for a **NavigationTerm**. For a **NavigationTermSet** (section [3.1.5.7](#)) object, the value is always **NavigationLinkType.Root** (section [3.1.5.3.1.1](#)).

Remarks:

The link type is specified by the **NavigationLinkType** (section [3.1.5.3](#)) enumeration. The link type also determines whether the protocol server will use URL rewriting to implement a friendly URL or **catalog friendly URL** for a **NavigationTerm**. The URL rewriting is implementation-specific.

3.1.5.8.1.1.3 TaxonomyName

Type: CSOM String

Accessibility: Read Only

Gets the underlying **Term.Name** ([\[MS-EMMCSON\]](#) section 3.1.5.16.1.1.12) or **TermSet.Name** ([MS-EMMCSON] section 3.1.5.20.1.1.10) property.

3.1.5.8.1.1.4 IsReadOnly

Type: CSOM Boolean

Accessibility: Read Only

This returns true if the object is in "read-only" mode; otherwise it is in "editable" mode. See the **NavigationTermSetItem** documentation (section [3.1.5.8](#)) for a discussion of these two modes.

3.1.5.8.1.2 ObjectPath Properties

3.1.5.8.1.2.1 CatalogTargetUrlForChildTerms

Type: Microsoft.SharePoint.Client.Publishing.CustomizableString

Accessibility: Read Only

Gets the default value of the **CatalogTargetUrl** property for child **NavigationTerm** (section [3.1.5.5](#)) objects.

Remarks:

This property does not affect the current node.

This property is a **CustomizableString** (section [3.1.5.15](#)) object. The default value is inherited from the **CatalogTargetUrlForChildTerms.Value** (section [3.1.5.5.1.2.2](#)) property of the immediate parent node. In the case of a **NavigationTermSet** (section [3.1.5.7](#)) object, the default value is an **empty string**.

3.1.5.8.1.2.2 TargetUrlForChildTerms

Type: Microsoft.SharePoint.Client.Publishing.CustomizableString

Accessibility: Read Only

Gets the default value that is to be used for the **TargetUrl** (section [3.1.5.5.1.2.5](#)) property on child **NavigationTerm** (section [3.1.5.5](#)) objects.

Remarks:

This property does not affect the current node.

This property is a **CustomizableString** (section [3.1.5.15](#)) object. The default value is inherited from the **TargetUrlForChildTerms.Value** (section [3.1.5.5.1.2.6](#)) property of the immediate parent node. In the case of a **NavigationTermSet** (section [3.1.5.7](#)) object, the default value is an **empty string**.

3.1.5.8.1.2.3 Terms

Type: Microsoft.SharePoint.Client.Publishing.Navigation.NavigationTermCollection

Accessibility: Read Only

Gets a collection of all immediate child **NavigationTerm** (section [3.1.5.5](#)) objects of this **NavigationTerm** or **NavigationTermSet** (section [3.1.5.7](#)) object.

Remarks:

The **Terms** collection excludes certain objects according to the trimming specified by the associated **NavigationTerm.View** (section [3.1.5.5.1.2.10](#)). For example, if **NavigationTermSetView.ExcludeDeprecatedTerms** (section [3.1.5.9.1.1.1](#)) is true, then objects will be trimmed (that is, excluded) from the collection if their **NavigationTerm.IsDeprecated** property (section [3.1.5.5.1.1.6](#)) is true.

3.1.5.8.1.2.4 Title

Type: Microsoft.SharePoint.Client.Publishing.CustomizableString

Accessibility: Read Only

Gets the title that menus and breadcrumbs will display for the **navigation node**.

Remarks:

This property is a **CustomizableString** (section [3.1.5.15](#)) object. For a **NavigationTerm** object, the default value MUST be the **Term.Name** ([\[MS-EMMCOSM\]](#) section 3.1.5.16.1.1.12) property for the underlying **term**. For a **NavigationTermSet** object, this property SHOULD be the same as the **Web site** title, as indicated by the **NavigationTermSetView.WebTitle** property (section [3.1.5.9.1.1.8](#)) for the current view.

3.1.5.8.1.2.5 View

Type: Microsoft.SharePoint.Client.Publishing.Navigation.NavigationTermSetView

Accessibility: Read Only

Gets the **NavigationTermSetView** (section [3.1.5.9](#)) object that is used to calculate certain properties for this **NavigationTerm**.

3.1.5.8.2 Methods

3.1.5.8.2.1 Scalar Methods

3.1.5.8.2.1.1 GetResolvedDisplayUrl

Return Type: CSOM String

Returns the **server-relative URL** that is displayed for this **NavigationTermSet** (section [3.1.5.7](#)) or **NavigationTerm** (section [3.1.5.5](#)) object.

Parameters:

browserQueryString: A query string that, if specified, is included in the resolved **URL**.

Type: CSOM String

Remarks:

The URL MAY be resolved by expanding any implementation-specific tokens such as "~sitecollection/". If the *browserQueryString* parameter is provided, it is used as the query string part of the resulting URL.

The URL is derived differently depending on the **NavigationLinkType** (section [3.1.5.3](#)) value. If the term is of type **NavigationLinkType.SimpleLink** (section [3.1.5.3.1.3](#)) then the **NavigationTerm.SimpleLinkUrl** (section [3.1.5.5.1.1.8](#)) property MUST be returned. If the term is of type **NavigationLinkType.FriendlyUrl** (section [3.1.5.3.1.2](#)), then the friendly URL MUST be returned. If a valid URL is not specified, then the protocol server MUST return null.

3.1.5.8.2.2 ObjectPath Methods

3.1.5.8.2.2.1 CreateTerm

Return Type: Microsoft.SharePoint.Client.Publishing.Navigation.NavigationTerm

Creates a new **NavigationTerm** (section [3.1.5.5](#)) object with the specified *termName* for the **Term.Name** property ([\[MS-EMMCOSM\]](#) section 3.1.5.16.1.1.12). This operation is similar to **TermSetItem.CreateTerm** method ([\[MS-EMMCOSM\]](#) section 3.1.5.22.2.2.1), but with two important differences:

1. If the **Terms** collection ([\[MS-EMMCOSM\]](#) section 3.1.5.22.1.2.1) already contains a sibling **term** whose **Term.Name** property would conflict with *termName*, then the protocol server MUST generate a unique name. For example, if the name "St. Louis" is already in use, the *termName* could be changed to "St. Louis (2)". The method for generating the unique value is implementation-specific and MAY depend on the active **language code identifier (LCID)**.
2. If the *linkType* is **NavigationLinkType.FriendlyUrl** (section [3.1.5.3.1.2](#)), and if the **Terms** collection already contains a sibling term whose **NavigationTerm.FriendlyUrlSegment** (section [3.1.5.5.1.2.3](#)) would conflict with the default **FriendlyUrlSegment** for the newly created term, then the protocol server MUST generate a unique segment and assign it as the custom value for the **CustomizableString** object (section [3.1.5.15](#)). For example, suppose *termName* is "St. Louis" but there is already a friendly **URL** "http://example.com/locations/st-louis". In this case, the newly created term's URL segment could be assigned as "st-louis-2" instead of "st-louis". The method for generating the unique value is implementation-specific and MAY depend on the active language code identifier (LCID).

Parameters:

termName: The name for the new **NavigationTerm** object. The name to be stored in the **NavigationTerm.TaxonomyName** (section [3.1.5.5.1.1.9](#)) property.

Type: **CSOM String**

linkType: The type of link for the new **NavigationTerm** object as specified by the **NavigationLinktype** (section [3.1.5.3](#)) enumeration.

Type: Microsoft.SharePoint.Client.Publishing.Navigation.NavigationLinkType

termId: A unique identifier for the new **NavigationTerm** object.

Type: **CSOM GUID**

Remarks:

The new **NavigationTerm** will be a child of this object.

3.1.5.8.2.2.2 GetTaxonomyTermStore

Return Type: Microsoft.SharePoint.Client.Taxonomy.TermStore

Returns the underlying **TermStore** ([\[MS-EMMCOSOM\]](#) section 3.1.5.23) object.

Remarks:

If the **NavigationTermSet** (section [3.1.5.7](#)) object is in the "editable" mode, then this method returns the underlying **TermStore** object. If the protocol client calls this method when the **NavigationTermSet** object is read-only, then the protocol server MUST return an **InvalidOperationException** error.

Parameters: None

3.1.5.9 Microsoft.SharePoint.Client.Publishing.Navigation.NavigationTermSetView

TypeId: {097234E9-47DA-431F-BD12-173C296B187B}

ShortName: SP.Publishing.Navigation.NavigationTermSetView

The **NavigationTermSetView** class stores contextual information (for example the active **Web site**, **site map provider**, and policy for trimming child nodes) that affects the calculation of certain properties for the **NavigationTerm** (section [3.1.5.5](#)) objects in a **NavigationTermSet** (section [3.1.5.7](#)).

Remarks:

Resolving **URLs** depends on which Web site is in use. For example, the **NavigationTerm.GetResolvedDisplayUrl** (section [3.1.5.5.2.1.3](#)) method resolves a relative URL differently when the **TermSet** ([\[MS-EMMCOSOM\]](#) section 3.1.5.20) object is attached to a different Web site.

To minimize the size of **NavigationTermSet** objects in the taxonomy navigation cache, this additional contextual information is separated into the **NavigationTermSetView** class. This allows the protocol server to return different cached views of the **NavigationTermSet** without making expensive copies of the internal tree structure. The protocol client can call **NavigationTermSet.GetWithNewView** section [3.1.5.7.2.2.6](#)) to switch between views.

3.1.5.9.1 Properties

3.1.5.9.1.1 Scalar Properties

3.1.5.9.1.1.1 ExcludeDeprecatedTerms

Type: **CSOM Boolean**

Accessibility: Read/Write

Gets or sets a value that indicates whether **NavigationTerm** (section [3.1.5.5](#)) objects are trimmed if the underlying **term** is a **deprecated term**.

Remarks:

When traversing a tree of **NavigationTerm** objects, if this property is true the objects MUST be excluded from the **NavigationTermSetItem.Terms** collection (section [3.1.5.8.1.2.3](#)) whenever the **NavigationTerm.IsDeprecated** property is true (section [3.1.5.5.1.1.6](#)).

3.1.5.9.1.1.2 ExcludeTermsByPermissions

Type: CSOM Boolean

Accessibility: Read/Write

Gets or sets a value that indicates whether **NavigationTerm** (section [3.1.5.5](#)) objects are trimmed if the current user does not have permission to view the linked **URL**.

Remarks:

When traversing a tree of **NavigationTerm** objects, if this property is true then objects MUST be excluded from the **NavigationTermSetItem.Terms** collection (section [3.1.5.8.1.2.3](#)) whenever the current user does not have permissions to view the page referenced by **NavigationTerm.GetResolvedTargetUrl** (section [3.1.5.5.2.1.4](#)). This property only applies to **publishing pages** within the current **Web site**.

3.1.5.9.1.1.3 ExcludeTermsByProvider

Type: CSOM Boolean

Accessibility: Read/Write

Gets or sets a value that indicates whether **NavigationTerm** (section [3.1.5.5](#)) objects are trimmed according to the active **site map provider**.

Remarks:

When traversing a tree of **NavigationTerm** objects, if this property is true then objects MUST be excluded from the **NavigationTermSetItem.Terms** collection (section [3.1.5.8.1.2.3](#)) whenever the **term** is marked as hidden for the site map provider indicated by the **NavigationTermSetView.SiteMapProviderName** property (section [3.1.5.9.1.1.6](#)). To mark a term as hidden, use the properties **NavigationTerm.ExcludeFromGlobalNavigation** (section [3.1.5.5.1.1.3](#)) and **NavigationTerm.ExcludeFromCurrentNavigation** (section [3.1.5.5.1.1.2](#)).

3.1.5.9.1.1.4 ServerRelativeSiteUrl

Type: CSOM String

Accessibility: Read Only

Returns the **server-relative URL** for the **site collection** associated with this view.

Remarks:

For example, this property MAY be used by the **NavigationTerm.GetResolvedTargetUrl** method (section [3.1.5.5.2.1.4](#)) to resolve an implementation-defined relative **URL** syntax. For example, if the **ServerRelativeSiteUrl** is "/sites/spsite", then the protocol server could resolve "~sitecollection/Pages/Example.aspx" as "/sites/spsite/Pages/Example.aspx".

This property's value can also be an **empty string**.

3.1.5.9.1.1.5 ServerRelativeWebUrl

Type: **CSOM String**

Accessibility: Read Only

Returns the **server-relative URL** for the **Web site** associated with this view.

