Package ‘salesforcer’

July 6, 2021

Title An Implementation of ‘Salesforce’ APIs Using Tidy Principles

Version 1.0.0

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Description Functions connecting to the ‘Salesforce’ Platform APIs (REST, SOAP, Bulk 1.0, Bulk 2.0, Metadata, Reports and Dashboards)

<https://trailhead.salesforce.com/en/content/learn/modules/api_basics/api_basics_overview>.

``API'' is an acronym for `application programming interface''. Most all calls from these APIs are supported as they use CSV, XML or JSON data that can be parsed into R data structures. For more details please see the ‘Salesforce’ API documentation and this package’s website

<https://stevenmmortimer.github.io/salesforcer/> for more information, documentation, and examples.

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URL https://github.com/StevenMMortimer/salesforcer

BugReports https://github.com/StevenMMortimer/salesforcer/issues

Depends R (>= 3.6.0)

Imports methods (>= 3.6.0), utils (>= 3.6.0), stats (>= 3.6.0), dplyr (>= 1.0.0), purrr (>= 0.3.4), vctrs (>= 0.3.4), tibble (>= 3.0.3), readr (>= 1.3.1), lubridate (>= 1.7.8), anytime (>= 0.3.9), rlang (>= 0.4.7), htr (>= 1.4.1), curl (>= 4.3), data.table (>= 1.13.0), XML (>= 3.99-0.3), xml2 (>= 1.3.2), jsonlite (>= 1.6.1), rlist (>= 0.4.6.1), zip (>= 2.0.4), base64enc (>= 0.1-3), mime (>= 0.9), lifecycle (>= 0.2.0)

Suggests knitr, rmarkdown, testthat, spelling, here, microbenchmark, ggplot2, sessioninfo

VignetteBuilder knitr

ByteCompile true

Encoding UTF-8

Language en-US

RoxygenNote 7.1.1
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**Description**

This function looks for instances of elements in a list that have the same name and then combine them all into a single comma separated character string (referenceTo) or tbl_df (picklistValues).

**Usage**

```r
collapse_list_with_dupe_names(x)
```

**Arguments**

- `x` : list; a list, typically returned from the API that we would parse through

**Value**

A list containing one row per field for the requested object.

**Note**

The tibble only contains the fields that the user can view, as defined by the user’s field-level security settings.

**Examples**

```r
## Not run:
obj_dat <- sf.describe_objects(object_names = "Contact", api_type = "SOAP")[[1]]
obj_fields_list <- obj_dat[[names(obj_dat) == "fields"]]
map(collapse_list_with_dupe_names)
## End(Not run)
```

**Description**

A function to create a variety of objects that are part of the Metadata API service Below is a list of objects and their required components to be created with this function:

**Usage**

```r
metadata_type_validator(obj_type, obj_data)
```
Arguments

- `obj_type`: a string from one of the object types described above
- `obj_data`: a list of lists or a `data.frame` with the required inputs to create the `obj_type` specified.

Details

**AccessMapping**

- `accessLevel`: a character
- `object`: a character
- `objectField`: a character
- `userField`: a character

**AccountSettings**

- `fullName`: a character (inherited from Metadata)
- `enableAccountOwnerReport`: a character either 'true' or 'false'
- `enableAccountTeams`: a character either 'true' or 'false'
- `showViewHierarchyLink`: a character either 'true' or 'false'

**AccountSharingRuleSettings**

- `caseAccessLevel`: a character
- `contactAccessLevel`: a character
- `opportunityAccessLevel`: a character

**ActionLinkGroupTemplate**

- `fullName`: a character (inherited from Metadata)
- `actionLinkTemplates`: a `ActionLinkTemplate`
- `category`: a `PlatformActionGroupCategory` - which is a character taking one of the following values:
  - Primary
  - Overflow
- `executionsAllowed`: a `ActionLinkExecutionsAllowed` - which is a character taking one of the following values:
  - Once
  - OncePerUser
  - Unlimited
- `hoursUntilExpiration`: an integer
- `isPublished`: a character either 'true' or 'false'
- `name`: a character
ActionLinkTemplate

actionUrl a character
headers a character
isConfirmationRequired a character either 'true' or 'false'
isGroupDefault a character either 'true' or 'false'
label a character
labelKey a character
linkType a ActionLinkType - which is a character taking one of the following values:
  • API
  • APIAsync
  • Download
  • UI
method a ActionLinkHttpMethod - which is a character taking one of the following values:
  • HttpDelete
  • HttpHead
  • HttpGet
  • HttpPatch
  • HttpPost
  • HttpPut
position an integer
requestBody a character
userAlias a character
userVisibility a ActionLinkUserVisibility - which is a character taking one of the following values:
  • Creator
  • Everyone
  • EveryoneButCreator
  • Manager
  • CustomUser
  • CustomExcludedUser

ActionOverride

actionName a character
comment a character
content a character
formFactor a FormFactor - which is a character taking one of the following values:
  • Small
  • Medium
  • Large
skipRecordTypeSelect a character either 'true' or 'false'
type a ActionOverrideType - which is a character taking one of the following values:

- Default
- Standard
- Scontrol
- Visualforce
- Flexipage
- LightningComponent

ActivitiesSettings

fullName a character (inherited from Metadata)
allowUsersToRelateMultipleContactsToTasksAndEvents a character either 'true' or 'false'
autoRelateEventAttendees a character either 'true' or 'false'
enableActivityReminders a character either 'true' or 'false'
enableClickCreateEvents a character either 'true' or 'false'
enableDragAndDropScheduling a character either 'true' or 'false'
enableEmailTracking a character either 'true' or 'false'
enableGroupTasks a character either 'true' or 'false'
enableListViewScheduling a character either 'true' or 'false'
enableLogNote a character either 'true' or 'false'
enableMultidayEvents a character either 'true' or 'false'
enableRecurringEvents a character either 'true' or 'false'
enableRecurringTasks a character either 'true' or 'false'
enableSidebarCalendarShortcut a character either 'true' or 'false'
enableSimpleTaskCreateUI a character either 'true' or 'false'
enableUNSTaskDelegatedToNotifications a character either 'true' or 'false'
meetingRequestsLogo a character
showCustomLogoMeetingRequests a character either 'true' or 'false'
showEventDetailsMultiUserCalendar a character either 'true' or 'false'
showHomePageHoverLinksForEvents a character either 'true' or 'false'
showMyTasksHoverLinks a character either 'true' or 'false'

AddressSettings

fullName a character (inherited from Metadata)
countriesAndStates a CountriesAndStates

AdjustmentsSettings

enableAdjustments a character either 'true' or 'false'
enableOwnerAdjustments a character either 'true' or 'false'
AgentConfigAssignments
profiles a AgentConfigProfileAssignments
users a AgentConfigUserAssignments

AgentConfigButtons
button a character

AgentConfigProfileAssignments
profile a character

AgentConfigSkills
skill a character

AgentConfigUserAssignments
user a character

AnalyticsCloudComponentLayoutItem
assetType a character
devName a character
error a character
filter a character
height an integer
hideOnError a character either 'true' or 'false'
showHeader a character either 'true' or 'false'
showSharing a character either 'true' or 'false'
showTitle a character either 'true' or 'false'
width a character

AnalyticSnapshot
fullName a character (inherited from Metadata)
description a character
groupColumn a character
mappings a AnalyticSnapshotMapping
name a character
runningUser a character
sourceReport a character
targetObject a character

AnalyticSnapshotMapping
aggregateType a ReportSummaryType - which is a character taking one of the following values:
  • Sum
  • Average
  • Maximum
  • Minimum
  • None
sourceField a character
sourceType a ReportJobSourceTypes - which is a character taking one of the following values:
  • tabular
  • summary
  • snapshot
targetField a character

ApexClass
content a character formed using base64encode (inherited from MetadataWithContent)
apiVersion a numeric
packageVersions a PackageVersion
status a ApexCodeUnitStatus - which is a character taking one of the following values:
  • Inactive
  • Active
  • Deleted

ApexComponent
content a character formed using base64encode (inherited from MetadataWithContent)
apiVersion a numeric
description a character
label a character
packageVersions a PackageVersion

ApexPage
content a character formed using base64encode (inherited from MetadataWithContent)
apiVersion a numeric
availableInTouch a character either ’true’ or ’false’
confirmationTokenRequired a character either ’true’ or ’false’
description a character
label a character
packageVersions a PackageVersion

ApexTestSuite
**metadata_type_validator**

**fullNa**me a character (inherited from Metadata)

**testClassName** a character

**ApexTrigger**

**content** a character formed using `base64encode` (inherited from MetadataWithContent)

**apiVersion** a numeric

**packageVersions** a PackageVersion

**status** a ApexCodeUnitStatus - which is a character taking one of the following values:
- Inactive
- Active
- Deleted

**AppActionOverride**

**actionName** a character (inherited from ActionOverride)

**comment** a character (inherited from ActionOverride)

**content** a character (inherited from ActionOverride)

**formFactor** a FormFactor (inherited from ActionOverride)

**skipRecordTypeSelect** a character either 'true' or 'false' (inherited from ActionOverride)

**type** a ActionOverrideType (inherited from ActionOverride)

**pageOrSobjectType** a character

**AppBrand**

**footerColor** a character

**headerColor** a character

**logo** a character

**logoVersion** an integer

**shouldOverrideOrgTheme** a character either 'true' or 'false'

**AppComponentList**

**alignment** a character

**components** a character

**AppMenu**

**fullNa**me a character (inherited from Metadata)

**appMenuItems** a AppMenuItem

**AppMenuItem**

**name** a character

**type** a character
AppPreferences

enableCustomizeMyTabs a character either ‘true’ or ‘false’
enableKeyboardShortcuts a character either ‘true’ or ‘false’
enableListViewHover a character either ‘true’ or ‘false’
enableListViewReskin a character either ‘true’ or ‘false’
enableMultiMonitorComponents a character either ‘true’ or ‘false’
enablePinTabs a character either ‘true’ or ‘false’
enableTabHover a character either ‘true’ or ‘false’
enableTabLimits a character either ‘true’ or ‘false’
saveUserSessions a character either ‘true’ or ‘false’

AppProfileActionOverride

actionName a character (inherited from ProfileActionOverride)
content a character (inherited from ProfileActionOverride)
formFactor a FormFactor (inherited from ProfileActionOverride)
pageOrSobjectType a character (inherited from ProfileActionOverride)
recordType a character (inherited from ProfileActionOverride)
type a ActionOverrideType (inherited from ProfileActionOverride)
profile a character

ApprovalAction

action a WorkflowActionReference

ApprovalEntryCriteria

booleanFilter a character
criteriaItems a FilterItem
formula a character

ApprovalPageField

field a character

ApprovalProcess

fullName a character (inherited from Metadata)
active a character either ‘true’ or ‘false’
allowRecall a character either ‘true’ or ‘false’
allowedSubmitters a ApprovalSubmitter
approvalPageFields a ApprovalPageField
approvalStep a ApprovalStep
description a character
emailTemplate a character
enableMobileDeviceAccess a character either 'true' or 'false'
entryCriteria a ApprovalEntryCriteria
finalApprovalActions a ApprovalAction
finalApprovalRecordLock a character either 'true' or 'false'
finalRejectionActions a ApprovalAction
finalRejectionRecordLock a character either 'true' or 'false'
initialSubmissionActions a ApprovalAction
label a character
nextAutomatedApprover a NextAutomatedApprover
postTemplate a character
recallActions a ApprovalAction
recordEditability a RecordEditabilityType which is a character taking one of the following values:
  • AdminOnly
  • AdminOrCurrentApprover
showApprovalHistory a character either 'true' or 'false'

ApprovalStep
allowDelegate a character either 'true' or 'false'
approvalActions a ApprovalAction
assignedApprover a ApprovalStepApprover
description a character
entryCriteria a ApprovalEntryCriteria
ifCriteriaNotMet a StepCriteriaNotMetType which is a character taking one of the following values:
  • ApproveRecord
  • RejectRecord
  • GotoNextStep
label a character
name a character
rejectBehavior a ApprovalStepRejectBehavior
rejectionActions a ApprovalAction

ApprovalStepApprover
approver a Approver
whenMultipleApprovers a RoutingType which is a character taking one of the following values:
• Unanimous
• FirstResponse

ApprovalStepRejectBehavior
type a StepRejectBehaviorType - which is a character taking one of the following values:
  • RejectRequest
  • BackToPrevious

ApprovalSubmitter
submitter a character
type a ProcessSubmitterType - which is a character taking one of the following values:
  • group
  • role
  • user
  • roleSubordinates
  • roleSubordinatesInternal
  • owner
  • creator
  • partnerUser
  • customerPortalUser
  • portalRole
  • portalRoleSubordinates
  • allInternalUsers

Approver
name a character
type a NextOwnerType - which is a character taking one of the following values:
  • adhoc
  • user
  • userHierarchyField
  • relatedUserField
  • queue

AppWorkspaceConfig
mappings a WorkspaceMapping

ArticleTypeChannelDisplay

ArticleTypeTemplates a ArticleTypeTemplate

ArticleTypeTemplate
channel a Channel - which is a character taking one of the following values:
• AllChannels
• App
• Pkb
• Csp
• Prm

page  a character

template  a Template - which is a character taking one of the following values:
  • Page
  • Tab
  • Toc

AssignmentRule

cfullName  a character (inherited from Metadata)
cactive  a character either ‘true’ or ‘false’
cruleEntry  a RuleEntry

AssignmentRules
cfullName  a character (inherited from Metadata)
cassignmentRule  a AssignmentRule

AssistantRecommendationType

cfullName  a character (inherited from Metadata)
cdescription  a character
cmasterLabel  a character
cplatformActionList  a PlatformActionList
csubjectType  a character
ctitle  a character

Attachment

ccontent  a character formed using base64encode
cname  a character

AuraDefinitionBundle

cfullName  a character (inherited from Metadata)
cSVGContent  a character formed using base64encode
capiVersion  a numeric
ccontrollerContent  a character formed using base64encode
cdescription  a character
cdesignContent  a character formed using base64encode
documentationContent  a character formed using base64encode
helperContent  a character formed using base64encode
markup  a character formed using base64encode
modelContent  a character formed using base64encode
packageVersions  a PackageVersion
rendererContent  a character formed using base64encode
styleContent  a character formed using base64encode
testsuiteContent  a character formed using base64encode
type  a AuraBundleType - which is a character taking one of the following values:
  • Application
  • Component
  • Event
  • Interface
  • Tokens

AuthProvider

fullName  a character (inherited from Metadata)
authorizeUrl  a character
consumerKey  a character
customerSecret  a character
customMetadataTypeRecord  a character
defaultScopes  a character
errorMessage  a character
executionUser  a character
friendlyName  a character
iconUrl  a character
idTokenIssuer  a character
includeOrgIdInIdentifier  a character either 'true' or 'false'
logoutUrl  a character
plugin  a character
portal  a character
providerType  a AuthProviderType - which is a character taking one of the following values:
  • Facebook
  • Janrain
  • Salesforce
  • OpenIdConnect
  • MicrosoftACS
  • LinkedIn
  • Twitter
• Google
• GitHub
• Custom

registrationHandler a character
sendAccessTokenInHeader a character either 'true' or 'false'
sendClientCredentialsInHeader a character either 'true' or 'false'
tokenUrl a character
userInfoUrl a character

AutoResponseRule

fullName a character (inherited from Metadata)
active a character either 'true' or 'false'
ruleEntry a RuleEntry

AutoResponseRules

fullName a character (inherited from Metadata)
autoResponseRule a AutoResponseRule

BrandingSet

fullName a character (inherited from Metadata)
brandingSetProperty a BrandingSetProperty
description a character
masterLabel a character
type a character

BrandingSetProperty

propertyName a character
propertyValue a character

BusinessHoursEntry

fullName a character (inherited from Metadata)
active a character either 'true' or 'false'
default a character either 'true' or 'false'
fridayEndTime a character formatted as 'hh:mm:ssZ
fridayStartTime a character formatted as 'hh:mm:ssZ
mondayEndTime a character formatted as 'hh:mm:ssZ
mondayStartTime a character formatted as 'hh:mm:ssZ
name a character
saturdayEndTime a character formatted as 'hh:mm:ssZ
saturdayStartTime a character formatted as 'hh:mm:ssZ
sundayEndTime a character formatted as 'hh:mm:ssZ
sundayStartTime a character formatted as 'hh:mm:ssZ
thursdayEndTime a character formatted as 'hh:mm:ssZ
thursdayStartTime a character formatted as 'hh:mm:ssZ
timeZoneId a character
tuesdayEndTime a character formatted as 'hh:mm:ssZ
tuesdayStartTime a character formatted as 'hh:mm:ssZ
wednesdayEndTime a character formatted as 'hh:mm:ssZ
wednesdayStartTime a character formatted as 'hh:mm:ssZ