Remarks:

For example, this property MAY be used by the **NavigationTerm.GetResolvedTargetUrl** method (section [3.1.5.5.2.1.4](#)) to resolve an implementation-defined relative **URL** syntax. For example, if the **ServerRelativeWebUrl** is "/sites/spsite/spweb", then the protocol server could resolve "~site/Pages/Example.aspx" as "/sites/spsite/spweb/Pages/Example.aspx".

This property's value can also be an **empty string**.

3.1.5.9.1.1.6 SiteMapProviderName

Type: **CSOM String**

Accessibility: Read/Write

Gets or sets the name used to refer to the **site map provider** to be used for trimming **NavigationTerm** (section [3.1.5.5](#)) objects.

Remarks:

This property is used to trim child **navigation nodes** when **ExcludeTermsByProvider** (section [3.1.5.9.1.1.3](#)) is true. It is valid to assign an **empty string** to **SiteMapProviderName**; in this case, no trimming is performed for the current view.

3.1.5.9.1.1.7 WebId

Type: **CSOM GUID**

Accessibility: Read Only

Gets the unique identifier of the **Web site** associated with this view.

3.1.5.9.1.1.8 WebTitle

Type: **CSOM String**

Accessibility: Read Only

Gets the title of the **Web site** associated with this view.

Remarks:

This property is used as the **NavigationTermSetItem.Title** property (section [3.1.5.8.1.2.4](#)) for the **NavigationTermSet** (section [3.1.5.7](#)) object that is the root of the navigation hierarchy.

This property's value can also be an **empty string**.

3.1.5.9.1.2 ObjectPath Properties

None.

3.1.5.9.2 Methods

3.1.5.9.2.1 Scalar Methods

None.

3.1.5.9.2.2 ObjectPath Methods

3.1.5.9.2.2.1 CreateEmptyInstance

This method is a **static CSOM method**.

Return Type: Microsoft.SharePoint.Client.Publishing.Navigation.NavigationTermSetView

Creates and returns a new instance of the **NavigationTermSetView** (section [3.1.5.9](#)) class. The **WebId** property (section [3.1.5.9.1.1.7](#)) will be assigned the **empty GUID**, the string typed properties will be assigned as empty strings, and the Boolean typed properties will be initialized to false.

Parameters: None

3.1.5.9.2.2.2 GetCopy

Return Type: Microsoft.SharePoint.Client.Publishing.Navigation.NavigationTermSetView

Returns a copy of this **NavigationTermSetView** (section [3.1.5.9](#)) object.

Parameters: None

3.1.5.9.2.2.3 CSOM Constructor

Creates a new instance of the **NavigationTermSetView** class and initializes its properties. The Boolean typed properties will be initialized to false, and the other properties will be assigned according to the *web* and *siteMapProviderName* parameters.

Parameters:

web: The **Web site** ([\[MS-CSOMSPT\]](#) section 3.2.5.143) whose data will be used to initialize the **NavigationTermSetView** properties.

Type: Microsoft.SharePoint.Client.Web

siteMapProviderName: The **site map provider** name to be assigned to the **SiteMapProviderName** property (section [3.1.5.9.1.1.6](#)).

Type: **CSOM String**

3.1.5.10 Microsoft.SharePoint.Client.Publishing.Navigation.StandardNavigationSettings

TypeId: {5EBDD423-1350-43F9-AD8C-CBE0887C7C42}

ShortName: SP.Publishing.Navigation.StandardNavigationSettings

The **StandardNavigationSettings** class is used to manage the standard navigation schemes (global navigation and current navigation) for a **site collection**.

Remarks:

The protocol server's administrative user interface presents a simplified perspective with two standard schemes: global navigation and current navigation. Each standard scheme can be configured for only one of three navigation sources: **taxonomy site map provider**, **portal site map provider**, or

inherit from **parent site**. These configurations correspond to predefined configurations of the underlying providers, that is, binding a specific switchable site map provider to a specific taxonomy site map provider and assigning the navigation **term set**. Other "nonstandard" configurations are possible by configuring the providers individually.

3.1.5.10.1 Properties

3.1.5.10.1.1 Scalar Properties

3.1.5.10.1.1.1 Source

Type: Microsoft.SharePoint.Client.Publishing.Navigation.StandardNavigationSource

Accessibility: Read/Write

Gets or sets the navigation source for the **site collection**.

Remarks:

This property determines whether the switchable **site map provider** will use the **taxonomy site map provider** or the **portal site map provider** in the standard configurations. If the settings are in an advanced configuration, then this property returns **StandardNavigationSource.Unknown** (section [3.1.5.11.1.1](#)). If the protocol client attempts to assign the **StandardNavigationSource.Unknown** value to this property, the protocol server MUST return an **InvalidOperationException** error.

3.1.5.10.1.1.2 TermSetId

Type: CSOM GUID

Accessibility: Read/Write

Gets or sets a unique identifier for the **TermSet** ([\[MS-EMMC SOM\]](#) section 3.1.5.20) object used by the **taxonomy site map provider**.

Remarks:

This property is ignored unless **StandardNavigationSource.TaxonomyProvider** (section [3.1.5.11.1.3](#)) is selected.

3.1.5.10.1.1.3 TermStoreId

Type: CSOM GUID

Accessibility: Read/Write

Gets or sets a unique identifier for the **TermStore** ([\[MS-EMMC SOM\]](#) section 3.1.5.23) object used by the **taxonomy site map provider**.

Remarks:

This property is ignored unless **StandardNavigationSource.TaxonomyProvider** (section [3.1.5.11.1.3](#)) is selected.

3.1.5.10.1.2 ObjectPath Properties

None.

3.1.5.10.2 Methods

3.1.5.10.2.1 Scalar Methods

None.

3.1.5.10.2.2 ObjectPath Methods

None.

3.1.5.11 Microsoft.SharePoint.Client.Publishing.Navigation.StandardNavigationSource

ShortName: SP.Publishing.Navigation.StandardNavigationSource

Flag: false

StandardNavigationSource is an enumeration that specifies the three configuration choices for the standard navigation schemes (global navigation and current navigation).

Remarks:

See the **StandardNavigationSettings** class (section [3.1.5.10](#)) for more information about the standard navigation schemes.

3.1.5.11.1 Field Values

3.1.5.11.1.1 Unknown

Value: 0

Indicates that the navigation scheme is in an advanced configuration that does not correspond to one of the standard configurations.

3.1.5.11.1.2 PortalProvider

Value: 1

Indicates that the navigation scheme is configured so that the **switchable site map provider** is pointing to the **portal site map provider**, and the **taxonomy site map provider** is disabled so that the protocol server will not process its friendly **URLs**.

3.1.5.11.1.3 TaxonomyProvider

Value: 2

Indicates that the navigation scheme is configured so that the **switchable site map provider** is pointing to the **taxonomy site map provider**.

3.1.5.11.1.4 InheritFromParentWeb

Value: 3

Indicates that the navigation scheme is inheriting its settings from the **parent site**. If this value is used, then the switchable site map provider, **portal site map provider**, and **taxonomy site map provider** are all configured to inherit their settings from the parent site.

3.1.5.12 Microsoft.SharePoint.Client.Publishing.Navigation.WebNavigationSettings

TypeId: {00AC02AA-86E2-4D48-AA73-341ED7962374}

ShortName: SP.Publishing.Navigation.WebNavigationSettings

The **WebNavigationSettings** class manages navigation settings for a **Web site**.

3.1.5.12.1 Properties

3.1.5.12.1.1 Scalar Properties

3.1.5.12.1.1.1 AddNewPagesToNavigation

Type: CSOM Boolean

Accessibility: Read/Write

Gets or sets a value that indicates whether clicking the **New Page** button will automatically create a **NavigationTerm** (section [3.1.5.5](#)) in the **term set** for the active **taxonomy site map provider**.

Remarks:

True if new pages will automatically create a **NavigationTerm** (section 3.1.5.5); otherwise, false.

3.1.5.12.1.1.2 CreateFriendlyUrlsForNewPages

Type: CSOM Boolean

Accessibility: Read/Write

Gets or sets a value that indicates whether clicking the **New Page** button will automatically create a friendly URL for the newly created page.

Remarks:

True if new pages will automatically create a friendly URL; otherwise, false.

3.1.5.12.1.2 ObjectPath Properties

3.1.5.12.1.2.1 CurrentNavigation

Type: Microsoft.SharePoint.Client.Publishing.Navigation.StandardNavigationSettings

Accessibility: Read Only

Returns an object that manages the settings for "current navigation", one of the two standard navigation schemes. See the **StandardNavigationSettings** class (section [3.1.5.10](#)) for more information about the standard navigation schemes.

Remarks:

The protocol server MUST NOT return null.

It MUST NOT be NULL.

3.1.5.12.1.2.2 GlobalNavigation

Type: Microsoft.SharePoint.Client.Publishing.Navigation.StandardNavigationSettings

Accessibility: Read Only

Returns an object that manages the settings for "global navigation", one of the two standard navigation schemes. See the **StandardNavigationSettings** class (section [3.1.5.10](#)) for more information about the standard navigation schemes.

Remarks:

The protocol server MUST NOT return null.

It MUST NOT be NULL.

3.1.5.12.2 Methods

3.1.5.12.2.1 Scalar Methods

3.1.5.12.2.1.1 Update

Return Type: None

Writes the new settings to the **Web site** that was passed to the constructor (section [3.1.5.12.2.2.1](#)).

Remarks:

This method also checks whether the navigation **term set** is being changed for any **taxonomy site map providers**. If so, changes MAY be written to both the old term set and the new term set to indicate whether they are attached to (that is, in use by) this Web site.

Parameters:

taxonomySession: The **TaxonomySession** ([\[MS-EMMCOSM\]](#) section 3.1.5.15) object to use to make the update.

Type: Microsoft.SharePoint.Client.Taxonomy.TaxonomySession

3.1.5.12.2.1.2 ResetToDefaults

Return Type: None

This operation resets the **WebNavigationSettings** object to the default state that the protocol server would use for a newly created **Web site**. This default state MAY depend on whether the Web site is located at the root of its **site collection**, for example because the **StandardNavigationSource.InheritFromParentWeb** setting (section [3.1.5.11.1.4](#)) is not applicable there.

Parameters: None

3.1.5.12.2.2 ObjectPath Methods

3.1.5.12.2.2.1 CSOM Constructor

Creates a new instance of the **WebNavigationSettings** class that will be used to access the settings for the specified **Web site**.

Parameters:

web: The Web site ([\[MS-CSOMSPT\]](#) section 3.2.5.143) whose settings will be accessed.

Type: Microsoft.SharePoint.Client.Web

3.1.5.13 Microsoft.SharePoint.Client.Publishing.AddinPlugin

TypeId: {698097B9-BBE7-4C07-A37B-23E2F07BC9A4}

ShortName: SP.Publishing.AddinPlugin

Class that represents the settings of a social plugin. A social plug-in contains HTML/JavaScript that will be rendered/executed on pages where the social plug-in is inserted. All social plug-ins are available in the "Social Plug-ins" WebPart category.

3.1.5.13.1 Properties

3.1.5.13.1.1 Scalar Properties

3.1.5.13.1.1.1 Description

Type: CSOM String

Accessibility: Read/Write

Gets or sets the value of the **Description** property of the social plug-in.

3.1.5.13.1.1.2 Markup

Type: CSOM String

Accessibility: Read/Write

Gets or sets the value of the **Markup** property which is the HTML/JavaScript codes contained in the social plug-in and will be rendered/executed when inserting the plug-in onto a page.

3.1.5.13.1.1.3 Title

Type: CSOM String

Accessibility: Read/Write

Gets or sets the value of the **Title** property of the social plug-in.

The **Title** property is used as the identifier for setting and updating a social plug-in.

3.1.5.13.1.2 ObjectPath Properties

None.

3.1.5.13.2 Methods

3.1.5.13.2.1 Scalar Methods

None.

3.1.5.13.2.2 ObjectPath Methods

3.1.5.13.2.2.1 CSOM Constructor

Creates a new instance of the **AddinPlugin** class that represents the settings of a social plugin.

Parameters: None

3.1.5.14 Microsoft.SharePoint.Client.Publishing.AddinSettings

TypeId: {7BC23BC0-CB63-4523-B967-A910C8B43668}

ShortName: SP.Publishing.AddinSettings

Class that represents the settings of a site services add-in.

The site services addin can be used to inject HTML/JavaScript on different locations on a page. The site services add-in will be applied on every site page in the site collection.

3.1.5.14.1 Properties

3.1.5.14.1.1 Scalar Properties

3.1.5.14.1.1.1 Description

Type: CSOM String

Accessibility: Read/Write

Gets or sets the **Description** property of a site services add-in.

3.1.5.14.1.1.2 Enabled

Type: CSOM Boolean

Accessibility: Read/Write

Gets or sets the **Enabled** property that indicates whether a site services add-in is enabled.

3.1.5.14.1.1.3 HeadScript

Type: CSOM String

Accessibility: Read/Write

Gets or sets the **HeadScript** property which is the HTML and JavaScript that will be inserted within the <header> tag on every page in the site collection.

3.1.5.14.1.1.4 HtmlEndBody

Type: CSOM String

Accessibility: Read/Write

Gets or sets the **HtmlEndBody** property which is HTML and JavaScript that will be inserted at the end of the <body> tag on every page in the site collection.

3.1.5.14.1.1.5 HtmlStartBody

Type: CSOM String

Accessibility: Read/Write

Gets or sets the **HtmlStartBody** property which is HTML and JavaScript that will be inserted at the start of the <body> tag on every page in the site collection.

3.1.5.14.1.1.6 Id

Type: **CSOM GUID**

Accessibility: Read Only

Gets or sets the **Id** property of the site services add-in.

The **Id** property is the unique identifier used for getting, setting, and deleting site services add-ins.

3.1.5.14.1.1.7 MetaTagPagePropertyMappings

Type: **CSOM dictionary**

Accessibility: Read/Write

Gets or sets the **MetaTagPagePropertyMappings** property. The **MetaTagPagePropertyMappings** property is a dictionary that stores the meta tag and page property mappings. Mappings will be generated and inserted into <meta> tags which are located right after the <header> tag on every page in the site collection.

For example, the key value pair {"tag:newTag", "Title"} in the **MetaTagPagePropertyMappings** property will add the meta tag <meta property="tag:newTag" content="[Value]" /> after the <header> tag. "Title" in {"tag:newTag", "Title"} refers to the name of the page property. [Value] will be replaced with the value of the page property called "Title".

3.1.5.14.1.1.8 Namespace

Type: **CSOM String**

Accessibility: Read/Write

Gets or sets the **Namespace** property that will add its content inside the <html> tag on every page in the site collection.

3.1.5.14.1.1.9 Title

Type: **CSOM String**

Accessibility: Read/Write

Title of the site services addin.

3.1.5.14.1.2 ObjectPath Properties

None.

3.1.5.14.2 Methods

3.1.5.14.2.1 Scalar Methods

None.

3.1.5.14.2.2 ObjectPath Methods

3.1.5.14.2.2.1 CSOM Constructor

Creates a new instance of the **AddinSettings** class that represents the settings of a site services add-in.

Parameters:

id: The **Id** property (section [3.1.5.14.1.1.6](#)) of the new **AddinSettings** (section [3.1.5.14](#)).

Type: **CSOM GUID**

3.1.5.15 **Microsoft.SharePoint.Client.Publishing.CustomizableString**

TypeId: {13EBB0D0-559A-4248-BA69-C57D5FABF4C4}

ShortName: SP.Publishing.CustomizableString

This is a helper class used by the **NavigationTerm** (section [3.1.5.5](#)) class to represent properties that are string types, and that have a default value that can be optionally overridden by a custom value.

3.1.5.15.1 **Properties**

3.1.5.15.1.1 **Scalar Properties**

3.1.5.15.1.1.1 **DefaultValue**

Type: **CSOM String**

Accessibility: Read Only

Gets the default value for the property, as described in the documentation for the various instances of the **CustomizableString** object (section [3.1.5.15](#)).

Remarks:

The protocol server MUST NOT return null for this property. The protocol server can return an **empty string** as a valid value.

3.1.5.15.1.1.2 **UsesDefaultValue**

Type: **CSOM Boolean**

Accessibility: Read/Write

Gets or sets whether the **CustomizableString** object (section [3.1.5.15](#)) uses the default value.

3.1.5.15.1.1.3 **Value**

Type: **CSOM String**

Accessibility: Read/Write

Gets or sets the current value of the property. The protocol server MUST NOT return null for this property.

Remarks:

If the **UsesDefaultValue** (section [3.1.5.15.1.1.2](#)) property is true, then the **Value** property MUST return the default value, as specified by the **DefaultValue** (section [3.1.5.15.1.1.1](#)) property. If the **UsesDefaultValue** property is false, then the **Value** property returns the custom value.

If the protocol client makes an assignment to the **Value** property (even if the new value is the same as the current value), then the **UsesDefaultValue** property MUST change to false on the protocol server.

3.1.5.15.1.2 **ObjectPath Properties**

None.

3.1.5.15.2 Methods

3.1.5.15.2.1 Scalar Methods

None.

3.1.5.15.2.2 ObjectPath Methods

None.

3.1.5.16 Microsoft.SharePoint.Client.Publishing.DesignPackage

TypeId: {D21214D9-63F5-488B-A665-2B7F9ABC1604}

ShortName: SP.Publishing.DesignPackage

Class that represents operations that can be used to perform around the design **solution package** for a **site collection**.

3.1.5.16.1 Properties

3.1.5.16.1.1 Scalar Properties

None.

3.1.5.16.1.2 ObjectPath Properties

None.

3.1.5.16.2 Methods

3.1.5.16.2.1 Scalar Methods

3.1.5.16.2.1.1 Apply

This method is a **static CSOM method**.

Return Type: None

Activates your design **solution package** on your **site collection**.

Parameters:

site: The site collection of the design solution package to activate.

Type: Microsoft.SharePoint.Client.Site

info: Information about the design solution package to activate.

Type: Microsoft.SharePoint.Client.Publishing.DesignPackageInfo

3.1.5.16.2.1.2 ExportEnterprise

This method is a **static CSOM method**.

Return Type: Microsoft.SharePoint.Client.Publishing.DesignPackageInfo

Exports the design **solution package** for a **site template** that is not a small business site template into the **solution gallery** and returns information about the design solution package.

Parameters:

site: The **site collection** that will be used to export the design solution package.

Type: Microsoft.SharePoint.Client.Site

includeSearchConfiguration: Indicates whether the search configuration will be exported in the design solution package.

Type: **CSOM Boolean**

3.1.5.16.2.1.3 ExportSmallBusiness

This method is a **static CSOM method**.

Return Type: Microsoft.SharePoint.Client.Publishing.DesignPackageInfo

Exports the design **solution package** for a small business **site template** to the **solution gallery** and returns information about the design solution package.

Parameters:

site: The **site collection** that will be used to export the design solution package.

Type: Microsoft.SharePoint.Client.Site

packageName: The name of the design solution package.

Type: **CSOM String**

includeSearchConfiguration: Indicates whether the search configuration will be exported in the design solution package.

Type: **CSOM Boolean**

3.1.5.16.2.1.4 Install

This method is a **static CSOM method**.

Return Type: None

Installs the design **solution package** specified.

Parameters:

site: The **site collection** that will be used to install the design solution package.

Type: Microsoft.SharePoint.Client.Site

info: Information about the design solution package to install.

Type: Microsoft.SharePoint.Client.Publishing.DesignPackageInfo

path: The **site-relative URL** of the design solution package to install.

Type: **CSOM String**

3.1.5.16.2.1.5 UnInstall

This method is a **static CSOM method**.

Return Type: None

Uninstalls the design **solution package** specified.

Parameters:

site: The **site collection** of the design solution package to uninstall.

Type: Microsoft.SharePoint.Client.Site

info: Information about the design solution package to uninstall.

Type: Microsoft.SharePoint.Client.Publishing.DesignPackageInfo

3.1.5.16.2.2 ObjectPath Methods

None.

3.1.5.17 Microsoft.SharePoint.Client.Publishing.DesignPackageInfo

TypeId: {5332B37D-A6D1-4231-83CD-D7DD274540B7}

ShortName: SP.Publishing.DesignPackageInfo

Represents information about a design **solution package**.

3.1.5.17.1 Properties

3.1.5.17.1.1 Scalar Properties

3.1.5.17.1.1.1 MajorVersion

Type: **CSOM Int32**

Accessibility: Read/Write

Represents the **major version** of the design **solution package**.

3.1.5.17.1.1.2 MinorVersion

Type: **CSOM Int32**

Accessibility: Read/Write

Represents the **minor version** of the design **solution package**.

3.1.5.17.1.1.3 PackageGuid

Type: **CSOM GUID**

Accessibility: Read/Write

Represents a unique identifier for the design **solution package**.

3.1.5.17.1.1.4 PackageName

Type: **CSOM String**

Accessibility: Read/Write

Represents the name of the design **solution package**.

3.1.5.17.1.2 ObjectPath Properties

None.

3.1.5.18 Microsoft.SharePoint.Client.Publishing.ImageRendition

TypeId: {CB63161F-1F15-446F-9BA9-AF89AE03CD45}

ShortName: SP.Publishing.ImageRendition

The **ImageRendition** object contains the configuration of an image rendition in a specific **site**. An image rendition MUST specify a width and/or height and MUST have a name associated with it.

The image rendition configuration is used to create copies of an image stored in a site that are cropped and scaled to match the configuration specified.

When a rendition only specifies a width or a height, the output image MUST keep the original image aspect ratio.

3.1.5.18.1 Properties

3.1.5.18.1.1 Scalar Properties

3.1.5.18.1.1.1 Height

Type: **CSOM Int32**

Accessibility: Read/Write

Gets or sets the image rendition height in pixels.

It MUST be greater than zero and less than or equal to 2048 to specify a height.

It MUST be 0 or -1 to not specify a height.

If the value is not set, **Width** (section [3.1.5.18.1.1.6](#)) MUST be specified.

3.1.5.18.1.1.2 Id

Type: **CSOM Int32**

Accessibility: Read Only

Gets the unique identifier of the image rendition.

The **Id** MUST be assigned by the server when the rendition is first created.

3.1.5.18.1.1.3 IdCsom

Type: **CSOM Int32**

Accessibility: Read/Write

Internal property used by the server to identify the rendition when making updates.

It MUST be set to the same value as **Id** (section [3.1.5.18.1.1.2](#)).

The client MUST NOT change or set this value.

3.1.5.18.1.1.4 Name

Type: CSOM String

Accessibility: Read/Write

Gets or sets the name for the image rendition.

It MUST NOT be NULL or empty.

3.1.5.18.1.1.5 Version

Type: CSOM Int32

Accessibility: Read Only

Gets the current version of the image rendition.

It MUST be set by the server when the rendition is first created.

It MUST be incremented by the server when the **Width** (section [3.1.5.18.1.1.6](#)) or **Height** (section [3.1.5.18.1.1.1](#)) values of the rendition change.

3.1.5.18.1.1.6 Width

Type: CSOM Int32

Accessibility: Read/Write

Gets or sets the image rendition width in pixels.

MUST be greater than zero and less than or equal to 2048 to specify a width.

MUST be 0 or -1 to not specify a width.

If the value is not set, **Height** (section [3.1.5.18.1.1.1](#)) MUST be specified.

3.1.5.18.1.1.7 Group

Type: CSOM String

Accessibility: Read/Write

Gets or sets the group for the image rendition.

3.1.5.18.1.2 ObjectPath Properties

None.

3.1.5.19 Microsoft.SharePoint.Client.Publishing.Navigation.NavigationTermProviderNameCollection

TypeId: {4C6CC6D4-AEBF-4C8E-9575-BCBB7034AA92}

ShortName: SP.Publishing.Navigation.NavigationTermProviderNameCollection

Represents a collection of text strings stored by the **NavigationTerm.ExcludedProviders** property (section [3.1.5.5.1.2.11](#)).

3.1.5.19.1 Properties

3.1.5.19.1.1 Scalar Properties

None.

3.1.5.19.1.2 ObjectPath Properties

None.

3.1.5.19.2 Methods

3.1.5.19.2.1 Scalar Methods

3.1.5.19.2.1.1 Add

Return Type: None

Adds a text string to the collection. The value MUST NOT be null.

Parameters:

item: The text string to be added.

Type: **CSOM String**

3.1.5.19.2.1.2 Clear

Return Type: None

Removes all strings from the collection.

Parameters: None

3.1.5.19.2.1.3 Remove

Return Type: **CSOM Boolean**

Removes a text string from the collection. If the collection did not contain the specified string, then false is returned; otherwise true is returned.

Parameters:

item: The text string to be removed.

Type: **CSOM String**

3.1.5.19.2.2 ObjectPath Methods

None.

3.1.5.20 Microsoft.SharePoint.Client.Publishing.PublishingPage

TypeId: {E361280D-01DC-431A-9823-4AFACD06418B}

ShortName: SP.Publishing.PublishingPage

The **PublishingPage** class provides publishing-related behavior for an ASPX page that is stored in a **PublishingWeb** (section [3.1.5.22](#)).