BusinessHoursSettings

fullName a character (inherited from Metadata)
businessHours a BusinessHoursEntry
holidays a Holiday

BusinessProcess

fullName a character (inherited from Metadata)
description a character
isActive a character either 'true' or 'false'
values a PicklistValue

CallCenter

fullName a character (inherited from Metadata)
adapterUrl a character
customSettings a character
displayName a character
displayNameLabel a character
internalNameLabel a character
sections a CallCenterSection
version a character

CallCenterItem

label a character
name a character
value a character

CallCenterSection
items a CallCenterItem
label a character
name a character

CampaignInfluenceModel

fullName a character (inherited from Metadata)
isActive a character either 'true' or 'false'
isDefaultModel a character either 'true' or 'false'
isModelLocked a character either 'true' or 'false'
modelDescription a character
name a character
recordPreference a character

CaseSettings

fullName a character (inherited from Metadata)
caseAssignNotificationTemplate a character
caseCloseNotificationTemplate a character
caseCommentNotificationTemplate a character
caseCreateNotificationTemplate a character
caseFeedItemSettings a FeedItemSettings
closeCaseThroughStatusChange a character either 'true' or 'false'
defaultCaseOwner a character
defaultCaseOwnerType a character
defaultCaseUser a character
emailActionDefaultsHandlerClass a character
emailToCase a EmailToCaseSettings
enableCaseFeed a character either 'true' or 'false'
enableDraftEmails a character either 'true' or 'false'
enableEarlyEscalationRuleTriggers a character either 'true' or 'false'
enableEmailActionDefaultsHandler a character either 'true' or 'false'
enableSuggestedArticlesApplication a character either 'true' or 'false'
enableSuggestedArticlesCustomerPortal a character either 'true' or 'false'
enableSuggestedArticlesPartnerPortal a character either 'true' or 'false'
enableSuggestedSolutions a character either 'true' or 'false'
keepRecordTypeOnAssignmentRule a character either 'true' or 'false'
notifyContactOnCaseComment a character either 'true' or 'false'
notifyDefaultCaseOwner a character either 'true' or 'false'
notifyOwnerOnCaseComment a character either 'true' or 'false'
metadata_type_validator

notifyOwnerOnCaseOwnerChange  a character either 'true' or 'false'
showEmailAttachmentsInCaseAttachmentsRL  a character either 'true' or 'false'
showFewerCloseActions  a character either 'true' or 'false'
systemUserEmail  a character
useSystemEmailAddress  a character either 'true' or 'false'
useSystemUserAsDefaultCaseUser  a character either 'true' or 'false'
webToCase  a WebToCaseSettings

CaseSubjectParticle

fullName  a character (inherited from Metadata)
index  an integer
textField  a character
type  a CaseSubjectParticleType - which is a character taking one of the following values:
  • ProvidedString
  • Source
  • MessageType
  • SocialHandle
  • SocialNetwork
  • Sentiment
  • RealName
  • Content
  • PipeSeparator
  • ColonSeparator
  • HyphenSeparator

Certificate

certificationContent  a character formed using base64encode (inherited from MetadataWithContent)
certificationSignature  a character either 'true' or 'false'
enryptedWithPlatformEncryption  a character either 'true' or 'false'
expirationDate  a character formatted as 'yyyy-mm-ddThh:mm:ssZ'
keySize  an integer
masterLabel  a character
privateKeyExportable  a character either 'true' or 'false'

ChannelLayout

fullName  a character (inherited from Metadata)
enabledChannels  a character
label  a character
layoutItems  a ChannelLayoutItem
recordType a character

ChannelLayoutItem

field a character

ChartSummary

aggregate a ReportSummaryType - which is a character taking one of the following values:
- Sum
- Average
- Maximum
- Minimum
- None

axisBinding a ChartAxis - which is a character taking one of the following values:
- x
- y
- y2
- r

column a character

ChatterAnswersReputationLevel

name a character

value an integer

ChatterAnswersSettings

fullName a character (inherited from Metadata)

emailFollowersOnBestAnswer a character either 'true' or 'false'

emailFollowersOnReply a character either 'true' or 'false'

emailOwnerOnPrivateReply a character either 'true' or 'false'

emailOwnerOnReply a character either 'true' or 'false'

enableAnswerViaEmail a character either 'true' or 'false'

enableChatterAnswers a character either 'true' or 'false'

enableFacebookSSO a character either 'true' or 'false'

enableInlinePublisher a character either 'true' or 'false'

enableReputation a character either 'true' or 'false'

enableRichTextEditor a character either 'true' or 'false'

facebookAuthProvider a character

showInPortals a character either 'true' or 'false'

ChatterExtension
fullName  a character (inherited from Metadata)
compositionComponent  a character
description  a character
extensionName  a character
headerText  a character
hoverText  a character
icon  a character
isProtected  a character either 'true' or 'false'
masterLabel  a character
renderComponent  a character
type  a ChatterExtensionType - which is a character taking one of the following values:
  • Lightning

ChatterMobileSettings

enablePushNotifications  a character either 'true' or 'false'

CleanDataService

fullName  a character (inherited from Metadata)
cleanRules  a CleanRule
description  a character
masterLabel  a character
matchEngine  a character

CleanRule

bulkEnabled  a character either 'true' or 'false'
bypassTriggers  a character either 'true' or 'false'
bypassWorkflow  a character either 'true' or 'false'
description  a character
developerName  a character
fieldMappings  a FieldMapping
masterLabel  a character
matchRule  a character
sourceSobjectType  a character
status  a CleanRuleStatus - which is a character taking one of the following values:
  • Inactive
  • Active
targetSobjectType  a character

CodeLocation
column an integer
line an integer
numExecutions an integer
time a numeric

Community

fullName a character (inherited from Metadata)
active a character either 'true' or 'false'
chatterAnswersFacebookSsoUrl a character
communityFeedPage a character
dataCategoryName a character
description a character
eEmailFooterDocument a character
eEmailHeaderDocument a character
eMailNotificationUrl a character
enableChatterAnswers a character either 'true' or 'false'
enablePrivateQuestions a character either 'true' or 'false'
expertsGroup a character
portal a character
reputationLevels a ReputationLevels
showInPortal a character either 'true' or 'false'
site a character

CommunityCustomThemeLayoutType

description a character
label a character

CommunityRoles

customerUserRole a character
employeeUserRole a character
partnerUserRole a character

CommunityTemplateBundleInfo

description a character
image a character
order an integer
title a character
type a CommunityTemplateBundleInfoType - which is a character taking one of the following values:
  • Highlight
  • PreviewImage

CommunityTemplateDefinition

fullName a character (inherited from Metadata)

baseTemplate a CommunityBaseTemplate - which is a character taking one of the following values:
  • c

bundlesInfo a CommunityTemplateBundleInfo

category a CommunityTemplateCategory - which is a character taking one of the following values:
  • IT
  • Marketing
  • Sales
  • Service

defaultBrandingSet a character
defaultThemeDefinition a character
description a character
enableExtendedCleanUpOnDelete a character either 'true' or 'false'
masterLabel a character

navigationLinkSet a NavigationLinkSet

pageSetting a CommunityTemplatePageSetting

CommunityTemplatePageSetting

page a character

themeLayout a character

CommunityThemeDefinition

fullName a character (inherited from Metadata)
customThemeLayoutType a CommunityCustomThemeLayoutType
description a character
enableExtendedCleanUpOnDelete a character either 'true' or 'false'
masterLabel a character

themeSetting a CommunityThemeSetting

CommunityThemeSetting

customThemeLayoutType a character

themeLayout a character
themeLayoutType a CommunityThemeLayoutType - which is a character taking one of the following values:
  - Login
  - Home
  - Inner

CompactLayout

fullName a character (inherited from Metadata)
fields a character
label a character

CompanySettings

fullName a character (inherited from Metadata)
fiscalYear a FiscalYearSettings

ComponentInstance

componentInstanceProperties a ComponentInstanceProperty
componentName a character
visibilityRule a UiFormulaRule

ComponentInstanceProperty

name a character

type a ComponentInstancePropertyTypeEnum - which is a character taking one of the following values:
  - decorator
value a character

ConnectedApp

fullName a character (inherited from Metadata)
attributes a ConnectedAppAttribute
canvasConfig a ConnectedAppCanvasConfig
contactEmail a character
contactPhone a character
description a character
iconUrl a character
infoUrl a character
ipRanges a ConnectedAppIpRange
label a character
logoUrl a character
**App Standalone Metadata Type Validator**

```python
mobileAppConfig: ConnectedAppMobileDetailConfig
mobileStartUrl: character
oauthConfig: ConnectedAppOauthConfig
plugin: character
samlConfig: ConnectedAppSamlConfig
startUrl: character

ConnectedAppAttribute

formula: character
key: character

ConnectedAppCanvasConfig

accessMethod: AccessMethod - which is a character taking one of the following values:
  - Get
  - Post
canvasUrl: character
lifecycleClass: character
locations: CanvasLocationOptions - which is a character taking one of the following values:
  - None
  - Chatter
  - UserProfile
  - Visualforce
  - Aura
  - Publisher
  - ChatterFeed
  - ServiceDesk
  - OpenCTI
  - AppLauncher
  - MobileNav
  - PageLayout
options: CanvasOptions - which is a character taking one of the following values:
  - HideShare
  - HideHeader
  - PersonalEnabled
samlInitiationMethod: SamlInitiationMethod - which is a character taking one of the following values:
  - None
  - IdpInitiated
  - SpInitiated
```
ConnectedAppIpRange

description a character
end a character
start a character

ConnectedAppMobileDetailConfig

applicationBinaryFile a character formed using base64encode
applicationBinaryFileName a character
applicationBundleIdentifier a character
applicationFileLength an integer
applicationIconFile a character
applicationIconFileName a character
applicationInstallUrl a character
devicePlatform a DevicePlatformType - which is a character taking one of the following values:
  • ios
  • android
deviceType a DeviceType - which is a character taking one of the following values:
  • phone
  • tablet
  • minitablet
minimumOsVersion a character
privateApp a character either 'true' or 'false'
version a character

ConnectedAppOauthConfig

callbackUrl a character
certificate a character
consumerKey a character
consumerSecret a character
scopes a ConnectedAppOauthAccessScope - which is a character taking one of the following values:
  • Basic
  • Api
  • Web
  • Full
  • Chatter
  • CustomApplications
  • RefreshToken
  • OpenID
• Profile
• Email
• Address
• Phone
• OfflineAccess
• CustomPermissions
• Wave
• Eclair

disSingleLogoutUrl a character

ConnectedAppSamlConfig

acsUrl a character
certificate a character
cipheringCertificate a character
cipheringType a SamlEncryptionType - which is a character taking one of the following values:
  • AES_128
  • AES_256
  • Triple_Des
desEncryptedUrl a character
issuer a character

samlIdpSLOBindingEnum a SamlSLOBinding - which is a character taking one of the following values:
  • RedirectBinding
  • PostBinding

samlNameIdFormat a SamlNameIdFormatType - which is a character taking one of the following values:
  • Unspecified
  • EmailAddress
  • Persistent
  • Transient
samlSloUrl a character

samlSubjectCustomAttr a character

samlSubjectType a SamlSubjectType - which is a character taking one of the following values:
  • Username
  • FederationId
  • UserId
  • SpokeId
  • CustomAttribute
  • PersistentId

Container
height an integer
isContainerAutoSizeEnabled a character either 'true' or 'false'
region a character
sidebarComponents a SidebarComponent
style a character
unit a character
width an integer

ContentAsset

c content a character formed using base64encode (inherited from MetadataWithContent)
format a ContentAssetFormat - which is a character taking one of the following values:
  • Original
  • ZippedVersions
language a character
masterLabel a character
originNetwork a character
relationships a ContentAssetRelationships
versions a ContentAssetVersions

ContentAssetLink

access a ContentAssetAccess - which is a character taking one of the following values:
  • VIEWER
  • COLLABORATOR
  • INFERRED
isManagingWorkspace a character either 'true' or 'false'
name a character

ContentAssetRelationships

insightsApplication a ContentAssetLink
network a ContentAssetLink
organization a ContentAssetLink
workspace a ContentAssetLink

ContentAssetVersion

number a character
pathOnClient a character
zipEntry a character

ContentAssetVersions
version a ContentAssetVersion

ContractSettings

fullName a character (inherited from Metadata)
autoCalculateEndDate a character either 'true' or 'false'
autoExpirationDelay a character
autoExpirationRecipient a character
autoExpireContracts a character either 'true' or 'false'
enableContractHistoryTracking a character either 'true' or 'false'
notifyOwnersOnContractExpiration a character either 'true' or 'false'

CorsWhitelistOrigin

fullName a character (inherited from Metadata)
urlPattern a character

CountriesAndStates

countries a Country

Country

active a character either 'true' or 'false'
integrationValue a character
isoCode a character
label a character
orgDefault a character either 'true' or 'false'
standard a character either 'true' or 'false'
states a State
visible a character either 'true' or 'false'

CspTrustedSite

fullName a character (inherited from Metadata)
description a character
defaultUrl a character
isActive a character either 'true' or 'false'

CustomApplication

fullName a character (inherited from Metadata)
actionOverrides a AppActionOverride
brand a AppBrand
consoleConfig a ServiceCloudConsoleConfig
**Metadata Type Validator**

- `defaultLandingTab`: a character
- `description`: a character
- `formFactors`: a `FormFactor` - which is a character taking one of the following values:
  - `Small`
  - `Medium`
  - `Large`
- `isServiceCloudConsole`: a character either 'true' or 'false'
- `label`: a character
- `logo`: a character
- `navType`: a `NavType` - which is a character taking one of the following values:
  - `Standard`
  - `Console`
- `preferences`: a `AppPreferences`
- `profileActionOverrides`: a `AppProfileActionOverride`
- `setupExperience`: a character
- `subscriberTabs`: a character
- `tabs`: a character
- `uiType`: a `UiType` - which is a character taking one of the following values:
  - `Aloha`
  - `Lightning`
- `utilityBar`: a character
- `workspaceConfig`: a `AppWorkspaceConfig`

**Custom Application Component**

- `fullName`: a character (inherited from Metadata)
- `buttonIconUrl`: a character
- `buttonStyle`: a character
- `buttonText`: a character
- `buttonWidth`: an integer
- `height`: an integer
- `isHeightFixed`: a character either 'true' or 'false'
- `isHidden`: a character either 'true' or 'false'
- `isWidthFixed`: a character either 'true' or 'false'
- `visualforcePage`: a character
- `width`: an integer

**Custom Application Translation**

- `label`: a character
name  a character

CustomConsoleComponents

primaryTabComponents  a PrimaryTabComponents
subtabComponents  a SubtabComponents

CustomDataType

fullName  a character (inherited from Metadata)
customDataTypeComponents  a CustomDataTypeComponent
description  a character
displayFormula  a character
editComponentsOnSeparateLines  a character either 'true' or 'false'
label  a character
rightAligned  a character either 'true' or 'false'
supportComponentsInReports  a character either 'true' or 'false'

CustomDataTypeComponent

developerSuffix  a character
enforceFieldRequiredness  a character either 'true' or 'false'
label  a character
length  an integer
precision  an integer
scale  an integer
sortOrder  a SortOrder - which is a character taking one of the following values:
  • Asc
  • Desc
sortPriority  an integer
type  a FieldType - which is a character taking one of the following values:
  • AutoNumber
  • Lookup
  • MasterDetail
  • Checkbox
  • Currency
  • Date
  • DateTime
  • Email
  • Number
  • Percent
  • Phone
- Picklist
- MultiselectPicklist
- Text
- TextArea
- LongTextArea
- Html
- Url
- EncryptedText
- Summary
- Hierarchy
- File
- MetadataRelationship
- Location
- ExternalLookup
- IndirectLookup
- CustomDataType
- Time

**CustomDataTypeComponentTranslation**

`developerSuffix` a character
`label` a character

**CustomDataTypeTranslation**

`components` a CustomDataTypeComponentTranslation
`customDataTypeName` a character
`description` a character
`label` a character