Instantiate this class by using the static **GetPublishingPage** (section [3.1.5.20.2.2.1](#)) method.

This class also directly exposes the underlying **ListItem** ([\[MS-CSOMSPT\]](#) section 3.2.5.87) through the **ListItem** (section [3.1.5.20.1.2.1](#)) property, so that additional **ListItem** functionality can be easily accessed.

3.1.5.20.1 Properties

3.1.5.20.1.1 Scalar Properties

3.1.5.20.1.1.1 EndDate

Type: **CSOM DateTime**

Accessibility: Read/Write

Represents the Coordinated Universal Time (UTC) at which the **ListItem** (section [3.1.5.20.1.2.1](#)) is no longer a **published version**.

3.1.5.20.1.1.2 StartDate

Type: **CSOM DateTime**

Accessibility: Read/Write

Represents the Coordinated Universal Time (UTC) at which the **ListItem** (section [3.1.5.20.1.2.1](#)) starts to be a **published version**.

3.1.5.20.1.2 ObjectPath Properties

3.1.5.20.1.2.1 ListItem

Type: Microsoft.SharePoint.Client.ListItem

Accessibility: Read Only

Represents the **list item** used to perform operations.

3.1.5.20.2 Methods

3.1.5.20.2.1 Scalar Methods

3.1.5.20.2.1.1 AddFriendlyUrl

Return Type: **CSOM String**

Add a user-friendly URL for this **PublishingPage** (section [3.1.5.20](#)).

Exceptions:

Error Code	Error Type Name	Condition
-2147024809	ArgumentException	The <i>friendlyUrlSegment</i> MUST NOT be null or empty.
-2147467261	ArgumentNullException	The <i>editableParent</i> MUST NOT be null .
-2147024891	UnauthorizedAccessException	The protocol client has insufficient permissions to perform this operation.

Parameters:

friendlyUrlSegment: The user-friendly text to use as the URL segment.

Type: CSOM String

editableParent: The parent **NavigationTermSetItem** (section [3.1.5.8](#)) under which this new friendly URL is created.

Type: Microsoft.SharePoint.Client.Publishing.Navigation.NavigationTermSetItem

Note that it MUST be retrieved as an editable item (see *NavigationTermSet.GetAsEditable* (section [3.1.5.7.2.2.4](#)) and *NavigationTerm.GetAsEditable* (section [3.1.5.5.2.2.2](#))).

doAddToNavigation: Indicates whether to add the friendly URL into the managed navigation.

Type: **CSOM Boolean**

3.1.5.20.2.1.2 Schedule

Return Type: None

Schedule a **ListItem** ([\[MS-CSOMSPT\]](#) section 3.2.5.87) to automatically be approved (start) and be unpublished (expire) on certain dates.

Remarks:

Scheduling a **ListItem** indicates that it has already been effectively approved.

The **StartDate** (section [3.1.5.20.1.1.2](#)) and **EndDate** (section [3.1.5.20.1.1.1](#)) values are used to determine the publication schedule. If the start date is earlier than now, the **ListItem** is published immediately. Otherwise, it is scheduled to publish at a future date. If the end date is specified, the **ListItem** is scheduled to unpublish at a future date.

Exceptions:

Error Code	Error Type Name	Condition
-1	SPEXception	Documents can be scheduled only in a minor version-enabled list .
-1	SPEXception	Documents can be scheduled only in a list with content approval enabled.
-1	SPEXception	Scheduling a start date for a currently approved item is not supported. Items MUST be in the minor version state.
-1	SPEXception	Scheduling is not supported in this content database. Use Approve ([MS-CSOMSPT] section 3.2.5.64.2.1.13) or UnPublish ([MS-CSOMSPT] section 3.2.5.64.2.1.10) instead.
-2147024891	UnauthorizedAccessException	The protocol client has insufficient permissions to perform this operation.

Parameters:

approvalComment: Comments to be set when the **ListItem** is approved if the **StartDate** is in the future.

Type: **CSOM String**

3.1.5.20.2.2 ObjectPath Methods

3.1.5.20.2.2.1 GetPublishingPage

This method is a **static CSOM method**.

Return Type: Microsoft.SharePoint.Client.Publishing.PublishingPage

Static method to retrieve a **PublishingPage** (section [3.1.5.20](#)) object that wraps the given **ListItem** ([MS-CSOMSPT] section 3.2.5.87) object.

Remarks:

The *sourceListItem* MUST be a non-**null ListItem** object.

Exceptions:

Error Code	Error Type Name	Condition
-2147024809	ArgumentException	Invalid ListItem . The ListItem provided is not compatible with a PublishingPage .
-2147467261	ArgumentNullException	The <i>sourceListItem</i> is null , which is not valid.

Parameters:

sourceListItem: A **ListItem** object for which to retrieve a **PublishingPage** wrapper.

Type: Microsoft.SharePoint.Client.ListItem

3.1.5.21 Microsoft.SharePoint.Client.Publishing.PublishingPageInformation

TypeId: {68F48886-1E99-4D5A-BE5C-F0F0D53F371B}

ShortName: SP.Publishing.PublishingPageInformation

This class is used as an input parameter for methods that create **PublishingPage** (section [3.1.5.20](#)) objects.

Remarks:

For details about how to set each value of this class please refer to the method that is using this class as an input parameter.

3.1.5.21.1 Properties

3.1.5.21.1.1 Scalar Properties

3.1.5.21.1.1.1 Name

Type: **CSOM String**

Accessibility: Read/Write

The name for a **PublishingPage** (section [3.1.5.20](#)), or null if a default name SHOULD be used.

Defaults to null.

3.1.5.21.1.2 ObjectPath Properties

3.1.5.21.1.2.1 Folder

Type: Microsoft.SharePoint.Client.Folder

Accessibility: Read/Write

The **Folder** ([\[MS-CSOMSPT\]](#) section 3.2.5.72) object in which the **PublishingPage** (section [3.1.5.20](#)) is created, or null if a folder SHOULD NOT be used.

Defaults to null.

3.1.5.21.1.2.2 PageLayoutListItem

Type: Microsoft.SharePoint.Client.ListItem

Accessibility: Read/Write

ListItem ([\[MS-CSOMSPT\]](#) section 3.2.5.87) of the page layout to use for the **PublishingPage** (section [3.1.5.20](#)), or null if the default page layout SHOULD be used.

Defaults to null.

3.1.5.22 Microsoft.SharePoint.Client.Publishing.PublishingWeb

TypeId: {55927360-235B-4ACE-9DCF-C574D6E517EA}

ShortName: SP.Publishing.PublishingWeb

The **PublishingWeb** (section 3.1.5.22) class provides publishing behavior for a **Web** ([\[MS-CSOMSPT\]](#) section 3.2.5.143) instance that supports publishing.

The **PublishingWeb** class includes support for creation of **PublishingPage** objects.

Instantiate this class by using the static **GetPublishingWeb** (section [3.1.5.22.2.2.2](#)) method.

This class also directly exposes the underlying **Web** through the **Web** (section [3.1.5.22.1.2.1](#)) property, so that additional **Web** functionality can be easily accessed.

3.1.5.22.1 Properties

3.1.5.22.1.1 Scalar Properties

None.

3.1.5.22.1.2 ObjectPath Properties

3.1.5.22.1.2.1 Web

Type: Microsoft.SharePoint.Client.Web

Accessibility: Read Only

Gets the **Web** ([\[MS-CSOMSPT\]](#) section 3.2.5.143) object that is wrapped by this **PublishingWeb** (section [3.1.5.22](#)) object.

The **PublishingWeb** class wraps the **Web** class. This property directly exposes the underlying **Web** so that additional **Web** functionality can be easily accessed.

3.1.5.22.2 Methods

3.1.5.22.2.1 Scalar Methods

None.

3.1.5.22.2.2 ObjectPath Methods

3.1.5.22.2.2.1 AddPublishingPage

Return Type: Microsoft.SharePoint.Client.Publishing.PublishingPage

Creates a new **PublishingPage** (section [3.1.5.20](#)) in the **PublishingWeb** (section [3.1.5.22](#)).

Remarks:

The following combination of **PublishingPageInformation** (section [3.1.5.21](#)) values can be set:

- **PublishingPageInformation** with all defaults.
- **PublishingPageInformation.Name** and **PublishingPageInformation.PageLayoutListItem**.
- **PublishingPageInformation.Name**, **PublishingPageInformation.PageLayoutListItem** and **PublishingPageInformation.Folder**.

If the combination of **PublishingPageInformation** values is invalid an **ArgumentException** will be thrown indicating the invalid setting.

Exceptions:

Error Code	Error Type Name	Condition
-2147024809	ArgumentException	Incorrect combination of PublishingPageInformation settings provided.
-2147024891	UnauthorizedAccessException	The current user has insufficient permissions to perform this operation.

Parameters:

pageInformation: Indicates the **PublishingPage** information to use when creating a new **PublishingPage**.

Type: Microsoft.SharePoint.Client.Publishing.PublishingPageInformation

3.1.5.22.2.2.2 GetPublishingWeb

This method is a **static CSOM method**.

Return Type: Microsoft.SharePoint.Client.Publishing.PublishingWeb

Static method to retrieve a **PublishingWeb** instance that wraps the specified **Web** ([\[MS-CSOMSPT\]](#) section 3.2.5.143) object.

Exceptions:

Error Code	Error Type Name	Condition
-2147467261	ArgumentNullException	The <i>web</i> is null , which is not valid.

Parameters:

web: The **Web** object to wrap in a **PublishingWeb** instance.

Type: Microsoft.SharePoint.Client.Web

The *web* MUST NOT be **null**.

3.1.5.23 Microsoft.SharePoint.Client.Publishing.ScheduledItem

TypeId: {E4353749-4AA8-438C-8A8D-AC8052B60449}

ShortName: SP.Publishing.ScheduledItem

Represents a **list item** that can be scheduled to have a **published version** during a specified time span.

3.1.5.23.1 Properties

3.1.5.23.1.1 Scalar Properties

3.1.5.23.1.1.1 EndDate

Type: **CSOM DateTime**

Accessibility: Read/Write

Represents the **Coordinated Universal Time (UTC)** at which the **ListItem** (section [3.1.5.20.1.2.1](#)) is no longer a **published version**.

3.1.5.23.1.1.2 StartDate

Type: **CSOM DateTime**

Accessibility: Read/Write

Represents the **Coordinated Universal Time (UTC)** at which the **ListItem** (section [3.1.5.20.1.2.1](#)) starts to be a **published version**.

3.1.5.23.1.2 ObjectPath Properties

3.1.5.23.1.2.1 ListItem

Type: Microsoft.SharePoint.Client.ListItem

Accessibility: Read Only

The **list item** used to perform the scheduling operation.

3.1.5.23.2 Methods

3.1.5.23.2.1 Scalar Methods

3.1.5.23.2.1.1 Schedule

Return Type: None

Schedules the **ListItem** (section [3.1.5.20.1.2.1](#)) to become a **published version** when the current time is between the specified **StartDate** (section [3.1.5.23.1.1.2](#)) and the specified **EndDate** (section [3.1.5.23.1.1.1](#)).

Parameters:

approvalComment: Represents the comments to describe the transaction of the **list item** when it becomes a published version.

Type: **CSOM String**

3.1.5.23.2.2 ObjectPath Methods

None.

3.1.5.24 Microsoft.SharePoint.Client.Publishing.SiteImageRenditions

TypeId: {324675A4-AA0D-47DB-A937-C2E5DC53457E}

ShortName: SP.Publishing.SiteImageRenditions

The **SiteImageRenditions** object exposes the operations to get and modify the **ImageRendition** (section [3.1.5.18](#)) from a **site collection**.

3.1.5.24.1 Properties

3.1.5.24.1.1 Scalar Properties

None.

3.1.5.24.1.2 ObjectPath Properties

None.

3.1.5.24.2 Methods

3.1.5.24.2.1 Scalar Methods

3.1.5.24.2.1.1 GetRenditions

This method is a **static CSOM method**.

Return Type: **CSOM array** of Microsoft.SharePoint.Client.Publishing.ImageRendition

Returns the **ImageRendition** (section [3.1.5.18](#)) for the context **site collection**. If no image renditions exist for the site collection, it MUST return an empty array.

Parameters: None

3.1.5.24.2.1.2 SetRenditions

This method is a **static CSOM method**.

Return Type: None

Sets the **ImageRenditions** (section [3.1.5.18](#)) for the context **site collection**.