**CustomExperience**

`fullName` a character (inherited from Metadata)
`allowInternalUserLogin` a character either 'true' or 'false'
`branding` a CustomExperienceBranding
`changePasswordEmailTemplate` a character
`emailFooterLogo` a character
`emailFooterText` a character
`emailSenderAddress` a character
`emailSenderName` a character
`enableErrorPageOverridesForVisualforce` a character either 'true' or 'false'
`forgotPasswordEmailTemplate` a character
`picassoSite` a character
sObjectType  a character
sendWelcomeEmail  a character either 'true' or 'false'
site  a character
siteAsContainerEnabled  a character either 'true' or 'false'
tabs  a CustomExperienceTabSet
urlPathPrefix  a character
welcomeEmailTemplate  a character
CustomExperienceBranding

loginFooterText  a character
loginLogo  a character
pageFooter  a character
pageHeader  a character
primaryColor  a character
primaryComplementColor  a character
quaternaryColor  a character
quaternaryComplementColor  a character
secondaryColor  a character
tertiaryColor  a character
tertiaryComplementColor  a character
zeronaryColor  a character
zeronaryComplementColor  a character
CustomExperienceTabSet

customTab  a character
defaultTab  a character
standardTab  a character

CustomFeedFilter

fullName  a character (inherited from Metadata)
criteria  a FeedFilterCriterion
description  a character
isProtected  a character either 'true' or 'false'
label  a character

CustomField

fullName  a character (inherited from Metadata)
businessOwnerGroup  a character
businessOwnerUser a character
businessStatus a character
caseSensitive a character either 'true' or 'false'
customDataType a character
defaultValue a character
deleteConstraint a DeleteConstraint - which is a character taking one of the following values:
  - Cascade
  - Restrict
  - SetNull
deprecated a character either 'true' or 'false'
description a character
displayFormat a character
encrypted a character either 'true' or 'false'
escapeMarkup a character either 'true' or 'false'
externalDeveloperName a character
externalId a character either 'true' or 'false'
fieldManageability a FieldManageability - which is a character taking one of the following values:
  - DeveloperControlled
  - SubscriberControlled
  - Locked
formula a character
formulaTreatBlanksAs a TreatBlanksAs - which is a character taking one of the following values:
  - BlankAsBlank
  - BlankAsZero
inlineHelpText a character
isConvertLeadDisabled a character either 'true' or 'false'
isFilteringDisabled a character either 'true' or 'false'
isNameField a character either 'true' or 'false'
isSortingDisabled a character either 'true' or 'false'
label a character
length an integer
lookupFilter a LookupFilter
maskChar an EncryptedFieldMaskChar - which is a character taking one of the following values:
  - asterisk
  - X
maskType an EncryptedFieldMaskType - which is a character taking one of the following values:
  - all
  - creditCard
metadataRelationshipControllingField  a character
populateExistingRows  a character either 'true' or 'false'
precision  an integer
referenceTargetField  a character
referenceTo  a character
relationshipLabel  a character
relationshipName  a character
relationshipOrder  an integer
reparentableMasterDetail  a character either 'true' or 'false'
required  a character either 'true' or 'false'
restrictedAdminField  a character either 'true' or 'false'
scale  an integer
securityClassification  a SecurityClassification - which is a character taking one of the following values:
  • AccountInformation
  • ConfigurationAndUsageData
  • DataIntendedToBePublic
  • BusinessSetupDataBusinessDataAndAggregates
  • AssociativeBusinessOrPersonalData
  • AuthenticationData
startingNumber  an integer
stripMarkup  a character either 'true' or 'false'
summarizedField  a character
summaryFilterItems  a FilterItem
summaryForeignKey  a character
summaryOperation  a SummaryOperations - which is a character taking one of the following values:
  • count
  • sum
  • min
  • max
trackFeedHistory  a character either 'true' or 'false'
trackHistory  a character either 'true' or 'false'
trackTrending  a character either 'true' or 'false'
type  a FieldType - which is a character taking one of the following values:
- AutoNumber
- Lookup
- MasterDetail
- Checkbox
- Currency
- Date
- DateTime
- Email
- Number
- Percent
- Phone
- Picklist
- MultiselectPicklist
- Text
- TextArea
- LongTextArea
- Html
- Url
- EncryptedText
- Summary
- Hierarchy
- File
- MetadataRelationship
- Location
- ExternalLookup
- IndirectLookup
- CustomDataType
- Time

**unique** a character either 'true' or 'false'

**valueSet** a ValueSet

**visibleLines** an integer

**writeRequiresMasterRead** a character either 'true' or 'false'

**CustomFieldTranslation**

**caseValues** a ObjectNameCaseValue

**gender** a Gender - which is a character taking one of the following values:
  - Neuter
  - Masculine
  - Feminine
  - AnimateMasculine

**help** a character
label a character
lookupFilter a LookupFilterTranslation
name a character
picklistValues a PicklistValueTranslation
relationshipLabel a character
startsWith a StartsWith - which is a character taking one of the following values:
  • Consonant
  • Vowel
  • Special

CustomLabel

fullName a character (inherited from Metadata)
categories a character
language a character
protected a character either ’true’ or ’false’
shortDescription a character
value a character

CustomLabels

fullName a character (inherited from Metadata)
labels a CustomLabel

CustomLabelTranslation

label a character
name a character

CustomMetadata

fullName a character (inherited from Metadata)
description a character
label a character
protected a character either ’true’ or ’false’
values a CustomMetadataValue

CustomMetadataValue

field a character
value a character that appears similar to any of the other accepted types (integer, numeric, date, datetime, boolean)

CustomNotificationType
**metadata_type_validator**

- **fullName** a character (inherited from Metadata)
- **customNotifTypeName** a character
- **description** a character
- **desktop** a character either 'true' or 'false'
- **email** a character either 'true' or 'false'
- **masterLabel** a character
- **mobile** a character either 'true' or 'false'

**CustomObject**

- **fullName** a character (inherited from Metadata)
- **actionOverrides** a ActionOverride
- **allowInChatterGroups** a character either 'true' or 'false'
- **articleTypeChannelDisplay** a ArticleTypeChannelDisplay
- **businessProcesses** a BusinessProcess
- **compactLayoutAssignment** a character
- **compactLayouts** a CompactLayout
- **customHelp** a character
- **customHelpPage** a character
- **customSettingsType** a CustomSettingsType - which is a character taking one of the following values:
  - List
  - Hierarchy
- **dataStewardGroup** a character
- **dataStewardUser** a character
- **deploymentStatus** a DeploymentStatus - which is a character taking one of the following values:
  - InDevelopment
  - Deployed
- **deprecated** a character either 'true' or 'false'
- **description** a character
- **enableActivities** a character either 'true' or 'false'
- **enableBulkApi** a character either 'true' or 'false'
- **enableChangeDataCapture** a character either 'true' or 'false'
- **enableDivisions** a character either 'true' or 'false'
- **enableEnhancedLookup** a character either 'true' or 'false'
- **enableFeeds** a character either 'true' or 'false'
- **enableHistory** a character either 'true' or 'false'
- **enableReports** a character either 'true' or 'false'
- **enableSearch** a character either 'true' or 'false'
enableSharing  a character either 'true' or 'false'
enableStreamingApi  a character either 'true' or 'false'
eventType  a PlatformEventType - which is a character taking one of the following values:
  • HighVolume
  • StandardVolume
externalDataSource  a character
externalName  a character
externalRepository  a character
externalSharingModel  a SharingModel - which is a character taking one of the following values:
  • Private
  • Read
  • ReadSelect
  • ReadWrite
  • ReadWriteTransfer
  • FullAccess
  • ControlledByParent
fieldSets  a FieldSet
fields  a CustomField
gender  a Gender - which is a character taking one of the following values:
  • Neuter
  • Masculine
  • Feminine
  • AnimateMasculine
historyRetentionPolicy  a HistoryRetentionPolicy
household  a character either 'true' or 'false'
indexes  a Index
label  a character
listViews  a ListView
nameField  a CustomField
pluralLabel  a character
recordTypeTrackFeedHistory  a character either 'true' or 'false'
recordTypeTrackHistory  a character either 'true' or 'false'
recordTypes  a RecordType
searchLayouts  a SearchLayouts
sharingModel  a SharingModel - which is a character taking one of the following values:
  • Private
  • Read
  • ReadSelect
  • ReadWrite
• ReadWriteTransfer
• FullAccess
• ControlledByParent

sharingReasons a SharingReason

sharingRecalculations a SharingRecalculation

startsWith a StartsWith - which is a character taking one of the following values:
  • Consonant
  • Vowel
  • Special

validationRules a ValidationRule

visibility a SetupObjectVisibility - which is a character taking one of the following values:
  • Protected
  • Public

webLinks a WebLink

CustomObjectTranslation

fullName a character (inherited from Metadata)
caseValues a ObjectNameCaseValue
fieldSets a FieldSetTranslation
fields a CustomFieldTranslation
gender a Gender - which is a character taking one of the following values:
  • Neuter
  • Masculine
  • Feminine
  • AnimateMasculine
layouts a LayoutTranslation

nameFieldLabel a character
quickActions a QuickActionTranslation
recordTypes a RecordTypeTranslation
sharingReasons a SharingReasonTranslation
standardFields a StandardFieldTranslation
startsWith a StartsWith - which is a character taking one of the following values:
  • Consonant
  • Vowel
  • Special
validationRules a ValidationRuleTranslation
webLinks a WebLinkTranslation
workflowTasks a WorkflowTaskTranslation
CustomPageWebLink

fullName  a character (inherited from Metadata)

availability  a WebLinkAvailability - which is a character taking one of the following values:
  • online
  • offline

description  a character

displayType  a WebLinkDisplayType - which is a character taking one of the following values:
  • link
  • button
  • massActionButton

encodingKey  a Encoding - which is a character taking one of the following values:
  • UTF-8
  • ISO-8859-1
  • Shift_JIS
  • ISO-2022-JP
  • EUC-JP
  • ks_c_5601-1987
  • Big5
  • GB2312
  • Big5-HKSCS
  • x-SJIS_0213

hasMenubar  a character either 'true' or 'false'

hasScrollbars  a character either 'true' or 'false'

hasToolbar  a character either 'true' or 'false'

height  an integer

isResizable  a character either 'true' or 'false'

linkType  a WebLinkType - which is a character taking one of the following values:
  • url
  • sControl
  • javascript
  • page
  • flow

masterLabel  a character

openType  a WebLinkWindowType - which is a character taking one of the following values:
  • newWindow
  • sidebar
  • noSidebar
  • replace
  • onClickJavaScript
page a character

position a WebLinkPosition - which is a character taking one of the following values:
  - fullScreen
  - none
  - topLeft

protected a character either 'true' or 'false'

requireRowSelection a character either 'true' or 'false'

scontrol a character

showsLocation a character either 'true' or 'false'

showsStatus a character either 'true' or 'false'

url a character

width an integer

CustomPageWebLinkTranslation

label a character

name a character

CustomPermission

fullName a character (inherited from Metadata)

connectedApp a character

description a character

label a character

requiredPermission a CustomPermissionDependencyRequired

CustomPermissionDependencyRequired

customPermission a character

dependency a character either 'true' or 'false'

CustomShortcut

action a character (inherited from DefaultShortcut)

active a character either 'true' or 'false' (inherited from DefaultShortcut)

keyCommand a character (inherited from DefaultShortcut)

description a character

eventName a character

CustomSite

fullName a character (inherited from Metadata)

active a character either 'true' or 'false'

allowHomePage a character either 'true' or 'false'
allowStandardAnswersPages a character either 'true' or 'false'
allowStandardIdeasPages a character either 'true' or 'false'
allowStandardLookups a character either 'true' or 'false'
allowStandardPortalPages a character either 'true' or 'false'
allowStandardSearch a character either 'true' or 'false'
analyticsTrackingCode a character
authorizationRequiredPage a character
bandwidthExceededPage a character
browserXssProtection a character either 'true' or 'false'
changePasswordPage a character
chatterAnswersForgotPasswordConfirmPage a character
chatterAnswersForgotPasswordPage a character
chatterAnswersHelpPage a character
chatterAnswersLoginPage a character
chatterAnswersRegistrationPage a character
clickjackProtectionLevel a SiteClickjackProtectionLevel - which is a character taking one of the following values:
  • AllowAllFraming
  • SameOriginOnly
  • NoFraming
contentSniffingProtection a character either 'true' or 'false'
cspUpgradeInsecureRequests a character either 'true' or 'false'
customWebAddresses a SiteWebAddress
description a character
favoriteIcon a character
fileNotFoundPage a character
forgotPasswordPage a character
genericErrorPage a character
guestProfile a character
inMaintenancePage a character
inactiveIndexPage a character
indexPage a character
masterLabel a character
myProfilePage a character
portal a character
referrerPolicyOriginWhenCrossOrigin a character either 'true' or 'false'
requireHttps a character either 'true' or 'false'
requireInsecurePortalAccess a character either 'true' or 'false'
robotsTxtPage a character
rootComponent a character
selfRegPage a character
serverIsDown a character
siteAdmin a character
siteRedirectMappings a SiteRedirectMapping
siteTemplate a character
siteType a SiteType - which is a character taking one of the following values:
  • Siteforce
  • Visualforce
  • User
subdomain a character
urlPathPrefix a character

CustomTab

fullName a character (inherited from Metadata)
actionOverrides a ActionOverride
auraComponent a character
customObject a character either 'true' or 'false'
description a character
flexiPage a character
frameHeight an integer
hasSidebar a character either 'true' or 'false'
icon a character
label a character
mobileReady a character either 'true' or 'false'
motif a character
page a character
scontrol a character
splashPageLink a character
url a character
urlEncodingKey a Encoding - which is a character taking one of the following values:
  • UTF-8
  • ISO-8859-1
  • Shift_JIS
  • ISO-2022-JP
  • EUC-JP
  • ks_c_5601-1987
• Big5
• GB2312
• Big5-HKSCS
• x-SJIS_0213

CustomTabTranslation

label  a character
name   a character

CustomValue

fullName a character (inherited from Metadata)
color   a character
default a character either 'true' or 'false'
description a character
isActive a character either 'true' or 'false'
label   a character

Dashboard

fullName a character (inherited from Metadata)

backgroundColor a character

backgroundFadeDirection a ChartBackgroundDirection - which is a character taking one of the following values:
  • TopToBottom
  • LeftToRight
  • Diagonal

backgroundStartColor a character
/chartTheme a ChartTheme - which is a character taking one of the following values:
  • light
  • dark

colorPalette a ChartColorPalettes - which is a character taking one of the following values:
  • Default
  • gray
  • colorSafe
  • unity
  • justice
  • nightfall
  • sunrise
  • bluegrass
  • tropic
  • heat
metadata_type_validator

• dusk
• pond
• watermelon
• fire
• water
• earth
• accessible

dashboardChartTheme a ChartTheme - which is a character taking one of the following values:
  • light
  • dark

dashboardColorPalette a ChartColorPalettes - which is a character taking one of the following values:
  • Default
  • gray
  • colorSafe
  • unity
  • justice
  • nightfall
  • sunrise
  • bluegrass
  • tropic
  • heat
  • dusk
  • pond
  • watermelon
  • fire
  • water
  • earth
  • accessible

dashboardFilters a DashboardFilter
dashboardGridLayout a DashboardGridLayout
dashboardResultRefreshedDate a character
dashboardResultRunningUser a character
dashboardType a DashboardType - which is a character taking one of the following values:
  • SpecifiedUser
  • LoggedInUser
  • MyTeamUser
description a character
folderName a character
isGridLayout a character either 'true' or 'false'
leftSection a DashboardComponentSection
middleSection a DashboardComponentSection
numSubscriptions an integer
rightSection a DashboardComponentSection
runningUser a character
textColor a character
title a character
titleColor a character
titleSize an integer

DashboardComponent

autoselectColumnsFromReport a character either 'true' or 'false'
chartAxisRange a ChartRangeType - which is a character taking one of the following values:
  • Auto
  • Manual
chartAxisRangeMax a numeric
chartAxisRangeMin a numeric
chartSummary a ChartSummary
componentChartTheme a ChartTheme - which is a character taking one of the following values:
  • light
  • dark
componentType a DashboardComponentType - which is a character taking one of the following values:
  • Bar
  • BarGrouped
  • BarStacked
  • BarStacked100
  • Column
  • ColumnGrouped
  • ColumnStacked
  • ColumnStacked100
  • Line
  • LineGrouped
  • Pie
  • Table
  • Metric
  • Gauge
  • LineCumulative
  • LineGroupedCumulative
  • Scontrol
- VisualforcePage
- Donut
- Funnel
- ColumnLine
- ColumnLineGrouped
- ColumnLineStacked
- ColumnLineStacked100
- Scatter
- ScatterGrouped
- FlexTable

**dashboardFilterColumns** a DashboardFilterColumn

**dashboardTableColumn** a DashboardTableColumn

**displayUnits** a ChartUnits - which is a character taking one of the following values:
- Auto
- Integer
- Hundreds
- Thousands
- Millions
- Billions
- Trillions

**drillDownUrl** a character

**drillEnabled** a character either 'true' or 'false'

**drillToDetailEnabled** a character either 'true' or 'false'

**enableHover** a character either 'true' or 'false'

**expandOthers** a character either 'true' or 'false'

**flexComponentProperties** a DashboardFlexTableComponentProperties

**footer** a character

**gaugeMax** a numeric

**gaugeMin** a numeric

**groupingColumn** a character

**header** a character

**indicatorBreakpoint1** a numeric

**indicatorBreakpoint2** a numeric

**indicatorHighColor** a character

**indicatorLowColor** a character

**indicatorMiddleColor** a character

**legendPosition** a ChartLegendPosition - which is a character taking one of the following values:
- Right
- Bottom
• OnChart

maxValuesDisplayed an integer
metricLabel a character
page a character
pageHeightInPixels an integer
report a character
scontrol a character
scontrolHeightInPixels an integer
showPercentage a character either 'true' or 'false'
showPicturesOnCharts a character either 'true' or 'false'
showPicturesOnTables a character either 'true' or 'false'
showRange a character either 'true' or 'false'
showTotal a character either 'true' or 'false'
showValues a character either 'true' or 'false'
sortBy a DashboardComponentFilter - which is a character taking one of the following values:
  • RowLabelAscending
  • RowLabelDescending
  • RowValueAscending
  • RowValueDescending
title a character
useReportChart a character either 'true' or 'false'

DashboardComponentColumn

breakPoint1 a numeric
breakPoint2 a numeric
breakPointOrder an integer
highRangeColor an integer
lowRangeColor an integer
midRangeColor an integer
reportColumn a character
showTotal a character either 'true' or 'false'
type a DashboardComponentColumnType - which is a character taking one of the following values:
  • NA

DashboardComponentSection

columnSize a DashboardComponentSize - which is a character taking one of the following values:
  • Narrow
  • Medium
components  a DashboardComponent

DashboardComponentSortInfo

sortColumn  a character
sortOrder  a character

DashboardFilter

dashboardFilterOptions  a DashboardFilterOption
name  a character

DashboardFilterColumn

column  a character

DashboardFilterOption

operator  a DashboardFilterOperation - which is a character taking one of the following values:
  • equals
  • notEqual
  • lessThan
  • greaterThan
  • lessOrEqual
  • greaterOrEqual
  • contains
  • notContain
  • startsWith
  • includes
  • excludes
  • between
values  a character

DashboardFlexTableComponentProperties

flexTableColumn  a DashboardComponentColumn
flexTableSortInfo  a DashboardComponentSortInfo
hideChatterPhotos  a character either 'true' or 'false'

DashboardFolder

accessType  a FolderAccessTypes (inherited from Folder)
folderShares  a FolderShare (inherited from Folder)
name  a character (inherited from Folder)
publicFolderAccess  a PublicFolderAccess (inherited from Folder)
metadata_type_validator

sharedTo  a SharedTo (inherited from Folder)

DashboardGridComponent

colSpan  an integer

columnIndex  an integer
dashboardComponent  a DashboardComponent

rowIndex  an integer

rowSpan  an integer

DashboardGridLayout

dashboardGridComponents  a DashboardGridComponent

numberOfColumns  an integer

rowHeight  an integer

DashboardMobileSettings

enableDashboardIPadApp  a character either 'true' or 'false'

DashboardTableColumn

aggregateType  a ReportSummaryType - which is a character taking one of the following values:
  • Sum
  • Average
  • Maximum
  • Minimum
  • None

calculatePercent  a character either 'true' or 'false'
column  a character
decimalPlaces  an integer

showTotal  a character either 'true' or 'false'
sortBy  a DashboardComponentFilter - which is a character taking one of the following values:
  • RowLabelAscending
  • RowLabelDescending
  • RowValueAscending
  • RowValueDescending

DataCategory

dataCategory  a DataCategory

label  a character

name  a character

DataCategoryGroup
fullName  a character (inherited from Metadata)
active  a character either 'true' or 'false'
dataCategory  a DataCategory
description  a character
label  a character
objectUsage  a ObjectUsage

DataPipeline

collection  a character formed using base64encode (inherited from MetadataWithContent)
apiVersion  a numeric
label  a character
scriptType  a DataPipelineType - which is a character taking one of the following values:
  • Pig

DefaultShortcut

action  a character
active  a character either 'true' or 'false'
keyCommand  a character

DelegateGroup

fullName  a character (inherited from Metadata)
customObjects  a character
groups  a character
label  a character
loginAccess  a character either 'true' or 'false'
permissionSets  a character
profiles  a character
roles  a character

DeployDetails

collectionFailures  a DeployMessage
collectionSuccesses  a DeployMessage
retrieveResult  a RetrieveResult
runTestResult  a RunTestsResult

DeployOptions

allowMissingFiles  a character either 'true' or 'false'
autoUpdatePackage  a character either 'true' or 'false'
checkOnly  a character either 'true' or 'false'
ignoreWarnings  a character either 'true' or 'false'
performRetrieve  a character either 'true' or 'false'
purgeOnDelete  a character either 'true' or 'false'
rollbackOnError  a character either 'true' or 'false'
runTests  a character
singlePackage  a character either 'true' or 'false'
testLevel  a TestLevel - which is a character taking one of the following values:
  • NoTestRun
  • RunSpecifiedTests
  • RunLocalTests
  • RunAllTestsInOrg

DescribeMetadataObject

childXmlNames  a character
directoryName  a character
inFolder  a character either 'true' or 'false'
metaFile  a character either 'true' or 'false'
suffix  a character
xmlName  a character

Document

content  a character formed using base64encode (inherited from MetadataWithContent)
description  a character
internalUseOnly  a character either 'true' or 'false'
keywords  a character
name  a character
public  a character either 'true' or 'false'

DocumentFolder

accessType  a FolderAccessTypes (inherited from Folder)
folderShares  a FolderShare (inherited from Folder)
name  a character (inherited from Folder)
publicFolderAccess  a PublicFolderAccess (inherited from Folder)
sharedTo  a SharedTo (inherited from Folder)

DuplicateRule

fullName  a character (inherited from Metadata)
actionOnInsert  a DupeActionType - which is a character taking one of the following values:
• Allow
• Block

[actionOnUpdate] a DupeActionType - which is a character taking one of the following values:
  • Allow
  • Block

[alertText] a character

[description] a character

[duplicateRuleFilter] a DuplicateRuleFilter

[duplicateRuleMatchRules] a DuplicateRuleMatchRule

[isActive] a character either 'true' or 'false'

[masterLabel] a character

[operationsOnInsert] a character

[operationsOnUpdate] a character

[securityOption] a DupeSecurityOptionType - which is a character taking one of the following values:
  • EnforceSharingRules
  • BypassSharingRules

[sortOrder] an integer

[DuplicateRuleFilter]

:booleanFilter] a character

[duplicateRuleFilterItems] a DuplicateRuleFilterItem

[DuplicateRuleFilterItem]

[field] a character (inherited from FilterItem)

[operation] a FilterOperation (inherited from FilterItem)

[value] a character (inherited from FilterItem)

[valueField] a character (inherited from FilterItem)

[sortOrder] an integer

[table] a character

[DuplicateRuleMatchRule]

[matchRuleSObjectType] a character

[matchingRule] a character

[objectMapping] a ObjectMapping

[EclairGeoData]

[content] a character formed using base64encode (inherited from MetadataWithContent)

[maps] a EclairMap
masterLabel a character

EclairMap

boundingBoxBottom a numeric
boundingBoxLeft a numeric
boundingBoxRight a numeric
boundingBoxTop a numeric
mapLabel a character
mapName a character
projection a character

EmailFolder

accessType a FolderAccessType (inherited from Folder)
folderShares a FolderShare (inherited from Folder)
name a character (inherited from Folder)
publicFolderAccess a PublicFolderAccess (inherited from Folder)
sharedTo a SharedTo (inherited from Folder)

EmailServicesAddress

authorizedSenders a character
developerName a character
isActive a character either ‘true’ or ‘false’
localPart a character
runAsUser a character

EmailServicesFunction

fullName a character (inherited from Metadata)
apexClass a character
attachmentOption a EmailServicesAttOptions - which is a character taking one of the following values:
  • None
  • TextOnly
  • BinaryOnly
  • All
  • NoContent

authenticationFailureAction a EmailServicesErrorAction - which is a character taking one of the following values:
  • UseSystemDefault
  • Bounce
• Discard
• Requeue

authorizationFailureAction a EmailServicesErrorAction - which is a character taking one of the following values:
  • UseSystemDefault
  • Bounce
  • Discard
  • Requeue

authorizedSenders a character

eMailServicesAddresses a EmailServicesAddress

errorRoutingAddress a character

functionInactiveAction a EmailServicesErrorAction - which is a character taking one of the following values:
  • UseSystemDefault
  • Bounce
  • Discard
  • Requeue

functionName a character

isActive a character either ‘true’ or ‘false’

isAuthenticationRequired a character either ‘true’ or ‘false’

isErrorRoutingEnabled a character either ‘true’ or ‘false’

isTextAttachmentsAsBinary a character either ‘true’ or ‘false’

isTlsRequired a character either ‘true’ or ‘false’

overLimitAction a EmailServicesErrorAction - which is a character taking one of the following values:
  • UseSystemDefault
  • Bounce
  • Discard
  • Requeue

EmailTemplate

content a character formed using base64encode (inherited from MetadataWithContent)

apiVersion a numeric

attachedDocuments a character

attachments a Attachment

available a character either ‘true’ or ‘false’

description a character

encodingKey a Encoding - which is a character taking one of the following values:
  • UTF-8
- ISO-8859-1
- Shift_JIS
- ISO-2022-JP
- EUC-JP
- ks_c_5601-1987
- Big5
- GB2312
- Big5-HKSCS
- x-SJIS_0213

**letterhead** a character

**name** a character

**packageVersions** a PackageVersion

**relatedEntityType** a character

**style** a EmailTemplateStyle - which is a character taking one of the following values:
  - none
  - freeForm
  - formalLetter
  - promotionRight
  - promotionLeft
  - newsletter
  - products

**subject** a character

**textOnly** a character

**type** a EmailTemplateType - which is a character taking one of the following values:
  - text
  - html
  - custom
  - visualforce

**uiType** a EmailTemplateUiType - which is a character taking one of the following values:
  - Aloha
  - SFX
  - SFX_Sample

**EmailToCaseRoutingAddress**

**addressType** a EmailToCaseRoutingAddressType - which is a character taking one of the following values:
  - EmailToCase
  - Outlook

**authorizedSenders** a character

**caseOrigin** a character
caseOwner a character
caseOwnerType a character
casePriority a character
createTask a character either ‘true’ or ‘false’
emailAddress a character
emailServicesAddress a character
isVerified a character either ‘true’ or ‘false’
routingName a character
saveEmailHeaders a character either ‘true’ or ‘false’
taskStatus a character

EmailToCaseSettings

enableE2CSourceTracking a character either ‘true’ or ‘false’
enableEmailToCase a character either ‘true’ or ‘false’
enableHtmlEmail a character either ‘true’ or ‘false’
enableOnDemandEmailToCase a character either ‘true’ or ‘false’
enableThreadIDInBody a character either ‘true’ or ‘false’
enableThreadIDInSubject a character either ‘true’ or ‘false’
notifyOwnerOnNewCaseEmail a character either ‘true’ or ‘false’
overEmailLimitAction a EmailToCaseOnFailureActionType - which is a character taking one of the following values:
  • Bounce
  • Discard
  • Requeue
preQuoteSignature a character either ‘true’ or ‘false’
routingAddresses a EmailToCaseRoutingAddress
unauthorizedSenderAction a EmailToCaseOnFailureActionType - which is a character taking one of the following values:
  • Bounce
  • Discard
  • Requeue

EmbeddedServiceBranding

fullName a character (inherited from Metadata)
contrastInvertedColor a character
contrastPrimaryColor a character
embeddedServiceConfig a character
font a character
masterLabel a character
**metadata_type_validator**

**navBarColor** a character
**primaryColor** a character
**secondaryColor** a character

**EmbeddedServiceConfig**

**fullName** a character (inherited from Metadata)
**masterLabel** a character
**site** a character

**EmbeddedServiceFieldService**

**fullName** a character (inherited from Metadata)
**appointmentBookingFlowName** a character
**cancelApptBookingFlowName** a character
**enabled** a character either 'true' or 'false'
**fieldServiceConfirmCardImg** a character
**fieldServiceHomeImg** a character
**fieldServiceLogoImg** a character
**masterLabel** a character
**modifyApptBookingFlowName** a character
**shouldShowExistingAppointment** a character either 'true' or 'false'
**shouldShowNewAppointment** a character either 'true' or 'false'

**EmbeddedServiceLiveAgent**

**fullName** a character (inherited from Metadata)
**avatarImg** a character
**customPrechatComponent** a character
**enabled** a character either 'true' or 'false'
**fontSize** a EmbeddedServiceFontSize - which is a character taking one of the following values:
  - Small
  - Medium
  - Large
**headerBackgroundImg** a character
**liveAgentChatUrl** a character
**liveAgentContentUrl** a character
**liveChatButton** a character
liveChatDeployment a character
masterLabel a character
prechatBackgroundImg a character
prechatEnabled a character either 'true' or 'false'
prechatJson a character
scenario a EmbeddedServiceScenario - which is a character taking one of the following values:
  • Sales
  • Service
  • Basic
smallCompanyLogoImg a character
waitingStateBackgroundImg a character

EmbeddedServiceQuickAction

embeddedServiceLiveAgent a character
order an integer
quickActionDefinition a character

EntitlementProcess

fullName a character (inherited from Metadata)
SObjectType a character
active a character either 'true' or 'false'
businessHours a character
description a character
entryStartDateField a character
exitCriteriaBooleanFilter a character
exitCriteriaFilterItems a FilterItem
exitCriteriaFormula a character
isRecordTypeApplied a character either 'true' or 'false'
isVersionDefault a character either 'true' or 'false'
milestones a EntitlementProcessMilestoneItem
name a character
recordType a character
versionMaster a character
versionNotes a character
versionNumber an integer

EntitlementProcessMilestoneItem

businessHours a character
metadata_type_validator

criteriaBooleanFilter  a character
milestoneCriteriaFilterItems  a FilterItem
milestoneCriteriaFormula  a character
milestoneName  a character
minutesCustomClass  a character
minutesToComplete  an integer
successActions  a WorkflowActionReference
timeTriggers  a EntitlementProcessMilestoneTimeTrigger
useCriteriaStartTime  a character either 'true' or 'false'

EntitlementProcessMilestoneTimeTrigger

actions  a WorkflowActionReference
timeLength  an integer
workflowTimeTriggerUnit  a MilestoneTimeUnits - which is a character taking one of the following values:
  - Minutes
  - Hours
  - Days

EntitlementSettings

fullName  a character (inherited from Metadata)
assetLookupLimitedToActiveEntitlementsOnAccount  a character either 'true' or 'false'
assetLookupLimitedToActiveEntitlementsOnContact  a character either 'true' or 'false'
assetLookupLimitedToSameAccount  a character either 'true' or 'false'
assetLookupLimitedToSameContact  a character either 'true' or 'false'
enableEntitlementVersioning  a character either 'true' or 'false'
enableEntitlements  a character either 'true' or 'false'
entitlementLookupLimitedToActiveStatus  a character either 'true' or 'false'
entitlementLookupLimitedToSameAccount  a character either 'true' or 'false'
entitlementLookupLimitedToSameAsset  a character either 'true' or 'false'
entitlementLookupLimitedToSameContact  a character either 'true' or 'false'

EntitlementTemplate

fullName  a character (inherited from Metadata)
businessHours  a character
casesPerEntitlement  an integer
entitlementProcess  a character
isPerIncident  a character either 'true' or 'false'
term an integer

type a character

EscalationAction

assignedTo a character

assignedToTemplate a character

assignedToType a AssignToLookupValueType - which is a character taking one of the following values:

  • User
  • Queue

minutesToEscalation an integer

notifyCaseOwner a character either 'true' or 'false'

notifyEmail a character

notifyTo a character

notifyToTemplate a character

EscalationRule

fullName a character (inherited from Metadata)

active a character either 'true' or 'false'

ruleEntry a RuleEntry

EscalationRules

fullName a character (inherited from Metadata)

escalationRule a EscalationRule

EventDelivery

fullName a character (inherited from Metadata)

eventParameters a EventParameterMap

eventSubscription a character

referenceData a character

type a EventDeliveryType - which is a character taking one of the following values:

  • StartFlow
  • ResumeFlow

EventParameterMap

parameterName a character

parameterValue a character

EventSubscription
fullName a character (inherited from Metadata)
active a character either ‘true’ or ‘false’
eventParameters a EventParameterMap
eventType a character
referenceData a character