Exceptions:

Error Code	Error Type Name	Condition
-2147024891	UnauthorizedAccessException	The current user has insufficient permissions to perform this operation.
-2147024809	ArgumentException	One of the specified renditions is not valid.

Parameters:

renditions: An array of **ImageRendition** (section 3.1.5.18) objects to be set as the image renditions for the site collection.

Type: **CSOM array** of Microsoft.SharePoint.Client.Publishing.ImageRendition

It MUST NOT be NULL.

3.1.5.24.2.2 ObjectPath Methods

None.

3.1.5.25 Microsoft.SharePoint.Client.Publishing.SiteServicesAddins

TypeId: {31738358-BAAD-400C-9678-B5528C432AB5}

ShortName: SP.Publishing.SiteServicesAddins

Provides methods that manage site services addins and social plugins.

3.1.5.25.1 Properties

3.1.5.25.1.1 Scalar Properties

None.

3.1.5.25.1.2 ObjectPath Properties

None.

3.1.5.25.2 Methods

3.1.5.25.2.1 Scalar Methods

3.1.5.25.2.1.1 DeletePlugin

This method is a **static CSOM method**.

Return Type: None

Delete a social plugin by its **Title** property (section [3.1.5.13.1.1.3](#)).

Parameters:

pluginName: The **Title** property (section 3.1.5.13.1.1.3) of the social plugin.

Type: **CSOM String**

This method requires site designer permission level.

3.1.5.25.2.1.2 DeleteSettings

This method is a **static CSOM method**.

Return Type: None

Delete a site services addin by its **Id** property (section [3.1.5.14.1.1.6](#)).

Parameters:

addinId: The **Id** property (section 3.1.5.14.1.1.6) of the site services addin.

Type: **CSOM GUID**

This method requires site owner permission level.

3.1.5.25.2.1.3 SetPlugin

This method is a **static CSOM method**.

Return Type: None

Add a social plugin if it does not exist; otherwise, update it.

Parameters:

plugin: The social plugin to add or update.

Type: Microsoft.SharePoint.Client.Publishing.AddinPlugin

This method requires site designer permission level.

3.1.5.25.2.1.4 SetSettings

This method is a **static CSOM method**.

Return Type: None

Add the site services addin if it does not exist; otherwise, update it.

Parameters:

addin: Site services addin to add or update.

Type: Microsoft.SharePoint.Client.Publishing.AddinSettings

This method requires site owner permission level.

3.1.5.25.2.2 ObjectPath Methods

3.1.5.25.2.2.1 GetPlugin

This method is a **static CSOM method**.

Return Type: Microsoft.SharePoint.Client.Publishing.AddinPlugin

Gets the setting of a social plugin by its **Title** property (section [3.1.5.13.1.1.3](#)).

Parameters:

pluginName: The title of the social plugin.

Type: **CSOM String**

This method requires site designer permission level.

3.1.5.25.2.2.2 **GetSettings**

This method is a **static CSOM method**.

Return Type: Microsoft.SharePoint.Client.Publishing.AddinSettings

Gets the setting of a site services addin by its **Id** property (section [3.1.5.14.1.1.6](#)).

Parameters:

addinId: The ID property of the site services add-in.

Type: **CSOM GUID**

This method requires site designer permission level.

3.1.5.26 **Microsoft.SharePoint.Client.Publishing.PageLayoutCreationInformation**

TypeId: {D36987C1-DDF0-4E73-8B1A-E7E444EF3D3F}

ShortName: SP.Publishing.PageLayoutCreationInformation

A data structure representing information that is required to create a new **page layout**.

3.1.5.26.1 **Properties**

3.1.5.26.1.1 **Scalar Properties**

3.1.5.26.1.1.1 **AssociatedContentTypeId**

Type: **CSOM String**

Accessibility: Read/Write

Represents the **content type identifier** associated with the new **page layout**.

3.1.5.26.1.1.2 **MasterPageUrl**

Type: **CSOM String**

Accessibility: Read/Write

Represents the **server-relative URL** of the **master page** HTML design to be used to generate the new **page layout**.

3.1.5.26.1.1.3 **NewPageLayoutEditablePath**

Type: CSOM String

Accessibility: Read/Write

Represents the **server-relative URL** location of the new **page layout** HTML design.

3.1.5.26.1.1.4 NewPageLayoutNameWithoutExtension

Type: CSOM String

Accessibility: Read/Write

Represents the name of the **page layout**.

3.1.5.26.1.2 ObjectPath Properties

3.1.5.26.1.2.1 Web

Type: Microsoft.SharePoint.Client.Web

Accessibility: Read/Write

Represents the **site** to use to create the new **page layout**.

3.1.5.27 Microsoft.SharePoint.Client.Publishing.PublishingSite

TypeId: {8A896237-0D29-4A38-A399-C8FDE4B09D80}

ShortName: SP.Publishing.PublishingSite

Represents a publishing **site collection**.

3.1.5.27.1 Properties

3.1.5.27.1.1 Scalar Properties

None.

3.1.5.27.1.2 ObjectPath Properties

None.

3.1.5.27.2 Methods

3.1.5.27.2.1 Scalar Methods

3.1.5.27.2.1.1 CreatePageLayout

This method is a **static CSOM method**.

Return Type: None

Create a new **page layout**.

Parameters:

parameters: Specification of the page layout to create.

Type: Microsoft.SharePoint.Client.Publishing.PageLayoutCreationInformation

3.1.5.27.2.2 ObjectPath Methods

None.

3.1.6 Timer Events

None.

3.1.7 Other Local Events

None.

4 Protocol Examples

4.1 Create a New Navigation Hierarchy

In this example, a new navigation hierarchy is created. The navigation hierarchy will be created using the menu names, link types, and URLs specified in the following table.

Menu name	Link type	URL
Home	Simple	http://www.contoso.com
Products	Friendly URL	/sites/site1/products
Bicycles	Friendly URL	/sites/site1/products/bicycles
Skis	Friendly URL	/sites/site1/products/skis
Events	Friendly URL	/sites/site1/events
Summer Expo	Friendly URL	/sites/site1/events/summer-expo

The operation is summarized in the following sequence of requests and responses.

The protocol client creates a **TaxonomySession** ([\[MS-EMMCSON\]](#) section 3.1.5.15) object, and queries for all **TermStore** ([\[MS-EMMCSON\]](#) section 3.1.5.23) objects.

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>
    <ObjectPath Id="2" ObjectPathId="1" />
    <ObjectPath Id="4" ObjectPathId="3" />
    <ObjectPath Id="6" ObjectPathId="5" />
    <Query Id="7" ObjectPathId="5">
      <Query SelectAllProperties="false">
        <Properties>
          <Property Name="TermStores" SelectAll="true">
            <Query SelectAllProperties="false">
              <Properties />
            </Query>
          </Property>
        </Properties>
      </Query>
    </Query>
  </Actions>
  <ObjectPaths>
    <StaticProperty Id="1" TypeId="{3747adcd-a3c3-41b9-bfab-4a64dd2f1e0a}" Name="Current" />
    <Property Id="3" ParentId="1" Name="Site" />
    <Constructor Id="5" TypeId="{981cbc68-9edc-4f8d-872f-71146fcbb84f}">
      <Parameters>
        <Parameter ObjectPathId="3" />
        <Parameter Type="Boolean">true</Parameter>
      </Parameters>
    </Constructor>
  </ObjectPaths>
</Request>
```

The protocol server returns a collection of **TermStore** objects. In this case, there is only one.

Response:

```
[
{
"SchemaVersion":"15.0.0.0","LibraryVersion":"15.0.3410.1000","ErrorInfo":null
},2,{
"IsNull":false
},4,{
"IsNull":false
},6,{
"IsNull":false
},7,{
"ObjectType ":"SP.Taxonomy.TaxonomySession"," ObjectIdentity ":"fec14c62-7c3b-481b-851b-
c80d7802b224:ta:", "TermStores":{
"_ObjectType_":"SP.Taxonomy.TermStoreCollection","_Child_Items_":[
{
"_ObjectType_":"SP.Taxonomy.TermStore","_ObjectIdentity_":"fec14c62-7c3b-481b-851b-
c80d7802b224:st:TKE6KUAnlkq7BYswGJADmQ==","ContentTypePublishingHub":null,"DefaultLanguage":1
033,"Id":"\\Guid(293aal4c-2740-4a96-bb05-8b3018900399)\\","IsOnline":true,"Languages":[
1033
],"Name":"Managed Metadata Service Application Proxy","WorkingLanguage":1033
}
}
}
}
]
```

The protocol client calls the **TermStore.GetSiteCollectionGroup** (as specified in [MS-EMMCSON] section 3.1.5.23.2.2.8) method to retrieve a **TermGroup** object. Then it calls the **TermGroup.CreateTermSet** (as specified in [MS-EMMCSON] section 3.1.5.18.2.2.1) method to create a new navigation term set. The name of the new term set is "Navigation Demo".

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>
    <ObjectPath Id="30" ObjectPathId="29" />
    <ObjectIdentityQuery Id="31" ObjectPathId="29" />
    <ObjectPath Id="33" ObjectPathId="32" />
    <ObjectIdentityQuery Id="34" ObjectPathId="32" />
    <Method Name="CommitAll" Id="35" ObjectPathId="11" />
  </Actions>
  <ObjectPaths>
    <Method Id="29" ParentId="11" Name="GetSiteCollectionGroup">
      <Parameters>
        <Parameter ObjectPathId="3" />
        <Parameter Type="Boolean">true</Parameter>
      </Parameters>
    </Method>
    <Method Id="32" ParentId="29" Name="CreateTermSet">
      <Parameters>
        <Parameter Type="String">Navigation Demo</Parameter>
        <Parameter Type="Guid">{e742cc24-69e6-428e-81ca-156119ff0979}</Parameter>
        <Parameter Type="Int32">1033</Parameter>
      </Parameters>
    </Method>
    <Identity Id="11" Name="fec14c62-7c3b-481b-851b-c80d7802b224:st:TKE6KUAnlkq7BYswGJADmQ=="
  />
  <Property Id="3" ParentId="1" Name="Site" />
  <StaticProperty Id="1" TypeId="{3747adcd-a3c3-41b9-bfab-4a64dd2f1e0a}" Name="Current" />
</ObjectPaths>
</Request>
```

The protocol server returns the identifier of the new **TermSet** object.

Response:

```
[
{
  "SchemaVersion":"15.0.0.0","LibraryVersion":"15.0.3410.1000","ErrorInfo":null
},30,{
  "IsNull":false
},31,{
  "_ObjectIdentity_ ":"fec14c62-7c3b-481b-851b-c80d7802b224:gr:TKE6KUAnlkq7BYswGJADmeRWdFlGK2tPuhG99p0rWMc="
},33,{
  "IsNull":false
},34,{
  "_ObjectIdentity_ ":"fec14c62-7c3b-481b-851b-c80d7802b224:se:TKE6KUAnlkq7BYswGJADmeRWdFlGK2tPuhG99p0rWMckzELn5mmOQoHKFWEZ\u002fw15"
}
]
```

The protocol client calls the **NavigationTermSet.GetAsResolvedByWeb** (section [3.1.5.7.2.2.8](#)) method to create a new **NavigationTermSet** (section [3.1.5.7](#)) object using the global navigation taxonomy provider. It sets the **IsNavigationTermSet** (section [3.1.5.7.1.1.2](#)) property to true, and the **TargetUrlForChildTerms.Value** (section [3.1.5.7.1.2.2](#)) property to "`~site/Pages/Topics/Topic.aspx`".

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>
    <ObjectPath Id="39" ObjectPathId="38" />
    <ObjectPath Id="41" ObjectPathId="40" />
    <ObjectIdentityQuery Id="42" ObjectPathId="40" />
    <SetProperty Id="43" ObjectPathId="40" Name="IsNavigationTermSet">
      <Parameter Type="Boolean">true</Parameter>
    </SetProperty>
    <ObjectPath Id="45" ObjectPathId="44" />
    <SetProperty Id="46" ObjectPathId="44" Name="Value">
      <Parameter Type="String">~site/Pages/Topics/Topic.aspx</Parameter>
    </SetProperty>
    <Method Name="CommitAll" Id="47" ObjectPathId="11" />
  </Actions>
  <ObjectPaths>
    <Property Id="38" ParentId="1" Name="Web" />
    <StaticMethod Id="40" Name="GetAsResolvedByWeb" TypeId="{5ed5ae4c-8e92-4e56-af6e-d349611614d8}">
      <Parameters>
        <Parameter ObjectPathId="32" />
        <Parameter ObjectPathId="38" />
        <Parameter Type="String">GlobalNavigationTaxonomyProvider</Parameter>
      </Parameters>
    </StaticMethod>
    <Property Id="44" ParentId="40" Name="TargetUrlForChildTerms" />
    <Identity Id="11" Name="fec14c62-7c3b-481b-851b-c80d7802b224:st:TKE6KUAnlkq7BYswGJADmQ==" />
  </ObjectPaths>
  <StaticProperty Id="1" TypeId="{3747adcd-a3c3-41b9-bfab-4a64dd2f1e0a}" Name="Current" />
  <Identity Id="32" Name="fec14c62-7c3b-481b-851b-c80d7802b224:se:TKE6KUAnlkq7BYswGJADmeRWdFlGK2tPuhG99p0rWMckzELn5mmOQoHKFWEZ/w15" />
</Request>
```

The protocol server returns the identifier of the new **NavigationTermSet** object.

Response:

```
[
{
"SchemaVersion":"15.0.0.0","LibraryVersion":"15.0.3410.1000","ErrorInfo":null
},39,{
"IsNull":false
},41,{
"IsNull":false
},42,{
"_ObjectIdentity_":"c9a9c738-3bb7-475b-83f4-
7edbc963099e:nt:se:TKE6KUANlkq7BYswGJADmeRWdF1GK2tPuhG99p0rWMckzELn5mmOQoHKFEWZ\u002fw15;\u00
2fsites\u002fpub1||`1|0"
},45,{
"IsNull":false
}
]
```

Finally the protocol client creates the navigation hierarchy of **NavigationTerm** (section [3.1.5.5](#)) objects. It calls the **NavigationTermSet.CreateTerm** (section [3.1.5.7.2.2.1](#)) and **NavigationTerm.CreateTerm** (section [3.1.5.5.2.2.1](#)) methods on objects to construct each node in the hierarchy. For the "Home" menu item, it sets the **SimpleLinkUrl** (section [3.1.5.5.1.1.8](#)) property to "http://www.contoso.com". All other **NavigationTerm** objects are configured to use a friendly URL.

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>
    <ObjectPath Id="50" ObjectPathId="49" />
    <ObjectIdentityQuery Id="51" ObjectPathId="49" />
    <SetProperty Id="52" ObjectPathId="49" Name="SimpleLinkUrl">
      <Parameter Type="String">http://www.contoso.com/</Parameter>
    </SetProperty>
    <ObjectPath Id="54" ObjectPathId="53" />
    <ObjectIdentityQuery Id="55" ObjectPathId="53" />
    <ObjectPath Id="57" ObjectPathId="56" />
    <ObjectIdentityQuery Id="58" ObjectPathId="56" />
    <ObjectPath Id="60" ObjectPathId="59" />
    <ObjectIdentityQuery Id="61" ObjectPathId="59" />
    <ObjectPath Id="63" ObjectPathId="62" />
    <ObjectIdentityQuery Id="64" ObjectPathId="62" />
    <ObjectPath Id="66" ObjectPathId="65" />
    <ObjectIdentityQuery Id="67" ObjectPathId="65" />
    <Method Name="CommitAll" Id="68" ObjectPathId="11" />
  </Actions>
  <ObjectPaths>
    <Method Id="49" ParentId="40" Name="CreateTerm">
      <Parameters>
        <Parameter Type="String">Home</Parameter>
        <Parameter Type="Enum">2</Parameter>
        <Parameter Type="Guid">{33e12d60-2332-4612-917d-48b2896699b9}</Parameter>
      </Parameters>
    </Method>
    <Method Id="53" ParentId="40" Name="CreateTerm">
      <Parameters>
        <Parameter Type="String">Products</Parameter>
        <Parameter Type="Enum">1</Parameter>
        <Parameter Type="Guid">{87faa433-4e3e-4500-aa5b-e04330b12acd}</Parameter>
      </Parameters>
    </Method>
    <Method Id="56" ParentId="53" Name="CreateTerm">
      <Parameters>
        <Parameter Type="String">Bicycles</Parameter>
        <Parameter Type="Enum">1</Parameter>
        <Parameter Type="Guid">{da5e60a5-d339-44c9-8c8f-a7e6eaa2d587}</Parameter>
      </Parameters>
    </Method>
  </ObjectPaths>
</Request>
```

```

</Method>
<Method Id="59" ParentId="53" Name="CreateTerm">
  <Parameters>
    <Parameter Type="String">Skis</Parameter>
    <Parameter Type="Enum">1</Parameter>
    <Parameter Type="Guid">{d30a51bf-a71b-45b5-ae1e-945327df6f49}</Parameter>
  </Parameters>
</Method>
<Method Id="62" ParentId="40" Name="CreateTerm">
  <Parameters>
    <Parameter Type="String">Events</Parameter>
    <Parameter Type="Enum">1</Parameter>
    <Parameter Type="Guid">{7408f146-623e-4384-a53a-ec0a8c39a17a}</Parameter>
  </Parameters>
</Method>
<Method Id="65" ParentId="62" Name="CreateTerm">
  <Parameters>
    <Parameter Type="String">Summer Expo</Parameter>
    <Parameter Type="Enum">1</Parameter>
    <Parameter Type="Guid">{2236b9e8-5d6e-42fc-bf47-49a02af1ca4e}</Parameter>
  </Parameters>
</Method>
<Identity Id="11" Name="fec14c62-7c3b-481b-851b-c80d7802b224:st:TKE6KUAnlkq7BYswGJADmQ=="
/>
  <Identity Id="40" Name="c9a9c738-3bb7-475b-83f4-
7edbc963099e:nt:se:TKE6KUAnlkq7BYswGJADmeRWdF1GK2tPuhG99p0rWMckzELn5mmOQoHKFW EZ/wl5;/sites/pu
b1||`1|0" />
  </ObjectPaths>
</Request>

```

The protocol server returns the IDs of the new **NavigationTerm** objects.

Response:

```

[
{
  "SchemaVersion":"15.0.0.0","LibraryVersion":"15.0.3410.1000","ErrorInfo":null
},50,{
  "IsNull":false
},51,{
  "_ObjectIdentity_":"c9a9c738-3bb7-475b-83f4-
7edbc963099e:nt:te:TKE6KUAnlkq7BYswGJADmeRWdF1GK2tPuhG99p0rWMckzELn5mmOQoHKFW EZ\u002fwl5YC3hM
zIjEkarFUiYiWaZuQ==;\u002fsites\u002fpub1||`1|0"
},54,{
  "IsNull":false
},55,{
  "_ObjectIdentity_":"c9a9c738-3bb7-475b-83f4-
7edbc963099e:nt:te:TKE6KUAnlkq7BYswGJADmeRWdF1GK2tPuhG99p0rWMckzELn5mmOQoHKFW EZ\u002fwl5M6T6h
z5OAEWqW+BDMLEqzQ==;\u002fsites\u002fpub1||`1|0"
},57,{
  "IsNull":false
},58,{
  "_ObjectIdentity_":"c9a9c738-3bb7-475b-83f4-
7edbc963099e:nt:te:TKE6KUAnlkq7BYswGJADmeRWdF1GK2tPuhG99p0rWMckzELn5mmOQoHKFW EZ\u002fwl5pWBe2
jnTyUSMj6fm6qLVhw==;\u002fsites\u002fpub1||`1|0"
},60,{
  "IsNull":false
},61,{
  "_ObjectIdentity_":"c9a9c738-3bb7-475b-83f4-
7edbc963099e:nt:te:TKE6KUAnlkq7BYswGJADmeRWdF1GK2tPuhG99p0rWMckzELn5mmOQoHKFW EZ\u002fwl5v1EK0
xuntUWuHpRTJ99vSQ==;\u002fsites\u002fpub1||`1|0"
},63,{
  "IsNull":false
},64,{
  "_ObjectIdentity_":"c9a9c738-3bb7-475b-83f4-
7edbc963099e:nt:te:TKE6KUAnlkq7BYswGJADmeRWdF1GK2tPuhG99p0rWMckzELn5mmOQoHKFW EZ\u002fwl5RvEId
D5ihEOlOuwKjDmheg==;\u002fsites\u002fpub1||`1|0"
}
]

```

```

},66,{
  "IsNull":false
},67,{
  "ObjectIdentity ":"c9a9c738-3bb7-475b-83f4-
7edbc963099e:nt:te:TKE6KUAnlkq7BYswGJADmeRWdF1GK2tPuhG99p0rWMckzELn5mmOQoHKFWEZ\u002fwl56Lk2I
m5d\u002fEK\u002fR0mgKvHKTg==;\u002fsites\u002fpub1||`1|0"
}
]

```

4.2 Resolve URLs

In this example, URLs for navigation terms are resolved and returned to the protocol client. This is a useful operation in scenarios where the protocol client needs custom control over navigation. An example is where the protocol client is a mobile application that is rendering the menus for a small screen.

Using the menu items described in section 4.1, this example shows how to resolve the **URLs** for each top-level menu item: Home, Products, and Events.

The operation is summarized in the following sequence of requests and responses.

The protocol client creates a **TaxonomySession** ([MS-EMMCOS] section 3.1.5.15) object, and queries for all **TermStore** ([MS-EMMCOS] section 3.1.5.23) objects.

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>
    <ObjectPath Id="2" ObjectPathId="1" />
    <ObjectPath Id="4" ObjectPathId="3" />
    <ObjectPath Id="6" ObjectPathId="5" />
    <Query Id="7" ObjectPathId="5">
      <Query SelectAllProperties="false">
        <Properties>
          <Property Name="TermStores" SelectAll="true">
            <Query SelectAllProperties="false">
              <Properties />
            </Query>
          </Property>
        </Properties>
      </Query>
    </Query>
  </Actions>
  <ObjectPaths>
    <StaticProperty Id="1" TypeId="{3747adcd-a3c3-41b9-bfab-4a64dd2f1e0a}" Name="Current" />
    <Property Id="3" ParentId="1" Name="Site" />
    <Constructor Id="5" TypeId="{981cbc68-9edc-4f8d-872f-71146fcbb84f}">
      <Parameters>
        <Parameter ObjectPathId="3" />
        <Parameter Type="Boolean">true</Parameter>
      </Parameters>
    </Constructor>
  </ObjectPaths>
</Request>

```

The protocol server returns a collection of **TermStore** objects. In this case, there is only one.

Response:

```
[
```



```

{
  "SchemaVersion":"15.0.0.0","LibraryVersion":"15.0.3410.1000","ErrorInfo":null
},2,{
  "IsNull":false
},4,{
  "IsNull":false
},6,{
  "IsNull":false
},7,{
  "_ObjectType_":"SP.Taxonomy.TaxonomySession","_ObjectIdentity_":"fec14c62-7c3b-481b-851b-
c80d7802b224:ta:", "TermStores":{
    "_ObjectType_":"SP.Taxonomy.TermStoreCollection", "_Child_Items_":[
      {
        "_ObjectType_":"SP.Taxonomy.TermStore", "_ObjectIdentity_":"fec14c62-7c3b-481b-851b-
c80d7802b224:st:TKE6KUAnlkq7BYswGJADmQ==", "ContentTypePublishingHub":null, "DefaultLanguage":1
033, "Id":"\\Guid(293aa14c-2740-4a96-bb05-8b3018900399)\\", "IsOnline":true, "Languages":[
1033
], "Name":"Managed Metadata Service Application Proxy", "WorkingLanguage":1033
}
]
}
}
}
}
}

```

The protocol client calls the **TermStore.GetTermSet** ([MS-EMMCOSM] section 3.1.5.23.2.2.6) passing the identifier of the "Navigation Demo" **term set**. It calls the **NavigationTermSet.GetAsResolvedByWeb** (section 3.1.5.7.2.2.8) method to get the **NavigationTermSet** (section 3.1.5.7) wrapper for the term set. Finally, it queries for all child **NavigationTerm** (section 3.1.5.5) objects and their **Title** (section 3.1.5.5.1.2.9) properties to be loaded into the new **NavigationTermSet** object.

Request:

```

<Request AddExpandFieldTypeSuffix="true" SchemaVersion="15.0.0.0" LibraryVersion="15.0.0.0"
ApplicationName=".NET Library"
xmlns="http://schemas.microsoft.com/sharepoint/clientquery/2009">
  <Actions>
    <ObjectPath Id="13" ObjectPathId="12" />
    <ObjectIdentityQuery Id="14" ObjectPathId="12" />
    <ObjectPath Id="16" ObjectPathId="15" />
    <ObjectPath Id="18" ObjectPathId="17" />
    <ObjectIdentityQuery Id="19" ObjectPathId="17" />
    <Query Id="20" ObjectPathId="17">
      <Query SelectAllProperties="false">
        <Properties>
          <Property Name="Terms">
            <Query SelectAllProperties="false">
              <Properties />
            </Query>
          <ChildItemQuery SelectAllProperties="false">
            <Properties>
              <Property Name="Title">
                <Query SelectAllProperties="false">
                  <Properties>
                    <Property Name="Value" ScalarProperty="true" />
                  </Properties>
                </Query>
              </Property>
            </Properties>
          </ChildItemQuery>
        </Properties>
      </Query>
    </Query>
  </Actions>
</ObjectPaths>

```