ExtendedErrorDetails

extendedErrorCode a ExtendedErrorCode - which is a character taking one of the following values:

• ACTIONCALL_DUPLICATE_INPUT_PARAM - Errors with this extended error code have the following properties: actionCallName, parameterName
• ACTIONCALL_DUPLICATE_OUTPUT_PARAM - Errors with this extended error code have the following properties: actionCallName, parameterName
• ACTIONCALL_MISSING_NAME - Errors with this extended error code have the following properties:
• ACTIONCALL_MISSING_REQUIRED_PARAM - Errors with this extended error code have the following properties: actionCallName, parameterName
• ACTIONCALL_MISSING_REQUIRED_TYPE - Errors with this extended error code have the following properties: actionCallName
• ACTIONCALL_NOT_FOUND_WITH_NAME_AND_TYPE - Errors with this extended error code have the following properties:
• ACTIONCALL_NOT_SUPPORTED_FOR_PROCESSTYPE - Errors with this extended error code have the following properties: processType
• APEXCALLOUT_INPUT_DUPLICATE - Errors with this extended error code have the following properties: apexClassName, parameterName
• APEXCALLOUT_INPUT_INCOMPATIBLE_DATATYPE - Errors with this extended error code have the following properties: apexClassName, parameterName
• APEXCALLOUT_INVAILD - Errors with this extended error code have the following properties: apexClassName
• APEXCALLOUT_MISSING_CLASSNAME - Errors with this extended error code have the following properties: apexClassName
• APEXCALLOUT_NOT_FOUND - Errors with this extended error code have the following properties: apexClassName
• APEXCALLOUT_OUTPUT_INCOMPATIBLE_DATATYPE - Errors with this extended error code have the following properties: apexClassName, parameterName
• APEXCALLOUT_OUTPUT_NOT_FOUND - Errors with this extended error code have the following properties: apexClassName, parameterName
• APEXCALLOUT_REQUIRED_INPUT_MISSING - Errors with this extended error code have the following properties: apexClassName, parameterName
• APEXCLASS_MISSING_INTERFACE - Errors with this extended error code have the following properties: apexClassName, parentScreenFieldName
• ASSIGNMENTITEM_ELEMENT_MISSING_DATATYPE - Errors with this extended error code have the following properties: assignmentName, operatorName, elementName
• ASSIGNMENTITEM_ELEMENT_NOT_SUPPORTED - Errors with this extended error code have the following properties: elementName, assignmentName, elementType
• ASSIGNMENTITEM_FIELD_INVALID_DATATYPE - Errors with this extended error code have the following properties: fieldValue, dataType, incompatibleDataType
• ASSIGNMENTITEM_FIELD_INVALID_DATATYPE_WITH_ELEMENT - Errors with this extended error code have the following properties: elementName, acceptedDataType, dataType, fieldValue
• ASSIGNMENTITEM_INCOMPATIBLE_DATATYPES - Errors with this extended error code have the following properties: assignmentName, operatorName, leftElementName, leftElementType, rightElementName, rightElementType
• ASSIGNMENTITEM_INVALID_COLLECTION - Errors with this extended error code have the following properties: assignmentName, operatorName, leftElementName, rightElementName
• ASSIGNMENTITEM_INVALID_DATATYPE_IN_ELEMENT - Errors with this extended error code have the following properties: elementName, dataType, incompatibleDataType
• ASSIGNMENTITEM_INVALID_REFERENCE - Errors with this extended error code have the following properties: parameterName, operatorName
• ASSIGNMENTITEM_LEFT_DATATYPE_INVALID_FOR_OPERATOR - Errors with this extended error code have the following properties: assignmentName, operatorName, dataType, elementName
• ASSIGNMENTITEM_MODIFIES_NONVARIABLE - Errors with this extended error code have the following properties: assignmentName
• ASSIGNMENTITEM_NONEXISTENT_REFERENCE - Errors with this extended error code have the following properties: parameterName, operatorName
• ASSIGNMENTITEM_REQUIRED - Errors with this extended error code have the following properties: assignmentName
• ASSIGNMENTITEM_RIGHT_DATATYPE_INVALID_FOR_OPERATOR - Errors with this extended error code have the following properties: elementName
• AUTOLAUNCHED_CHOICELOOKUP_NOT_SUPPORTED - Errors with this extended error code have the following properties: choiceLookupName
• AUTOLAUNCHED_CHOICE_NOT_SUPPORTED - Errors with this extended error code have the following properties: choiceName
• AUTOLAUNCHED_SCREEN_NOT_SUPPORTED - Errors with this extended error code have the following properties:
• AUTOLAUNCHED_STEP_NOT_SUPPORTED - Errors with this extended error code have the following properties:
• AUTOLAUNCHED_SUBFLOW_INCOMPATIBLE_FLOWTYPE - Errors with this extended error code have the following properties: subflowType
• AUTOLAUNCHED_WAIT_NOT_SUPPORTED - Errors with this extended error code have the following properties:
• CHOICEFIELD_DEFAULT_CHOICE_NOT_FOUND - Errors with this extended error code have the following properties: screenFieldName
• CHOICEFIELD_MISSING_CHOICE - Errors with this extended error code have the following properties: questionName
• CHOICELOOKUP_DATATYPE_INCOMPATIBLE_WITH_CHOICEFIELD - Errors with this extended error code have the following properties: choiceName, parentScreenFieldName
• CHOICE_DATATYPE_INCOMPATIBLE_WITH_CHOICEFIELD - Errors with this extended error code have the following properties: choiceName, parentScreenFieldName
• CHOICE_NOT_SUPPORTED_FOR_SCREENFIELDTYPE - Errors with this extended error code have the following properties: elementName, screenFieldName
• CHOICE_USED_MULTIPLE_TIMES_INSAMEFIELD - Errors with this extended error code have the following properties: choiceName
• CONDITION_DATATYPE_INCOMPATIBLE - Errors with this extended error code have the following properties: leftElementName, leftElementType, operatorName, rightElementName, rightElementType, ruleName
• CONDITION_DATATYPE_INCOMPATIBLE_WITH_ELEMENT - Errors with this extended error code have the following properties: elementName, dataType, operatorName, parameterName, ruleName
• CONDITION_ELEMENT_DATATYPES_INCOMPATIBLE - Errors with this extended error code have the following properties: elementName, leftElementType, operatorName, rightElementType, ruleName
• CONDITION_INVALID_LEFT_OPERAND - Errors with this extended error code have the following properties: ruleName
• CONDITION_INVALID_LEFT_ELEMENT - Errors with this extended error code have the following properties: elementName, dataType, operatorName, parameterName, ruleName
• CONDITION_LOGIC_EXCEEDS_LIMIT - Errors with this extended error code have the following properties: elementName, characterLimit
• CONDITION_LOGIC_INVALID - Errors with this extended error code have the following properties: elementName
• CONDITION_LOGIC_MISSING - Errors with this extended error code have the following properties: elementName
• CONDITION_REFERENCED_ELEMENT_NOT_FOUND - Errors with this extended error code have the following properties: ruleName
• CONDITION_RIGHTOPERAND_NULL - Errors with this extended error code have the following properties: ruleName
• CONNECTOR_MISSING_TARGET - Errors with this extended error code have the following properties: elementName
• CONSTANT_INCLUDES_REFERENCES - Errors with this extended error code have the following properties: constantName
• CUSTOMEVENTS_NOT_ENABLED - Errors with this extended error code have the following properties:
• CUSTOMEVENT_MISSING_PROCESSMETADATAVALUES - Errors with this extended error code have the following properties:
• CUSTOMEVENT_OBJECTTYPE_NOT_FOUND - Errors with this extended error code have the following properties: objectType
• CUSTOMEVENT_OBJECTTYPE_NOT_SUPPORTED - Errors with this extended error code have the following properties: objectType
• CUSTOMEVENT_PROCESSMETADATAVALUES_MISSING_NAME - Errors with this extended error code have the following properties: metadataValue
• CUSTOMEVENT_PROCESSMETADATAVALUES_MORE_THAN_ONE_NAME - Errors with this extended error code have the following properties: metadataValue
• DATATYPE_INVALID - Errors with this extended error code have the following properties: elementName, dataType
• DATATYPE_MISSING - Errors with this extended error code have the following properties: elementName
• DECISION_DEFAULTCONNECTOR_MISSING_LABEL - Errors with this extended error code have the following properties: flowDecision
• DECISION_MISSING_OUTCOME - Errors with this extended error code have the following properties: flowDecision
• ELEMENT_CONNECTS_TO_SELF - Errors with this extended error code have the following properties: elementName
• ELEMENT_COORDINATES_INVALID - Errors with this extended error code have the following properties: coordinateLimit, coordinateName
• ELEMENT_INVALID_CONNECTOR - Errors with this extended error code have the following properties: elementName
• ELEMENT_INVALID_REFERENCE - Errors with this extended error code have the following properties: elementName
• ELEMENT_MISSING_CONNECTOR - Errors with this extended error code have the following properties: elementName
• ELEMENT_MISSING_LABEL - Errors with this extended error code have the following properties: characterLimit, elementName
• ELEMENT_NEVER_USED - Errors with this extended error code have the following properties: elementName
• ELEMENT_SCALE_SMALLER_THAN_DEFAULTVALUE - Errors with this extended error code have the following properties: elementName
• EXTERNAL_OBJECTS_NOT_SUPPORTED - Errors with this extended error code have the following properties: objectName
• EXTERNAL_OBJECTFIELDS_NOT_SUPPORTED - Errors with this extended error code have the following properties: fieldReference
• FIELDASSIGNMENT_FIELD_INCOMPATIBLE_DATATYPE - Errors with this extended error code have the following properties: fieldName, elementName
• FIELDASSIGNMENT_INVALID_DATATYPE - Errors with this extended error code have the following properties: fieldName, elementName, assignmentName
• FIELDASSIGNMENT_INVALID_ELEMENT - Errors with this extended error code have the following properties: fieldName, elementName, elementType
• FIELDASSIGNMENT_INVALID_REFERENCE - Errors with this extended error code have the following properties: fieldName, parameterName
• FIELDASSIGNMENT_MULTIPLE_REFERENCESSAME_FIELD - Errors with this extended error code have the following properties: fieldName
• FIELDASSIGNMENT_PICKLISTFIELD_INCOMPATIBLE_DATATYPE - Errors with this extended error code have the following properties: fieldName, dataType
• FIELDASSIGNMENT_REFERENCED_ELEMENT_MISSING_DATATYPE - Errors with this extended error code have the following properties: fieldName, elementName, elementType
• FIELDSERVICE_UNSUPPORTED_FIELD_TYPE - Errors with this extended error code have the following properties: elementName
• FIELD_INVALID_VALUE - Errors with this extended error code have the following properties: fieldName, parameterName
• FIELD_NOT_FOUND - Errors with this extended error code have the following properties: objectName, fieldName
• FIELD_RELATIONSHIP_NOT_SUPPORTED - Errors with this extended error code have the following properties: fieldRelationshipName
• FLEXIPAGE_COMPONENT_ATTRIBUTE_EXPRESSION_EXCEPTION - Errors with this extended error code have the following properties: componentName, propertyName, propertyType, errorCode, invalidTokens
• FLEXIPAGE_COMPONENT_ATTRIBUTE_GENERIC_EXCEPTION - Errors with this extended error code have the following properties: componentName, propertyName, propertyType, errorIdentifier, errorParams
• FLEXIPAGE_COMPONENT_ATTRIBUTE_MISSING_REQUIRED - Errors with this extended error code have the following properties: componentName, propertyName, propertyType
• FLEXIPAGE_COMPONENT_ATTRIBUTE_TOO_LONG - Errors with this extended error code have the following properties: componentName, propertyName, propertyType, maxLength
• FLEXIPAGE_COMPONENT_MAX_LIMIT_EXCEPTION - Errors with this extended error code have the following properties:
• FLEXIPAGE_COMPONENT_RULE_VALIDATION_EXCEPTION - Errors with this extended error code have the following properties: componentName, criterionIndex
• FLEXIPAGE_PICKLIST_INVALID_VALUE_EXCEPTION - Errors with this extended error code have the following properties: componentName, propertyName, propertyType, invalidValue
• FLOW_INCLUDES_STEP - Errors with this extended error code have the following properties: elementName
• FLOW_NAME_USED_IN_OTHER_CLIENT - Errors with this extended error code have the following properties: flowName
• FLOW_STAGE_INCLUDES_REFERENCES - Errors with this extended error code have the following properties: stageName
• FORMULA_EXPRESSION_INVALID - Errors with this extended error code have the following properties: formulaExpression
• INPUTPARAM_INCOMPATIBLE_DATATYPE - Errors with this extended error code have the following properties: parameterName
• INPUTPARAM_INCOMPATIBLE_WITH_COLLECTION_VARIABLE - Errors with this extended error code have the following properties: parameterName
• INPUTPARAM_INCOMPATIBLE_WITH_NONCOLLECTION_VARIABLE - Errors with this extended error code have the following properties: parameterName
• INPUTPARAM_MISMATCHED_OBJECTTYPE - Errors with this extended error code have the following properties: parameterName
• INVALID_FLOW - Errors with this extended error code have the following properties:
• INVALID_SURVEY_VARIABLE_NAME_OR_TYPE - Errors with this extended error code have the following properties: surveyName
• LOOP_ASSIGNNEXTVALUEUTO_MISMATCHED_DATATYPE - Errors with this extended error code have the following properties: elementName
• LOOP_ASSIGNNEXTVALUEUTO_MISMATCHED_OBJECTTYPE - Errors with this extended error code have the following properties: elementName
• LOOP_ASSIGNNEXTVALUEUTO_MISSING - Errors with this extended error code have the following properties: elementName
• LOOP_ASSIGNNEXTVALUEUTO_MISSING_VARIABLE - Errors with this extended error code have the following properties: elementName
• LOOP_ASSIGNNEXTVALUEUTO_REFERENCE_NOT_FOUND - Errors with this extended error code have the following properties: fieldRelationshipName
• LOOP_COLLECTION_ELEMENT_NOT_FOUND - Errors with this extended error code have the following properties: elementName
• LOOP_COLLECTION_NOT_FOUND - Errors with this extended error code have the following properties: elementName
• LOOP_COLLECTION_NOT_SUPPORTED_FOR_FIELD - Errors with this extended error code have the following properties: fieldName
• OBJECTTYPE_INVALID - Errors with this extended error code have the following properties: objectType
• OBJECT_CANNOT_BE_CREATED - Errors with this extended error code have the following properties: objectName
• OBJECT_CANNOT_BE_DELETED - Errors with this extended error code have the following properties: objectName
• OBJECT_CANNOT_BE_QUERIED - Errors with this extended error code have the following properties: objectName
• OBJECT_CANNOT_BE_UPDATED - Errors with this extended error code have the following properties: objectName
• OBJECT_ENCRYPTED_FIELDS_NOT_SUPPORTED - Errors with this extended error code have the following properties: fieldName
• OBJECT_NOT_FOUND - Errors with this extended error code have the following properties: objectName
• OUTPUTPARAM_ASSIGNTOREFERENCE_NOTFOUND - Errors with this extended error code have the following properties: parameterName
• OUTPUTPARAM_INCOMPATIBLE_DATATYPE - Errors with this extended error code have the following properties: parameterName
• OUTPUTPARAM_MISMATCHED_OBJECTTYPE - Errors with this extended error code have the following properties: parameterName
• OUTPUTPARAM_MISMATCHED_WITH_COLLECTION_VARIABLE - Errors with this extended error code have the following properties: parameterName
• OUTPUTPARAM_MISSING_ASSIGNTOREFERENCE - Errors with this extended error code have the following properties: parameterName
• OUTPUTPARAM_MISMATCHED_WITH_NONCOLLECTION_VARIABLE - Errors with this extended error code have the following properties: parameterName
• PARAM_DATATYPE_NOT_SUPPORTED - Errors with this extended error code have the following properties: parameterName
• PROCESSMETADATAVALEUES_NOT_SUPPORTED_FOR_PROCESSTYPE - Errors with this extended error code have the following properties: processType, metadataValue
• PROCESSMETADATAVALEUE_NONEXISTENT_ELEMENT - Errors with this extended error code have the following properties: metadataValue
• PROCESSTYPE_ELEMENT_NOT_SUPPORTED - Errors with this extended error code have the following properties: processType, elementType
• PROCESSTYPE_NOT_SUPPORTED - Errors with this extended error code have the following properties: processType
• RECORDFILTER_ENCRYPTED_FIELDS_NOT_SUPPORTED - Errors with this extended error code have the following properties: fieldName
• RECORDFILTER_GEOLOCATION_FIELDS_NOT_SUPPORTED - Errors with this extended error code have the following properties: fieldName, objectName
• RECORDFILTER_INVALID_DATATYPE - Errors with this extended error code have the following properties: fieldName, elementType, operatorName
• RECORDFILTER_INVALID_ELEMENT - Errors with this extended error code have the following properties: fieldName, assignmentName, elementType, operatorName
• RECORDFILTER_INVALID_OPERATOR - Errors with this extended error code have the following properties: fieldName, operatorName
• RECORDFILTER_INVALID_REFERENCE - Errors with this extended error code have the following properties: fieldName, operatorName
• RECORDFILTER_MISSING_DATATYPE - Errors with this extended error code have the following properties: fieldName, elementType, operatorName
• RECORDFILTER_MULTIPLE_QUERIESSAME_FIELD - Errors with this extended error code have the following properties: fieldName
• RECORDLOOKUP_IDASSIGNMENT_VARIABLE_INCOMPATIBLE_DATATYPE - Errors with this extended error code have the following properties: elementName
• RECORDLOOKUP_IDASSIGNMENT_VARIABLE_NOT_FOUND - Errors with this extended error code have the following properties: elementName
• RECORDUPDATE_MISSING_FILTERS - Errors with this extended error code have the following properties: objectName
• REFERENCED_ELEMENT_NOT_FOUND - Errors with this extended error code have the following properties: elementName, mergeFieldReference
• RULE_MISSING_CONDITION - Errors with this extended error code have the following properties: elementName, ruleName
• SCREENFIELD_BOOLEAN_ISREQUIRED_ISFALSE - Errors with this extended error code have the following properties: fieldName
• SCREENFIELD_DEFAULTVALUE_NOT_SUPPORTED - Errors with this extended error code have the following properties: elementName
• SCREENFIELD_EXTENSION_COMPONENT_NOT_GLOBAL - Errors with this extended error code have the following properties: elementName
• SCREENFIELD_EXTENSION_DUPLICATE_INPUT_PARAM - Errors with this extended error code have the following properties: elementName, extensionName, parameterName
• SCREENFIELD_EXTENSION_DUPLICATE_OUTPUT_PARAM - Errors with this extended error code have the following properties: elementName, extensionName, parameterName
• SCREENFIELD_EXTENSION_IMPLEMENTATION_INVALID - Errors with this extended error code have the following properties: elementName, extensionName
• SCREENFIELD_EXTENSION_INPUT_ATTRIBUTE_INVALID - Errors with this extended error code have the following properties: elementName, extensionName, parameterName
• SCREENFIELD_EXTENSION_NAME_INVALID - Errors with this extended error code have the following properties: elementName, extensionName
• SCREENFIELD_EXTENSION_NAME_MISSING - Errors with this extended error code have the following properties: elementName, fieldType
• SCREENFIELD_EXTENSION_NAME_NOT_SUPPORTED - Errors with this extended error code have the following properties: elementName, fieldType
• SCREENFIELD_EXTENSION_OUTPUT_ATTRIBUTE_INVALID - Errors with this extended error code have the following properties: elementName, extensionName, parameterName
• SCREENFIELD_EXTENSION_REQUIRED_INPUT_MISSING - Errors with this extended error code have the following properties: elementName, extensionName, parameterName
• SCREENFIELD_INPUTS_NOT_SUPPORTED - Errors with this extended error code have the following properties: elementName, fieldType
• SCREENFIELD_INVALID_DATATYPE - Errors with this extended error code have the following properties: dataType, fieldType
• SCREENFIELD_MULTISELECTCHOICE_SEMICOLON_NOT_SUPPORTED - Errors with this extended error code have the following properties: choiceName
• SCREENFIELD_OUTPUTS_NOT_SUPPORTED - Errors with this extended error code have the following properties: elementName, fieldType
• SCREENFIELD_TYPE_NOT_SUPPORTED - Errors with this extended error code have the following properties: elementName, fieldType
• SCREENFIELD_USERINPUT_NOT_SUPPORTED_FOR_CHOICETYPE - Errors with this extended error code have the following properties: choiceName
• SCREENFIELD_VALIDATIONRULE_NOT_SUPPORTED - Errors with this extended error code have the following properties: elementName
• SCREENRULE_ACTION_INVALID_ATTRIBUTE - Errors with this extended error code have the following properties: screenRuleName, attributeName
• SCREENRULE_ACTION_INVALID_ATTRIBUTE_FOR_API_VERSION - Errors with this extended error code have the following properties: screenRuleName, attributeName
• SCREENRULE_ACTION_INVALID_VALUE - Errors with this extended error code have the following properties: screenRuleName, acceptedValues, actionValue
• SCREENRULE_ACTION_MISSING_ATTRIBUTE - Errors with this extended error code have the following properties: screenRuleName
• SCREENRULE_ACTION_MISSING_FIELDREFERENCE - Errors with this extended error code have the following properties: screenRuleName
• SCREENRULE_ACTION_MISSING_VALUE - Errors with this extended error code have the following properties: screenRuleName
• SCREENRULE_ATTRIBUTE_NOT_SUPPORTED_FOR_SCREENFIELD - Errors with this extended error code have the following properties: screenRuleName, attributeName, fieldName
• SCREENRULE_FIELD_NOT_FOUND_ON_SCREEN - Errors with this extended error code have the following properties: screenRuleName, fieldValue
• SCREENRULE_MISSED_ACTION - Errors with this extended error code have the following properties: screenRuleName
• SCREENRULE_NOT_SUPPORTED_IN_ORG - Errors with this extended error code have the following properties:
• SCREENRULE_SCREENFIELD_NOT_VISIBLE - Errors with this extended error code have the following properties: fieldName
• SCREENRULE_VISIBILITY_NOT_SUPPORTED_IN_ORG - Errors with this extended error code have the following properties:
• SCREEN_ALLOWBACK_ALLOWFINISH_BOTH_FALSE - Errors with this extended error code have the following properties:
• SCREEN_CONTAINS_LIGHTNING_COMPONENT - Errors with this extended error code have the following properties: elementName
• SCREEN_MISSING_FOOTER_AND_LIGHTNING_COMPONENT - Errors with this extended error code have the following properties:
• SCREEN_MISSING_LABEL - Errors with this extended error code have the following properties: characterLimit
• SCREEN_MULTISELECTFIELD_DOESNT_SUPPORT_CHOICE_WITH_USERINPUT - Errors with this extended error code have the following properties: choiceName
• SCREEN_PAUSEDTEXT_NOT_SHOWN_WHEN_ALLOWPAUSE_IS_FALSE - Errors with this extended error code have the following properties: fieldName
• SETTING_FIELD MAKES OTHER FIELD REQUIRED - Errors with this extended error code have the following properties: fieldName, requiredField
• SETTING_FIELD MAKES OTHER FIELD UNSUPPORTED - Errors with this extended error code have the following properties: fieldName, otherFieldName
• SOBJECT_ELEMENT_INCOMPATIBLE_DATATYPE - Errors with this extended error code have the following properties: fieldName, fieldValue
• SOBJECT_ELEMENT_MISMATCHED_OBJECTTYPE - Errors with this extended error code have the following properties: objectType, subjectName
• SORT_ENCRYPTED_FIELDS_NOT_SUPPORTED - Errors with this extended error code have the following properties: fieldName, objectType
• SORT_FIELD MISSING - Errors with this extended error code have the following properties: sortOrder
• SORT_FIELD_NOT_SUPPORTED - Errors with this extended error code have the following properties: fieldName, objectName
• SORT_GEOLOCATION_FIELDS_NOT_SUPPORTED - Errors with this extended error code have the following properties: fieldName, objectName
• SORT_LIMIT_INVALID - Errors with this extended error code have the following properties: maxLimit
• SORT_ORDER_MISSING - Errors with this extended error code have the following properties: fieldName
• SPECIFIC_FIELD_VALUE MAKES_OTHER_FIELD_REQUIRED - Errors with this extended error code have the following properties: fieldName, fieldType, requiredField
• START_ELEMENT_MISSING - Errors with this extended error code have the following properties:
• SUBFLOW_DESKTOP_DESIGNER_FLOWS_NOT_SUPPORTED - Errors with this extended error code have the following properties: flowName
• SUBFLOW_INPUT_ELEMENT_INCOMPATIBLE_DATATYPES - Errors with this extended error code have the following properties: subflowName, inputAssignmentNames
• SUBFLOW_INPUT_INVALID_VALUE - Errors with this extended error code have the following properties: subflowName, inputAssignmentNames
• SUBFLOW_INPUT_MISMATCHED_COLLECTIONTYPES - Errors with this extended error code have the following properties: subflowName, inputParameterNames
• SUBFLOW_INPUT_MISMATCHED_OBJECTS - Errors with this extended error code have the following properties: subflowName, inputParameterNames
• SUBFLOW_INPUT_MISSING_NAME - Errors with this extended error code have the following properties: subflowName
• SUBFLOW_INPUT_MULTIPLE_ASSIGNMENTS_TO_ONE_VARIABLE - Errors with this extended error code have the following properties: inputVariableName
• SUBFLOW_INPUT_REFERENCES_FIELD_ON_SUBJECT_VARIABLE - Errors with this extended error code have the following properties: inputVariableName
• SUBFLOW_INPUT_VALUE_INCOMPATIBLE_DATATYPES - Errors with this extended error code have the following properties: subflowName, inputAssignmentNames
• SUBFLOW_INPUT_VARIABLE_NOT_FOUND_IN_MASTERFLOW - Errors with this extended error code have the following properties: subflowName, inputAssignmentNames
• SUBFLOW_INPUT_VARIABLE_NOT_FOUND_INREFERENCEDFLOW - Errors with this extended error code have the following properties: subflowName, inputAssignmentNames
• SUBFLOW_INPUT_VARIABLE_NO_INPUT_ACCESS - Errors with this extended error code have the following properties: subflowName, inputAssignmentNames
• SUBFLOW_INVALID_NAME - Errors with this extended error code have the following properties:
• SUBFLOW_INVALID_REFERENCE - Errors with this extended error code have the following properties: flowName
• SUBFLOW_MASTER_FLOW_TYPE_NOT_AUTOLAUNCHED - Errors with this extended error code have the following properties: parentFlowName
• SUBFLOW_MISSING_NAME - Errors with this extended error code have the following properties:
• SUBFLOW_NO_ACTIVE_VERSION - Errors with this extended error code have the following properties: subflowName, flowName
• SUBFLOW_OUTPUT_INCOMPATIBLE_DATATYPES - Errors with this extended error code have the following properties: subflowName, flowVersion, outputParameterNames
• SUBFLOW_OUTPUT_MISMATCHED_COLLECTIONTYPES - Errors with this extended error code have the following properties: subflowName, flowVersion, outputParameterNames
• SUBFLOW_OUTPUT_MISMATCHED_OBJECTS - Errors with this extended error code have the following properties: subflowName, flowVersion, outputParameterNames
• SUBFLOW_OUTPUT_MISSING_ASSIGNTOREFERENCE - Errors with this extended error code have the following properties: outputAssignment
• SUBFLOW_OUTPUT_MISSING_NAME - Errors with this extended error code have the following properties: subflowName
• SUBFLOW_OUTPUT_MULTIPLE_ASSIGNMENTS_TO_ONE_VARIABLE - Errors with this extended error code have the following properties: outputVariableName
• SUBFLOW_OUTPUT_REFERENCES_FIELD_ON_SOBJECT_VARIABLE - Errors with this extended error code have the following properties: outputAssignment
• SUBFLOW_OUTPUT_TARGET_DOES_NOT_EXIST_IN_MASTER_FLOW - Errors with this extended error code have the following properties: subflowName, outputAssignmentName
• SUBFLOW_OUTPUT_VARIABLE_NOT_FOUND_IN_MASTERFLOW - Errors with this extended error code have the following properties: subflowName, variableName
• SUBFLOW_OUTPUT_VARIABLE_NOT_FOUND_IN_REFERENCEDFLOW - Errors with this extended error code have the following properties: subflowName, flowVersion, outputParameterNames
• SUBFLOW_OUTPUT_VARIABLE_NO_OUTPUT_ACCESS - Errors with this extended error code have the following properties: subflowName, variableName
• SURVEY_REFERENCES_MASTERFLOW - Errors with this extended error code have the following properties:
  • SURVEY_CHOICE_NOT_REFERENCED_BY_A_QUESTION - Errors with this extended error code have the following properties: choiceName
  • SURVEY_CHOICE_REFERENCED_BY_MULTIPLE_QUESTIONS - Errors with this extended error code have the following properties: choiceName
  • SURVEY_INACTIVE_SUBFLOWS - Errors with this extended error code have the following properties: subflowName
  • SURVEY_MISSING_QUESTION_OR_SUBFLOW - Errors with this extended error code have the following properties: surveyName
  • SURVEY_MISSING_REQUIRED_VARIABLES - Errors with this extended error code have the following properties: surveyName
  • SURVEY_NESTED_SUBFLOWS - Errors with this extended error code have the following properties: subflowName
  • SURVEY_NONSURVEY_SUBFLOWS - Errors with this extended error code have the following properties: subflowName
  • SURVEY_SCREENFIELD_TYPE_NOT_SUPPORTED_FOR_QUESTION - Errors with this extended error code have the following properties: elementName
• SURVEY_START_ELEMENT_INVALID - Errors with this extended error code have the following properties:

• SURVEY_VARIABLE_ACCESS_INVALID - Errors with this extended error code have the following properties: surveyName

• UNEXPECTED_ERROR - Errors with this extended error code have the following properties:

• VALUE_CHAR_LIMIT_EXCEEDED - Errors with this extended error code have the following properties: elementName, characterLimit

• VARIABLE_FIELD_NOT_SUPPORTED_FOR_DATATYPE - Errors with this extended error code have the following properties: fieldName, datatype

• VARIABLE_FIELD_NOT_SUPPORTED_FOR_DATATYPE_AND_COLLECTION - Errors with this extended error code have the following properties: fieldName, datatype

• VARIABLE_FIELD_REQUIRED_FOR_DATATYPE - Errors with this extended error code have the following properties: fieldName, datatype

• VARIABLE_SCALE_EXCEEDS_LIMIT - Errors with this extended error code have the following properties: fieldName

• VARIABLE_SCALE_NEGATIVE_INTEGER - Errors with this extended error code have the following properties: fieldName

• VARIABLE_SCALE_NULL - Errors with this extended error code have the following properties: fieldName

• WAITEVENT_DEFAULT_CONNECTOR_MISSING_LABEL - Errors with this extended error code have the following properties: waiteventName

• WAITEVENT_DUPLICATE_INPUT_PARAM - Errors with this extended error code have the following properties: parameterName

• WAITEVENT_INPUT_NOT_SUPPORTED_FOR_EVENTTYPE - Errors with this extended error code have the following properties: waiteventName, inputParameterName

• WAITEVENT_INPUTQUIRES_LITERAL_VALUE - Errors with this extended error code have the following properties: waiteventName, parameterName

• WAITEVENT_INVALID_CONDITION_LOGIC - Errors with this extended error code have the following properties: waiteventName

• WAITEVENT_MISSING - Errors with this extended error code have the following properties:

• WAITEVENT_MISSING_CONNECTOR - Errors with this extended error code have the following properties: waiteventName

• WAITEVENT_MISSING_EVENTTYPE - Errors with this extended error code have the following properties: waiteventName

• WAITEVENT_OBJECT_NOT_SUPPORTED_FOR_EVENTTYPE - Errors with this extended error code have the following properties: waiteventName

• WAITEVENT_OUTPUT_NOT_SUPPORTED_FOR_EVENTTYPE - Errors with this extended error code have the following properties: waiteventName, outputParameter

• WAITEVENT_RELATIVEALARM_INVALID_DATETIME_FIELD - Errors with this extended error code have the following properties: waiteventName, eventParameterName, incompatibleValue

• WAITEVENT_RELATIVEALARM_INVALID_FIELD - Errors with this extended error code have the following properties: waiteventName, eventParameterName, incompatibleValue
• WAITEVENT_RELATIVEALARM_INVALID_OBJECTTYPE - Errors with this extended error code have the following properties: waitEventName, inputParameterName

• WAITEVENT_RELATIVEALARM_INVALID_OFFSETNUMBER - Errors with this extended error code have the following properties: waitEventName, eventParameterName, incompatibleValue

• WAITEVENT_RELATIVEALARM_INVALID_OFFSETUNIT - Errors with this extended error code have the following properties: waitEventName, eventParameterName, incompatibleValue

• WAITEVENT_REQUIRED_INPUT_MISSING - Errors with this extended error code have the following properties: waitEventName, parameterName