```

<Method Id="12" ParentId="11" Name="GetTermSet">
  <Parameters>
    <Parameter Type="Guid">{e742cc24-69e6-428e-81ca-156119ff0979}</Parameter>
  </Parameters>
</Method>
<Property Id="15" ParentId="1" Name="Web" />
<StaticMethod Id="17" Name="GetAsResolvedByWeb" TypeId="{5ed5ae4c-8e92-4e56-af6e-
d349611614d8}">
  <Parameters>
    <Parameter ObjectPathId="12" />
    <Parameter ObjectPathId="15" />
    <Parameter Type="String">GlobalNavigationTaxonomyProvider</Parameter>
  </Parameters>
</StaticMethod>
<Identity Id="11" Name="fec14c62-7c3b-481b-851b-c80d7802b224:st:TKE6KUAnlkq7BYswGJADmQ=="
/>
  <StaticProperty Id="1" TypeId="{3747adcd-a3c3-41b9-bfab-4a64dd2f1e0a}" Name="Current" />
</ObjectPaths>
</Request>

```

The protocol server returns the identifier of the new **NavigationTermSet** object and loads it with the three child **NavigationTerm** objects: Events, Home, and Products.

Response:

```

[
  {
    "SchemaVersion":"15.0.0.0","LibraryVersion":"15.0.3410.1000","ErrorInfo":null
  },13,{
    "IsNull":false
  },14,{
    " ObjectIdentity ":"fec14c62-7c3b-481b-851b-
c80d7802b224:se:TKE6KUAnlkq7BYswGJADmeRwDf1GK2tPuhG99p0rWMckzELn5mmOQoHKFWEZ\u002fwl5"
  },16,{
    "IsNull":false
  },18,{
    "IsNull":false
  },19,{
    " ObjectIdentity ":"c9a9c738-3bb7-475b-83f4-
7edbc963099e:nt:se:TKE6KUAnlkq7BYswGJADmeRwDf1GK2tPuhG99p0rWMckzELn5mmOQoHKFWEZ\u002fwl5;\u00
2fsites\u002fpub1||`1|0"
  },20,{
    " ObjectType ":"SP.Publishing.Navigation.NavigationTermSet"," ObjectIdentity ":"c9a9c738-
3bb7-475b-83f4-
7edbc963099e:nt:se:TKE6KUAnlkq7BYswGJADmeRwDf1GK2tPuhG99p0rWMckzELn5mmOQoHKFWEZ\u002fwl5;\u00
2fsites\u002fpub1||`1|0","Terms":{
    "_ObjectType_":"SP.Publishing.Navigation.NavigationTermCollection","_Child_Items_":[
      {
        " ObjectType ":"SP.Publishing.Navigation.NavigationTerm"," ObjectIdentity ":"c9a9c738-3bb7-
475b-83f4-
7edbc963099e:nt:te:TKE6KUAnlkq7BYswGJADmeRwDf1GK2tPuhG99p0rWMckzELn5mmOQoHKFWEZ\u002fwl5Ho9S
KGXCuqbdjzasJELQ==;\u002fsites\u002fpub1||`1|0","Title":{
        "_ObjectType_":"SP.Publishing.CustomizableString","Value":"Events"
        }
      },{
        " _ObjectType_":"SP.Publishing.Navigation.NavigationTerm","_ObjectIdentity_":"c9a9c738-3bb7-
475b-83f4-
7edbc963099e:nt:te:TKE6KUAnlkq7BYswGJADmeRwDf1GK2tPuhG99p0rWMckzELn5mmOQoHKFWEZ\u002fwl5uTfpl
XVHWESrCvYXjTJJQA==;\u002fsites\u002fpub1||`1|0","Title":{
        "_ObjectType_":"SP.Publishing.CustomizableString","Value":"Home"
        }
      },{
        " ObjectType ":"SP.Publishing.Navigation.NavigationTerm"," ObjectIdentity ":"c9a9c738-3bb7-
475b-83f4-
7edbc963099e:nt:te:TKE6KUAnlkq7BYswGJADmeRwDf1GK2tPuhG99p0rWMckzELn5mmOQoHKFWEZ\u002fwl5M6T6h
z5OAEWqW+BDMLEqzQ==;\u002fsites\u002fpub1||`1|0","Title":{

```

```

    "_ObjectType_": "SP.Publishing.CustomizableString", "Value": "Products"
  }
}
]
}
}
]

```

The protocol client iterates through the three child **NavigationTerm** objects. It calls the **GetResolvedTargetUrl** (section [3.1.5.5.2.1.4](#)) method on the Events **NavigationTerm** object.

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="GetResolvedTargetUrl" Id="34" ObjectPathId="28">
      <Parameters>
        <Parameter Type="Null" />
        <Parameter Type="Array" />
      </Parameters>
    </Method>
  </Actions>
  <ObjectPaths>
    <Identity Id="28" Name="c9a9c738-3bb7-475b-83f4-
7edbc963099e:nt:te:TKE6KUAnlkq7BYswGJADmeRWdF1GK2tPuhG99p0rWMckzELn5mmOQoHKFWZ/wl58Ho9SKGXCU
qqbdjzasJELQ==;/sites/pub1||`1|0" />
  </ObjectPaths>
</Request>

```

The protocol server returns the resolved URL for Events.

Response:

```

[
{
  "SchemaVersion": "15.0.0.0", "LibraryVersion": "15.0.3410.1000", "ErrorInfo": null
}, 34, "\u002fsites\u002fpub1\u002fPages\u002fTopics\u002fTopic.aspx?TermStoreId=293aa14c-2740-
4a96-bb05-8b3018900399&TermSetId=e742cc24-69e6-428e-81ca-156119ff0979&TermId=483d7af0-97a1-
4a09-aa6d-d8f36ac2442d"
]

```

Next, the protocol client calls the **GetResolvedTargetUrl** method on the Home **NavigationTerm** object.

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="GetResolvedTargetUrl" Id="35" ObjectPathId="30">
      <Parameters>
        <Parameter Type="Null" />
        <Parameter Type="Array" />
      </Parameters>
    </Method>
  </Actions>
  <ObjectPaths>

```

```

    <Identity Id="30" Name="c9a9c738-3bb7-475b-83f4-
7edbc963099e:nt:te:TKE6KUAnlkq7BYswGJADmeRWdF1GK2tPuhG99p0rWMckzELn5mmOQoHKFW EZ/w15uTfplXVHWE
SrCvYXjTJJQA==;/sites/pub1||`1|0" />
  </ObjectPaths>
</Request>

```

Because the Home menu item is a simple link URL, the protocol server returns null.

Response:

```

[
{
  "SchemaVersion":"15.0.0.0","LibraryVersion":"15.0.3410.1000","ErrorInfo":null
},35,null
]

```

Finally the protocol client calls the **GetResolvedTargetUrl** method on the Products **NavigationTerm** object.

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="GetResolvedTargetUrl" Id="36" ObjectPathId="32">
      <Parameters>
        <Parameter Type="Null" />
        <Parameter Type="Array" />
      </Parameters>
    </Method>
  </Actions>
  <ObjectPaths>
    <Identity Id="32" Name="c9a9c738-3bb7-475b-83f4-
7edbc963099e:nt:te:TKE6KUAnlkq7BYswGJADmeRWdF1GK2tPuhG99p0rWMckzELn5mmOQoHKFW EZ/w15M6T6hz5OAE
WqW+BDMLEqzQ==;/sites/pub1||`1|0" />
  </ObjectPaths>
</Request>

```

The protocol server returns the resolved URL for Products.

Response:

```

[
{
  "SchemaVersion":"15.0.0.0","LibraryVersion":"15.0.3410.1000","ErrorInfo":null
},36,"\\u002fsites\\u002fpub1\\u002fPages\\u002fTopics\\u002fTopic.aspx?TermStoreId=293aa14c-2740-
4a96-bb05-8b3018900399&TermSetId=e742cc24-69e6-428e-81ca-156119ff0979&TermId=87faa433-4e3e-
4500-aa5b-e04330b12acd"
]

```

4.3 Changing a View

In this example, the protocol client applies a **NavigationTermSetView** (section 3.1.5.9) object to a **NavigationTermSet** (section 3.1.5.7) object to exclude deprecated **terms**. This example uses the same menu items that are specified in section 4.1. The only change is that the **NavigationTerm** (section 3.1.5.5) object that represents the Events menu item is deprecated.

In the first query for **NavigationTerm** objects, the protocol client will receive the **NavigationTerm** objects for the Home, Products, and Events menu items. The protocol client then creates a **NavigationTermSetView** object that excludes deprecated terms. After applying the new **NavigationTermSetView** object, and querying again, the protocol client will receive only the **NavigationTerm** objects for Home and Products.

The operation is summarized in the following sequence of requests and responses.

The protocol client creates a **TaxonomySession** ([MS-EMMCSON] section 3.1.5.15) object, and queries for all **TermStore** ([MS-EMMCSON] section 3.1.5.23) objects.

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>
    <ObjectPath Id="2" ObjectPathId="1" />
    <ObjectPath Id="4" ObjectPathId="3" />
    <ObjectPath Id="6" ObjectPathId="5" />
    <Query Id="7" ObjectPathId="5">
      <Query SelectAllProperties="false">
        <Properties>
          <Property Name="TermStores" SelectAll="true">
            <Query SelectAllProperties="false">
              <Properties />
            </Query>
          </Property>
        </Properties>
      </Query>
    </Query>
  </Actions>
  <ObjectPaths>
    <StaticProperty Id="1" TypeId="{3747adcd-a3c3-41b9-bfab-4a64dd2f1e0a}" Name="Current" />
    <Property Id="3" ParentId="1" Name="Site" />
    <Constructor Id="5" TypeId="{981cbc68-9edc-4f8d-872f-71146fcbb84f}">
      <Parameters>
        <Parameter ObjectPathId="3" />
        <Parameter Type="Boolean">true</Parameter>
      </Parameters>
    </Constructor>
  </ObjectPaths>
</Request>
```

The protocol server returns a collection of **TermStore** objects. In this case, there is only one.

Response:

```
[
{
  "SchemaVersion":"15.0.0.0","LibraryVersion":"15.0.3410.1000","ErrorInfo":null
},2,{
  "IsNull":false
},4,{
  "IsNull":false
},6,{
  "IsNull":false
},7,{
  "ObjectType ":"SP.Taxonomy.TaxonomySession"," ObjectIdentity ":"fec14c62-7c3b-481b-851b-
c80d7802b224:ta:","TermStores":{
  "ObjectType ":"SP.Taxonomy.TermStoreCollection"," Child Items ":[
  {
  "_ObjectType_":"SP.Taxonomy.TermStore","_ObjectIdentity_":"fec14c62-7c3b-481b-851b-
c80d7802b224:st:TKE6KUAnlkq7BYswGJADmQ==","ContentTypePublishingHub":null,"DefaultLanguage":1
033,"Id":"\\Guid(293aa14c-2740-4a96-bb05-8b3018900399)\\","IsOnline":true,"Languages":[
```

```

1033
], "Name": "Managed Metadata Service Application Proxy", "WorkingLanguage": 1033
}
]
}
}
]
]

```

The protocol client calls the **GetAsResolvedByWeb** (section [3.1.5.7.2.2.8](#)) method to obtain a **NavigationTermSet** object. The protocol client queries to load the child **NavigationTerm** objects for the **NavigationTermSet**.

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>
    <ObjectPath Id="13" ObjectPathId="12" />
    <ObjectIdentityQuery Id="14" ObjectPathId="12" />
    <ObjectPath Id="16" ObjectPathId="15" />
    <ObjectPath Id="18" ObjectPathId="17" />
    <ObjectIdentityQuery Id="19" ObjectPathId="17" />
    <Query Id="20" ObjectPathId="17">
      <Query SelectAllProperties="false">
        <Properties>
          <Property Name="Terms">
            <Query SelectAllProperties="false">
              <Properties />
            </Query>
          <ChildItemQuery SelectAllProperties="false">
            <Properties>
              <Property Name="Title">
                <Query SelectAllProperties="false">
                  <Properties>
                    <Property Name="Value" ScalarProperty="true" />
                  </Properties>
                </Query>
              </Property>
              <Property Name="IsDeprecated" ScalarProperty="true" />
            </Properties>
          </ChildItemQuery>
        </Property>
      </Properties>
    </Query>
  </Actions>
  <ObjectPaths>
    <Method Id="12" ParentId="11" Name="GetTermSet">
      <Parameters>
        <Parameter Type="Guid">{e742cc24-69e6-428e-81ca-156119ff0979}</Parameter>
      </Parameters>
    </Method>
    <Property Id="15" ParentId="1" Name="Web" />
    <StaticMethod Id="17" Name="GetAsResolvedByWeb" TypeId="{5ed5ae4c-8e92-4e56-af6e-
d349611614d8}">
      <Parameters>
        <Parameter ObjectPathId="12" />
        <Parameter ObjectPathId="15" />
        <Parameter Type="String">GlobalNavigationTaxonomyProvider</Parameter>
      </Parameters>
    </StaticMethod>
    <Identity Id="11" Name="fec14c62-7c3b-481b-851b-c80d7802b224:st:TKE6KUAnlkq7BYswGJADmQ=="
  />
  <StaticProperty Id="1" TypeId="{3747adcd-a3c3-41b9-bfab-4a64dd2f1e0a}" Name="Current" />
</ObjectPaths>

```

</Request>

The protocol server returns the new **NavigationTermSet**, and 3 **NavigationTerm** objects. The 3 **NavigationTerm** objects represent the 3 menu items: Home, Products, and Events.