• WAITEVENT_TYPE_INVALID_OR_NOT_SUPPORTED - Errors with this extended error code have the following properties: waitEventName

• WORKFLOW_MISSED_PROCESSMETADATAVALUES - Errors with this extended error code have the following properties: flowName

• WORKFLOW_OBJECTTYPE_NOT_FOUND - Errors with this extended error code have the following properties: objectType

• WORKFLOW_OBJECTTYPE_NOT_SUPPORTED - Errors with this extended error code have the following properties: objectType

• WORKFLOW_OBJECTVARIABLE_AND_OLDOBJECTVARIABLE_REFERENCE_SAME_SOBJECT_VARIABLE - Errors with this extended error code have the following properties: objectVariableName, oldObjectVariableName

• WORKFLOW_OBJECTVARIABLE_DOESNT_SUPPORT_INPUT - Errors with this extended error code have the following properties: objectType, objectVariableName

• WORKFLOW_OLDOBJECTVARIABLE_DOESNT_SUPPORT_INPUT - Errors with this extended error code have the following properties: objectType, oldObjectVariableName

• WORKFLOW_PROCESSMETADATAVALUES_MORE_THAN_ONE_NAME - Errors with this extended error code have the following properties: metadataValue

• WORKFLOW_PROCESS_METADATAVALUES_MISSING_NAME - Errors with this extended error code have the following properties: metadataValue

• WORKFLOW_RECURSIVECOUNTVARIABLE_DOESNT_SUPPORT_INPUT - Errors with this extended error code have the following properties: elementName

• WORKFLOW_TRIGGERTYPE_INVALID_VALUE - Errors with this extended error code have the following properties:

**ExternalDataSource**

fullName a character (inherited from Metadata)

authProvider a character

certificate a character

customConfiguration a character

data a character

isWritable a character either 'true' or 'false'

label a character

oauthRefreshToken a character
oauthScope a character
oauthToken a character
password a character
principalType a ExternalPrincipalType - which is a character taking one of the following values:
  • Anonymous
  • PerUser
  • NamedUser
protocol a AuthenticationProtocol - which is a character taking one of the following values:
  • NoAuthentication
  • Oauth
  • Password
repository a character
type a ExternalDataSourceType - which is a character taking one of the following values:
  • Datacloud
  • Datajourney
  • OpenSearch
  • Identity
  • outgoingemail
  • recommendation
  • SfdcOrg
  • OData
  • OData4
  • SimpleURL
  • Wrapper
username a character
version a character

ExternalServiceRegistration

fullName a character (inherited from Metadata)
description a character
label a character
namedCredential a character
schema a character
schemaType a character
schemaUrl a character
status a character

FeedFilterCriterion

feedItemType a FeedItemType - which is a character taking one of the following values:
• TrackedChange
• UserStatus
• TextPost
• AdvancedTextPost
• LinkPost
• ContentPost
• PollPost
• RypplePost
• ProfileSkillPost
• DashboardComponentSnapshot
• ApprovalPost
• CaseCommentPost
• ReplyPost
• EmailMessageEvent
• CallLogPost
• ChangeStatusPost
• AttachArticleEvent
• MilestoneEvent
• ActivityEvent
• ChatTranscriptPost
• CollaborationGroupCreated
• CollaborationGroupUnarchived
• SocialPost
• QuestionPost
• FacebookPost
• BasicTemplateFeedItem
• CreateRecordEvent
• CanvasPost
• AnnouncementPost

**feedItemVisibility** a FeedItemVisibility - which is a character taking one of the following values:
  - AllUsers
  - InternalUsers

**relatedSObjectType** a character

**FeedItemSettings**

**characterLimit** an integer

**collapseThread** a character either 'true' or 'false'

**displayFormat** a FeedItemDisplayFormat - which is a character taking one of the following values:
  - Default
  - HideBlankLines

**feedItemType** a FeedItemType - which is a character taking one of the following values:
• TrackedChange
• UserStatus
• TextPost
• AdvancedTextPost
• LinkPost
• ContentPost
• PollPost
• RypplePost
• ProfileSkillPost
• DashboardComponentSnapshot
• ApprovalPost
• CaseCommentPost
• ReplyPost
• EmailMessageEvent
• CallLogPost
• ChangeStatusPost
• AttachArticleEvent
• MilestoneEvent
• ActivityEvent
• ChatTranscriptPost
• CollaborationGroupCreated
• CollaborationGroupUnarchived
• SocialPost
• QuestionPost
• FacebookPost
• BasicTemplateFeedItem
• CreateRecordEvent
• CanvasPost
• AnnouncementPost

FeedLayout

autocollapsePublisher a character either 'true' or 'false'
compactFeed a character either 'true' or 'false'
feedFilterPosition a FeedLayoutFilterPosition - which is a character taking one of the following values:
  • CenterDropDown
  • LeftFixed
  • LeftFloat

feedFilters a FeedLayoutFilter
fullWidthFeed a character either 'true' or 'false'
hideSidebar a character either 'true' or 'false'
highlightExternalFeedItems  a character either 'true' or 'false'
leftComponents  a FeedLayoutComponent
rightComponents  a FeedLayoutComponent
useInlineFiltersInConsole  a character either 'true' or 'false'

FeedLayoutComponent

cOMPONENTTYPE  a FeedLayoutComponentType - which is a character taking one of the following values:
  • HelpAndToolLinks
  • CustomButtons
  • Following
  • Followers
  • CustomLinks
  • Milestones
  • Topics
  • CaseUnifiedFiles
  • Visualforce

height  an integer
page  a character

FeedLayoutFilter

feedFilterName  a character

feedFilterType  a FeedLayoutFilterType - which is a character taking one of the following values:
  • AllUpdates
  • FeedItemType
  • Custom

feedItemType  a FeedItemType - which is a character taking one of the following values:
  • TrackedChange
  • UserStatus
  • TextPost
  • AdvancedTextPost
  • LinkPost
  • ContentPost
  • PollPost
  • RypplePost
  • ProfileSkillPost
  • DashboardComponentSnapshot
  • ApprovalPost
  • CaseCommentPost
  • ReplyPost
  • EmailMessageEvent
• CallLogPost
• ChangeStatusPost
• AttachArticleEvent
• MilestoneEvent
• ActivityEvent
• ChatTranscriptPost
• CollaborationGroupCreated
• CollaborationGroupUnarchived
• SocialPost
• QuestionPost
• FacebookPost
• BasicTemplateFeedItem
• CreateRecordEvent
• CanvasPost
• AnnouncementPost

FieldMapping

SObjectType  a character
developerName  a character
fieldMappingRows  a FieldMappingRow
masterLabel  a character

FieldMappingField

dataServiceField  a character
dataServiceObjectName  a character
priority  an integer

FieldMappingRow

SObjectType  a character
fieldMappingFields  a FieldMappingField
fieldName  a character
mappingOperation  a MappingOperation - which is a character taking one of the following values:
  • Autofill
  • Overwrite

FieldOverride

field  a character
formula  a character
literalValue  a character

FieldServiceSettings
fullName a character (inherited from Metadata)
fieldServiceNotificationsOrgPref a character either 'true' or 'false'
fieldServiceOrgPref a character either 'true' or 'false'
serviceAppointmentsDueDateOffsetOrgValue an integer
workOrderLineItemSearchFields a character
workOrderSearchFields a character

FieldSet

fullName a character (inherited from Metadata)
availableFields a FieldSetItem
description a character
displayedFields a FieldSetItem
label a character

FieldSetItem

field a character
isFieldManaged a character either 'true' or 'false'
isRequired a character either 'true' or 'false'

FieldSetTranslation

label a character
name a character

FieldValue

name a character
value a character that appears similar to any of the other accepted types (integer, numeric, date, datetime, boolean)

FileProperties

createdById a character
createdByName a character
createdDate a character formatted as 'yyyy-mm-ddThh:mm:ssZ'
fileName a character
fullName a character
id a character
lastModifiedById a character
lastModifiedByName a character
lastModifiedDate a character formatted as 'yyyy-mm-ddThh:mm:ssZ'
manageableState a ManageableState - which is a character taking one of the following values:
• released
• deleted
• deprecated
• installed
• beta
• unmanaged

namespacePrefix a character
type a character

FileTypeDispositionAssignmentBean

behavior a FileDownloadBehavior - which is a character taking one of the following values:
  • DOWNLOAD
  • EXECUTE_IN_BROWSER
  • HYBRID

fileType a FileType - which is a character taking one of the following values:
  • UNKNOWN
  • PDF
  • POWER_POINT
  • POWER_POINT_X
  • POWER_POINT_M
  • POWER_POINT_T
  • WORD
  • WORD_X
  • WORD_M
  • WORD_T
  • PPS
  • PPSX
  • EXCEL
  • EXCEL_X
  • EXCEL_M
  • EXCEL_T
  • GOOGLE_DOCUMENT
  • GOOGLE_PRESENTATION
  • GOOGLE_SPREADSHEET
  • GOOGLE_DRAWING
  • GOOGLE_FORM
  • GOOGLE_SCRIPT
  • LINK
  • SLIDE
  • AAC
  • ACGI
• AI
• AVI
• BMP
• BOXNOTE
• CSV
• EPS
• EXE
• FLASH
• GIF
• GZIP
• HTM
• HTML
• HTX
• JPEG
• JPE
• PJP
• PJPEG
• JFIF
• JPG
• JS
• MHTM
• MHTML
• MP3
• M4A
• M4V
• MP4
• MPEG
• MPG
• MOV
• MSG
• ODP
• ODS
• ODT
• OGV
• PNG
• PSD
• RTF
• QUIPDOC
• QUIPSHEET
• SHTM
• SHTML
• SNOTE
• STYPI
• SVG
• SVGZ
• TEXT
• THTML
• VISIO
• WMV
• WRF
• XML
• ZIP
• XZIP
• WMA
• XSN
• TRTF
• TXML
• WEBVIEW
• RFC822
• ASF
• DWG
• JAR
• XJS
• OPX
• XPSD
• TIF
• TIFF
• WAV
• CSS
• THUMB720BY480
• THUMB240BY180
• THUMB120BY90
• ALLTHUMBS
• PAGED_FLASH
• PACK
• C
• CPP
• WORDT
• INI
• JAVA
• LOG
• POWER_POINTT
• SQL
• XHTML
EXCEL

securityRiskFileType a character either 'true' or 'false'

FileUploadAndDownloadSecuritySettings

fullName a character (inherited from Metadata)
dispositions a FileTypeDispositionAssignmentBean
noHtmlUploadAsAttachment a character either 'true' or 'false'

FilterItem

field a character
operation a FilterOperation - which is a character taking one of the following values:
• equals
• notEqual
• lessThan
• greaterThan
• lessOrEqual
• greaterOrEqual
• contains
• notContain
• startsWith
• includes
• excludes
• within

value a character
valueField a character

FindSimilarOppFilter

similarOpportunitiesDisplayColumns a character
similarOpportunitiesMatchFields a character

FiscalYearSettings

fiscalYearNameBasedOn a character
startMonth a character

FlexiPage

fullName a character (inherited from Metadata)
description a character
flexiPageRegions a FlexiPageRegion
masterLabel a character
parentFlexiPage a character
platformActionList a PlatformActionList
quickActionList a QuickActionList
sobjectType a character
template a FlexiPageTemplateInstance
type a FlexiPageType - which is a character taking one of the following values:
• AppPage
• ObjectPage
• RecordPage
• HomePage
• MailAppAppPage
• CommAppPage
• CommForgotPasswordPage
• CommLoginPage
• CommObjectPage
• CommQuickActionCreatePage
• CommRecordPage
• CommRelatedListPage
• CommSearchResultPage
• CommGlobalSearchResultPage
• CommSelfRegisterPage
• CommThemeLayoutPage
• UtilityBar
• RecordPreview

FlexiPageRegion
appendable a RegionFlagStatus - which is a character taking one of the following values:
• disabled
• enabled
componentInstances a ComponentInstance
mode a FlexiPageRegionMode - which is a character taking one of the following values:
• Append
• Prepend
• Replace
name a character
prependable a RegionFlagStatus - which is a character taking one of the following values:
• disabled
• enabled
replaceable a RegionFlagStatus - which is a character taking one of the following values:
• disabled
• enabled
type a FlexiPageRegionType - which is a character taking one of the following values:

- Region
- Facet

FlexiPageTemplateInstance

name a character

properties a ComponentInstanceProperty

Flow

fullName a character (inherited from Metadata)

actionCalls a FlowActionCall

apexPluginCalls a FlowApexPluginCall

assignments a FlowAssignment

choices a FlowChoice

constants a FlowConstant

decisions a FlowDecision

description a character

dynamicChoiceSets a FlowDynamicChoiceSet

formulas a FlowFormula

interviewLabel a character

label a character

loops a FlowLoop

processMetadataValues a FlowMetadataValue

processType a FlowProcessType - which is a character taking one of the following values:

- AutoLaunchedFlow
- Flow
- Workflow
- CustomEvent
- InvocableProcess
- LoginFlow
- ActionPlan
- JourneyBuilderIntegration
- UserProvisioningFlow
- Survey
- FieldServiceMobile
- OrchestrationFlow
- FieldServiceWeb
- TransactionSecurityFlow

recordCreates a FlowRecordCreate
recordDeletes a FlowRecordDelete
recordLookups a FlowRecordLookup
recordUpdates a FlowRecordUpdate
screens a FlowScreen
stages a FlowStage
startElementReference a character
steps a FlowStep
subflows a FlowSubflow
textTemplates a FlowTextTemplate
variables a FlowVariable
waits a FlowWait

FlowActionCall

label a character (inherited from FlowNode)
locationX an integer (inherited from FlowNode)
locationY an integer (inherited from FlowNode)
actionName a character

actionType a InvocableActionType - which is a character taking one of the following values:
  • apex
  • chatterPost
  • contentWorkspaceEnableFolders
  • emailAlert
  • emailSimple
  • flow
  • metricRefresh
  • quickAction
  • submit
  • thanks
  • thunderResponse
  • createServiceReport
  • deployOrchestration
  • createResponseEventAction
  • generateWorkOrders
  • deactivateSessionPermSet
  • activateSession PermSet
  • aggregateValue
  • orchestrationTimer
  • orchestrationDebugLog
  • choosePricebook
  • localAction
connector a FlowConnector
faultConnector a FlowConnector
inputParameters a FlowActionCallInputParameter
outputParameters a FlowActionCallOutputParameter

FlowActionCallInputParameter

processMetadataValues a FlowMetadataValue (inherited from FlowBaseElement)
name a character
value a FlowElementReferenceOrValue

FlowActionCallOutputParameter

processMetadataValues a FlowMetadataValue (inherited from FlowBaseElement)
assignToReference a character
name a character

FlowApexPluginCall

label a character (inherited from FlowNode)
locationX an integer (inherited from FlowNode)
locationY an integer (inherited from FlowNode)
apexClass a character
connector a FlowConnector
faultConnector a FlowConnector
inputParameters a FlowApexPluginCallInputParameter
outputParameters a FlowApexPluginCallOutputParameter

FlowApexPluginCallInputParameter

processMetadataValues a FlowMetadataValue (inherited from FlowBaseElement)
name a character
value a FlowElementReferenceOrValue

FlowApexPluginCallOutputParameter

processMetadataValues a FlowMetadataValue (inherited from FlowBaseElement)
assignToReference a character
name a character

FlowAssignment

label a character (inherited from FlowNode)
locationX an integer (inherited from FlowNode)
locationY an integer (inherited from FlowNode)
assignmentItems a FlowAssignmentItem
connector a FlowConnector

FlowAssignmentItem

processMetadataValues a FlowMetadataValue (inherited from FlowBaseElement)
assignToReference a character
operator a FlowAssignmentOperator - which is a character taking one of the following values:
  • Assign
  • Add
  • Subtract
  • AddItem
value a FlowElementReferenceOrValue

FlowBaseElement

processMetadataValues a FlowMetadataValue

FlowCategory

fullName a character (inherited from Metadata)
description a character
flowCategoryItems a FlowCategoryItems
masterLabel a character

FlowCategoryItems

flow a character

FlowChoice

description a character (inherited from FlowElement)
name a character (inherited from FlowElement)
choiceText a character
dataType a FlowDataType - which is a character taking one of the following values:
  • Currency
  • Date
  • Number
  • String
  • Boolean
  • SObject
  • DateTime
  • Picklist
  • Multipicklist
userInput a FlowChoiceUserInput
value  a FlowElementReferenceOrValue

FlowChoiceTranslation

choiceText  a character
name  a character
userInput  a FlowChoiceUserInputTranslation