Response:

```
[
{
  "SchemaVersion":"15.0.0.0","LibraryVersion":"15.0.3410.1000","ErrorInfo":null
},13,{
  "IsNull":false
},14,{
  "_ObjectIdentity_":"fec14c62-7c3b-481b-851b-c80d7802b224:se:TKE6KUAnlkq7BYswGJADmeRWdF1GK2tPuhG99p0rWMckzELn5mmOQoHKFWEZ\u002fwl5"
},16,{
  "IsNull":false
},18,{
  "IsNull":false
},19,{
  " _ObjectIdentity _":"c9a9c738-3bb7-475b-83f4-7edbc963099e:nt:se:TKE6KUAnlkq7BYswGJADmeRWdF1GK2tPuhG99p0rWMckzELn5mmOQoHKFWEZ\u002fwl5;\u002fsites\u002fpub1||`1|0"
},20,{
  "_ObjectType_":"SP.Publishing.Navigation.NavigationTermSet","_ObjectIdentity_":"c9a9c738-3bb7-475b-83f4-7edbc963099e:nt:se:TKE6KUAnlkq7BYswGJADmeRWdF1GK2tPuhG99p0rWMckzELn5mmOQoHKFWEZ\u002fwl5;\u002fsites\u002fpub1||`1|0","Terms":{
  "_ObjectType_":"SP.Publishing.Navigation.NavigationTermCollection","_Child_Items_":[
  {
    "_ObjectType_":"SP.Publishing.Navigation.NavigationTerm","_ObjectIdentity_":"c9a9c738-3bb7-475b-83f4-7edbc963099e:nt:te:TKE6KUAnlkq7BYswGJADmeRWdF1GK2tPuhG99p0rWMckzELn5mmOQoHKFWEZ\u002fwl5Ez3RQqmod02eII2HbRGvzA==;\u002fsites\u002fpub1||`1|0","Title":{
    "_ObjectType_":"SP.Publishing.CustomizableString","Value":"Events"
    },"IsDeprecated":true
    },{
    " _ObjectType _":"SP.Publishing.Navigation.NavigationTerm"," _ObjectIdentity _":"c9a9c738-3bb7-475b-83f4-7edbc963099e:nt:te:TKE6KUAnlkq7BYswGJADmeRWdF1GK2tPuhG99p0rWMckzELn5mmOQoHKFWEZ\u002fwl5fNhsJpWSxk22iH3zNA65Tw==;\u002fsites\u002fpub1||`1|0","Title":{
    "_ObjectType_":"SP.Publishing.CustomizableString","Value":"Home"
    },"IsDeprecated":false
    },{
    " _ObjectType _":"SP.Publishing.Navigation.NavigationTerm"," _ObjectIdentity _":"c9a9c738-3bb7-475b-83f4-7edbc963099e:nt:te:TKE6KUAnlkq7BYswGJADmeRWdF1GK2tPuhG99p0rWMckzELn5mmOQoHKFWEZ\u002fwl5M6T6hz5OAEWqW+BDMLEqzQ==;\u002fsites\u002fpub1||`1|0","Title":{
    " _ObjectType _":"SP.Publishing.CustomizableString","Value":"Products"
    },"IsDeprecated":false
    }
  ]
}
}
]
```

The protocol client calls the **CreateEmptyInstance** (section [3.1.5.9.2.2.1](#)) method to create a new **NavigationTermSetView** object. Then it sets the **ExcludeDeprecatedTerms** (section [3.1.5.9.1.1.1](#)) property to true on the new object. Then it calls **GetWithNewView** (section [3.1.5.7.2.2.6](#)) to obtain a new **NavigationTermSet** object that will exclude deprecated terms.

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>
    <ObjectPath Id="35" ObjectPathId="34" />
    <SetProperty Id="36" ObjectPathId="34" Name="ExcludeDeprecatedTerms">
      <Parameter Type="Boolean">true</Parameter>
    </SetProperty>
    <ObjectPath Id="38" ObjectPathId="37" />
    <ObjectIdentityQuery Id="39" ObjectPathId="37" />
  </Actions>
  <ObjectPaths>
    <StaticMethod Id="34" Name="CreateEmptyInstance" TypeId="{097234e9-47da-431f-bd12-
173c296b187b}" />
    <Method Id="37" ParentId="17" Name="GetWithNewView">
      <Parameters>
        <Parameter ObjectPathId="34" />
      </Parameters>
    </Method>
    <Identity Id="17" Name="c9a9c738-3bb7-475b-83f4-
7edbc963099e:nt:se:TKE6KUAnlkq7BYswGJADmeRWdF1GK2tPuhG99p0rWMckzELn5mmOQoHKFWFwZ/w15;/sites/pu
b1||`1|0" />
  </ObjectPaths>
</Request>

```

The protocol server returns the identifier of the new **NavigationTermSetView** object.

Response:

```

[
{
  "SchemaVersion":"15.0.0.0","LibraryVersion":"15.0.3410.1000","ErrorInfo":null
},35,{
  "IsNull":false
},38,{
  "IsNull":false
},39,{
  "_ObjectIdentity_":"c9a9c738-3bb7-475b-83f4-
7edbc963099e:nt:se:TKE6KUAnlkq7BYswGJADmeRWdF1GK2tPuhG99p0rWMckzELn5mmOQoHKFWFwZ\u002fw15;|||1
"
}
]

```

The protocol client queries to load the child **NavigationTerm** objects that match the new **NavigationTermSetView** object.

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>
    <Query Id="41" ObjectPathId="37">
      <Query SelectAllProperties="false">
        <Properties>
          <Property Name="Terms">
            <Query SelectAllProperties="false">
              <Properties />
            </Query>
          <ChildItemQuery SelectAllProperties="false">
            <Properties>
              <Property Name="Title">
                <Query SelectAllProperties="false">
                  <Properties>

```



```

        <Property Name="Value" ScalarProperty="true" />
      </Properties>
    </Query>
  </Property>
  <Property Name="IsDeprecated" ScalarProperty="true" />
</Properties>
</ChildItemQuery>
</Property>
</Properties>
</Query>
</Query>
</Actions>
<ObjectPaths>
  <Identity Id="37" Name="c9a9c738-3bb7-475b-83f4-
7edbc963099e:nt:se:TKE6KUAnlkq7BYswGJADmeRwDf1GK2tPuhG99p0rWMckzELn5mmOQoHKFW EZ/w15;|||1" />
</ObjectPaths>
</Request>

```

The protocol server returns 2 **NavigationTerm** objects that represent the menu items Home, and Products. Because the new view excludes deprecated terms, the **NavigationTerm** for Events is not returned.

Response:

```

[
  {
    "SchemaVersion":"15.0.0.0","LibraryVersion":"15.0.3410.1000","ErrorInfo":null
  },41,{
    "_ObjectType_":"SP.Publishing.Navigation.NavigationTermSet","_ObjectIdentity_":"c9a9c738-
3bb7-475b-83f4-
7edbc963099e:nt:se:TKE6KUAnlkq7BYswGJADmeRwDf1GK2tPuhG99p0rWMckzELn5mmOQoHKFW EZ\u002fw15;|||1
","Terms":{
      "ObjectType ":"SP.Publishing.Navigation.NavigationTermCollection"," Child Items ":[
        {
          "_ObjectType_":"SP.Publishing.Navigation.NavigationTerm","_ObjectIdentity_":"c9a9c738-3bb7-
475b-83f4-
7edbc963099e:nt:te:TKE6KUAnlkq7BYswGJADmeRwDf1GK2tPuhG99p0rWMckzELn5mmOQoHKFW EZ\u002fw15fNhsJ
pWSxk22iH3zNA65Tw==;|||1","Title":{
            "_ObjectType_":"SP.Publishing.CustomizableString","Value":"Home"
          },
          "IsDeprecated":false
        },{
          "ObjectType ":"SP.Publishing.Navigation.NavigationTerm"," ObjectIdentity ":"c9a9c738-3bb7-
475b-83f4-
7edbc963099e:nt:te:TKE6KUAnlkq7BYswGJADmeRwDf1GK2tPuhG99p0rWMckzELn5mmOQoHKFW EZ\u002fw15M6T6h
z5OAEWqW+BDMLEqzQ==;|||1","Title":{
            "_ObjectType_":"SP.Publishing.CustomizableString","Value":"Products"
          },
          "IsDeprecated":false
        }
      ]
    }
  }
]

```

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
- Microsoft SharePoint Server 2016

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 this document since the last release. 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.
- The removal of a document from the documentation set.

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 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 changes were introduced. Minor editorial and formatting changes may have been made, but the technical content of the document is identical to the last released version.

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.
- 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 dochelp@microsoft.com.

Section	Tracking number (if applicable) and description	Major change (Y or N)	Change type
3.1.5.4.2.1.5 SetCrawlAsFriendlyUrlPage	Updated prescriptive language.	Y	Content update.
3.1.5.5.1.2.1 CatalogTargetUrl	Updated the reference for the CustomizableString object	N	Content update.
3.1.5.18.1.1.7 Group	Added a description for the Group property.	N	Content update.
3.1.5.24.2.1.2 SetRenditions	Added error codes to the Exceptions table.	N	New content added.
4.1 Create a New Navigation Hierarchy	Updated the reference for the TargetUrlForChildTerms.Value property.	N	Content update.

8 Index

A

Abstract data model
[server](#) 17
[Applicability](#) 15

C

[Capability negotiation](#) 15
[Change tracking](#) 92
[changing a view example](#) 84
[create a new navigation hierarchy example](#) 75

D

Data model - abstract
[server](#) 17

E

Examples
[changing a view](#) 84
[create a new navigation hierarchy](#) 75
[resolve URLs](#) 80

F

[Fields - vendor-extensible](#) 15

G

[Glossary](#) 10

H

Higher-layer triggered events
[server](#) 17

I

[Implementer - security considerations](#) 90
[Index of security parameters](#) 90
[Informative references](#) 14
Initialization
[server](#) 17
[Introduction](#) 10

M

Message processing
[server](#) 17
Messages
[syntax](#) 16
[transport](#) 16

N

[Normative references](#) 13

O

Other local events
[server](#) 74
[Overview \(synopsis\)](#) 14

P

[Parameters - security index](#) 90
[Preconditions](#) 15
[Prerequisites](#) 15
[Product behavior](#) 91

R

[References](#) 13
[informative](#) 14
[normative](#) 13
[Relationship to other protocols](#) 14
[resolve URLs example](#) 80

S

Security
[implementer considerations](#) 90
[parameter index](#) 90
Sequencing rules
[server](#) 17
Server
[abstract data model](#) 17
[higher-layer triggered events](#) 17
[initialization](#) 17
[message processing](#) 17
[other local events](#) 74
[sequencing rules](#) 17
[timer events](#) 74
[timers](#) 17
[Standards assignments](#) 15
[Syntax](#) 16

T

Timer events
[server](#) 74
Timers
[server](#) 17
[Tracking changes](#) 92
[Transport](#) 16
Triggered events - higher-layer
[server](#) 17

V

[Vendor-extensible fields](#) 15
[Versioning](#) 15