FlowChoiceUserInput

processMetadataValues  a FlowMetadataValue (inherited from FlowBaseElement)
isRequired  a character either 'true' or 'false'
promptText  a character
validationRule  a FlowInputValidationRule

FlowChoiceUserInputTranslation

promptText  a character
validationRule  a FlowInputValidationRuleTranslation

FlowCondition

processMetadataValues  a FlowMetadataValue (inherited from FlowBaseElement)
leftValueReference  a character
operator  a FlowComparisonOperator - which is a character taking one of the following values:
  
  • EqualTo
  • NotEqualTo
  • GreaterThan
  • LessThan
  • GreaterThanOrEqualTo
  • LessThanOrEqualTo
  • StartsWith
  • EndsWith
  • Contains
  • IsNull
  • WasSet
  • WasSelected
  • WasVisited

rightValue  a FlowElementReferenceOrValue

FlowConnector

processMetadataValues  a FlowMetadataValue (inherited from FlowBaseElement)
targetReference  a character
FlowConstant

description a character (inherited from FlowElement)
name a character (inherited from FlowElement)
dataType a FlowDataType - which is a character taking one of the following values:
  • Currency
  • Date
  • Number
  • String
  • Boolean
  • SObject
  • DateTime
  • Picklist
  • Multipicklist
value a FlowElementReferenceOrValue

FlowDecision

label a character (inherited from FlowNode)
locationX an integer (inherited from FlowNode)
locationY an integer (inherited from FlowNode)
defaultConnector a FlowConnector
defaultConnectorLabel a character
rules a FlowRule

FlowDefinition

fullName a character (inherited from Metadata)
activeVersionNumber an integer
description a character
masterLabel a character

FlowDefinitionTranslation

flows a FlowTranslation
fullName a character
label a character

FlowDynamicChoiceSet

description a character (inherited from FlowElement)
name a character (inherited from FlowElement)
dataType a FlowDataType - which is a character taking one of the following values:
  • Currency
• Date
• Number
• String
• Boolean
• SObject
• DateTime
• Picklist
• Multipicklist
displayField  a character
filters  a FlowRecordFilter
limit an integer
object  a character
outputAssignments  a FlowOutputFieldAssignment
picklistField  a character
picklistObject  a character
sortField  a character
sortOrder  a SortOrder - which is a character taking one of the following values:
  • Asc
  • Desc
valueField  a character

FlowElement

processMetadataValues  a FlowMetadataValue (inherited from FlowBaseElement)
description  a character
name  a character

FlowElementReferenceOrValue

booleanValue  a character either 'true' or 'false'
dateTimeValue  a character formatted as 'yyyy-mm-ddThh:mm:ssZ'
dateValue  a character formatted as 'yyyy-mm-dd'
elementReference  a character
numberValue  a numeric
stringValue  a character

FlowFormula

description  a character (inherited from FlowElement)
name  a character (inherited from FlowElement)
dataType  a FlowDataType - which is a character taking one of the following values:
  • Currency
metadata_type_validator

- Date
- Number
- String
- Boolean
- SObject
- DateTime
- Picklist
- Multipicklist

**expression** a character

**scale** an integer

**FlowInputFieldAssignment**

**processMetadataValues** a FlowMetadataValue (inherited from FlowBaseElement)

**field** a character

**value** a FlowElementReferenceOrValue

**FlowInputValidationRule**

**errorMessage** a character

**formulaExpression** a character

**FlowInputValidationRuleTranslation**

**errorMessage** a character

**FlowLoop**

**label** a character (inherited from FlowNode)

**locationX** an integer (inherited from FlowNode)

**locationY** an integer (inherited from FlowNode)

**assignNextValueToReference** a character

**collectionReference** a character

**iterationOrder** a IterationOrder - which is a character taking one of the following values:

- Asc
- Desc

**nextValueConnector** a FlowConnector

**noMoreValuesConnector** a FlowConnector

**FlowMetadataValue**

**name** a character

**value** a FlowElementReferenceOrValue

**FlowNode**
description a character (inherited from FlowElement)
name a character (inherited from FlowElement)
label a character
locationX an integer
locationY an integer

FlowOutputFieldAssignment

processMetadataValues a FlowMetadataValue (inherited from FlowBaseElement)
assignToReference a character
field a character

FlowRecordCreate

label a character (inherited from FlowNode)
locationX an integer (inherited from FlowNode)
locationY an integer (inherited from FlowNode)
assignRecordIdToReference a character
connector a FlowConnector
faultConnector a FlowConnector
inputAssignments a FlowInputFieldAssignment
inputReference a character
object a character

FlowRecordDelete

label a character (inherited from FlowNode)
locationX an integer (inherited from FlowNode)
locationY an integer (inherited from FlowNode)
connector a FlowConnector
faultConnector a FlowConnector
filters a FlowRecordFilter
inputReference a character
object a character

FlowRecordFilter

processMetadataValues a FlowMetadataValue (inherited from FlowBaseElement)
field a character
operator a FlowRecordFilterOperator - which is a character taking one of the following values:
  • EqualTo
  • NotEqualTo
metadata_type_validator

- GreaterThan
- LessThan
- GreaterThanOrEqualTo
- LessThanOrEqualTo
- StartsWith
- EndsWith
- Contains
- IsNull

**value** a FlowElementReferenceOrValue

**FlowRecordLookup**

- **label** a character (inherited from FlowNode)
- **locationX** an integer (inherited from FlowNode)
- **locationY** an integer (inherited from FlowNode)
- **assignNullValuesIfNoRecordsFound** a character either 'true' or 'false'
- **connector** a FlowConnector
- **faultConnector** a FlowConnector
- **filters** a FlowRecordFilter
- **object** a character
- **outputAssignments** a FlowOutputFieldAssignment
- **outputReference** a character
- **queriedFields** a character
- **sortField** a character
- **sortOrder** a SortOrder - which is a character taking one of the following values:
  - Asc
  - Desc

**FlowRecordUpdate**

- **label** a character (inherited from FlowNode)
- **locationX** an integer (inherited from FlowNode)
- **locationY** an integer (inherited from FlowNode)
- **connector** a FlowConnector
- **faultConnector** a FlowConnector
- **filters** a FlowRecordFilter
- **inputAssignments** a FlowInputFieldAssignment
- **inputReference** a character
- **object** a character

**FlowRule**
description  a character (inherited from FlowElement)
name  a character (inherited from FlowElement)
conditionLogic  a character
conditions  a FlowCondition
connector  a FlowConnector
label  a character

FlowScreen

label  a character (inherited from FlowNode)
locationX  an integer (inherited from FlowNode)
locationY  an integer (inherited from FlowNode)
allowBack  a character either 'true' or 'false'
allowFinish  a character either 'true' or 'false'
allowPause  a character either 'true' or 'false'
connector  a FlowConnector
fields  a FlowScreenField
helpText  a character
pausedText  a character
rules  a FlowScreenRule
showFooter  a character either 'true' or 'false'
showHeader  a character either 'true' or 'false'

FlowScreenField

description  a character (inherited from FlowElement)
name  a character (inherited from FlowElement)
choiceReferences  a character
dataType  a FlowDataType - which is a character taking one of the following values:
  • Currency
  • Date
  • Number
  • String
  • Boolean
  • SObject
  • DateTime
  • Picklist
  • Multipicklist
defaultSelectedChoiceReference  a character
defaultValue  a FlowElementReferenceOrValue
extensionName  a character
fieldText a character

fieldType a FlowScreenFieldType - which is a character taking one of the following values:

- DisplayText
- InputField
- LargeTextArea
- PasswordField
- RadioButtons
- DropdownBox
- MultiSelectCheckboxes
- MultiSelectPicklist
- ComponentInstance

helpText a character

inputParameters a FlowScreenFieldInputParameter

isRequired a character either 'true' or 'false'

isVisible a character either 'true' or 'false'

outputParameters a FlowScreenFieldOutputParameter

scale an integer

validationRule a FlowInputValidationRule

FlowScreenFieldInputParameter

processMetadataValues a FlowMetadataValue (inherited from FlowBaseElement)

name a character

value a FlowElementReferenceOrValue

FlowScreenFieldOutputParameter

processMetadataValues a FlowMetadataValue (inherited from FlowBaseElement)

assignToReference a character

name a character

FlowScreenFieldTranslation

fieldText a character

helpText a character

name a character

validationRule a FlowInputValidationRuleTranslation

FlowScreenRule

processMetadataValues a FlowMetadataValue (inherited from FlowBaseElement)

conditionLogic a character

conditions a FlowCondition
label a character
ruleActions a FlowScreenRuleAction

FlowScreenRuleAction

processMetadataValues a FlowMetadataValue (inherited from FlowBaseElement)
attribute a character
fieldReference a character
value a FlowElementReferenceOrValue

FlowScreenTranslation

fields a FlowScreenFieldTranslation
helpText a character
name a character
pausedText a character

FlowStage

description a character (inherited from FlowElement)
name a character (inherited from FlowElement)
isActive a character either ‘true’ or ‘false’
label a character
stageOrder an integer

FlowStep

label a character (inherited from FlowNode)
locationX an integer (inherited from FlowNode)
locationY an integer (inherited from FlowNode)
connectors a FlowConnector

FlowSubflow

label a character (inherited from FlowNode)
locationX an integer (inherited from FlowNode)
locationY an integer (inherited from FlowNode)
connector a FlowConnector
flowName a character
inputAssignments a FlowSubflowInputAssignment
outputAssignments a FlowSubflowOutputAssignment

FlowSubflowInputAssignment

processMetadataValues a FlowMetadataValue (inherited from FlowBaseElement)
name  a character
value  a FlowElementReferenceOrValue

FlowSubflowOutputAssignment

processMetadataValues  a FlowMetadataValue (inherited from FlowBaseElement)
assignToReference  a character
name  a character

FlowTextTemplate

description  a character (inherited from FlowElement)
name  a character (inherited from FlowElement)
text  a character

FlowTranslation

choices  a FlowChoiceTranslation
fullName  a character
label  a character
screens  a FlowScreenTranslation

FlowVariable

description  a character (inherited from FlowElement)
name  a character (inherited from FlowElement)
dataType  a FlowDataType - which is a character taking one of the following values:

  • Currency
  • Date
  • Number
  • String
  • Boolean
  • SObject
  • DateTime
  • Picklist
  • Multipicklist

isCollection  a character either 'true' or 'false'
isInput  a character either 'true' or 'false'
isOutput  a character either 'true' or 'false'
objectType  a character
scale  an integer
value  a FlowElementReferenceOrValue

FlowWait
**metadata_type_validator**

- **label** a character (inherited from FlowNode)
- **locationX** an integer (inherited from FlowNode)
- **locationY** an integer (inherited from FlowNode)
- **defaultConnector** a FlowConnector
- **defaultConnectorLabel** a character
- **faultConnector** a FlowConnector
- **waitEvents** a FlowWaitEvent

**FlowWaitEvent**

- **description** a character (inherited from FlowElement)
- **name** a character (inherited from FlowElement)
- **conditionLogic** a character
- **conditions** a FlowCondition
- **connector** a FlowConnector
- **eventType** a character
- **inputParameters** a FlowWaitEventInputParameter
- **label** a character
- **outputParameters** a FlowWaitEventOutputParameter

**FlowWaitEventInputParameter**

- **processMetadataValues** a FlowMetadataValue (inherited from FlowBaseElement)
- **name** a character
- **value** a FlowElementReferenceOrValue

**FlowWaitEventOutputParameter**

- **processMetadataValues** a FlowMetadataValue (inherited from FlowBaseElement)
- **assignToReference** a character
- **name** a character

**Folder**

- **fullName** a character (inherited from Metadata)
- **accessType** a FolderAccessType - which is a character taking one of the following values:
  - Shared
  - Public
  - Hidden
  - PublicInternal
- **folderShares** a FolderShare
- **name** a character
**publicFolderAccess** a PublicFolderAccess - which is a character taking one of the following values:
  - ReadOnly
  - ReadWrite

**sharedTo** a SharedTo

**FolderShare**

**accessLevel** a FolderShareAccessLevel - which is a character taking one of the following values:
  - View
  - EditAllContents
  - Manage

**sharedTo** a character

**sharedToType** a FolderSharedToType - which is a character taking one of the following values:
  - Group
  - Role
  - RoleAndSubordinates
  - RoleAndSubordinatesInternal
  - Manager
  - ManagerAndSubordinatesInternal
  - Organization
  - Territory
  - TerritoryAndSubordinates
  - AllPrmUsers
  - User
  - PartnerUser
  - AllCspUsers
  - CustomerPortalUser
  - PortalRole
  - PortalRoleAndSubordinates
  - ChannelProgramGroup

**ForecastingCategoryMapping**

**forecastingItemCategoryApiName** a character

**weightedSourceCategories** a WeightedSourceCategory

**ForecastingDisplayedFamilySettings**

**productFamily** a character

**ForecastingSettings**

**fullName** a character (inherited from Metadata)

**displayCurrency** a DisplayCurrency - which is a character taking one of the following values:
• CORPORATE
• PERSONAL

enableForecasts  a character either 'true' or 'false'
forecastingCategoryMappings  a ForecastingCategoryMapping
forecastingDisplayedFamilySettings  a ForecastingDisplayedFamilySettings
forecastingTypeSettings  a ForecastingTypeSettings

ForecastingTypeSettings

active  a character either 'true' or 'false'
adjustmentsSettings  a AdjustmentsSettings
displayedCategoryApiNames  a character
forecastRangeSettings  a ForecastRangeSettings
forecastedCategoryApiNames  a character
forecastingDateType  a ForecastingDateType - which is a character taking one of the following values:
  • OpportunityCloseDate
  • ProductDate
  • ScheduleDate

hasProductFamily  a character either 'true' or 'false'
isAmount  a character either 'true' or 'false'
isAvailable  a character either 'true' or 'false'
isQuantity  a character either 'true' or 'false'
managerAdjustableCategoryApiNames  a character
masterLabel  a character
name  a character

opportunityListFieldsLabelMappings  a OpportunityListFieldsLabelMapping
opportunityListFieldsSelectedSettings  a OpportunityListFieldsSelectedSettings
opportunityListFieldsUnselectedSettings  a OpportunityListFieldsUnselectedSettings
opportunitySplitName  a character
ownerAdjustableCategoryApiNames  a character
quotasSettings  a QuotasSettings
territory2ModelName  a character

ForecastRangeSettings

beginning  an integer
displaying  an integer
periodType  a PeriodTypes - which is a character taking one of the following values:
  • Month
• Quarter
• Week
• Year

GlobalPicklistValue

fullName a character (inherited from Metadata)
color a character
default a character either 'true' or 'false'
description a character
isActive a character either 'true' or 'false'

GlobalQuickActionTranslation

label a character
name a character

GlobalValueSet

fullName a character (inherited from Metadata)
customValue a CustomValue
description a character
masterLabel a character
sorted a character either 'true' or 'false'

GlobalValueSetTranslation

fullName a character (inherited from Metadata)
valueTranslation a ValueTranslation

Group

fullName a character (inherited from Metadata)
doesIncludeBosses a character either 'true' or 'false'
name a character

HistoryRetentionPolicy

archiveAfterMonths an integer
archiveRetentionYears an integer
description a character

Holiday

activityDate a character formatted as 'yyyy-mm-dd'
businessHours a character
description a character
endTime a character formatted as 'hh:mm:ssZ
isRecurring a character either 'true' or 'false'
name a character
recurrenceDayOfMonth an integer
recurrenceDayOfWeek a character
recurrenceDayOfWeekMask an integer
recurrenceEndDate a character formatted as 'yyyy-mm-dd'
recurrenceInstance a character
recurrenceInterval an integer
recurrenceMonthOfYear a character
recurrenceStartDate a character formatted as 'yyyy-mm-dd'
recurrenceType a character
startTime a character formatted as 'hh:mm:ssZ

HomePageComponent

fullName a character (inherited from Metadata)
body a character
height an integer
links a character
page a character
pageComponentType a PageComponentType - which is a character taking one of the following values:
  • links
  • htmlArea
  • imageOrNote
  • visualforcePage
showLabel a character either 'true' or 'false'
showScrollbars a character either 'true' or 'false'
width a PageComponentWidth - which is a character taking one of the following values:
  • narrow
  • wide

HomePageLayout

fullName a character (inherited from Metadata)
narrowComponents a character
wideComponents a character

IdeaReputationLevel
metadata_type_validator

name  a character
value  an integer

IdeasSettings

fullName  a character (inherited from Metadata)
enableChatterProfile  a character either 'true' or 'false'
enableIdeaThemes  a character either 'true' or 'false'
enableIdeas  a character either 'true' or 'false'
enableIdeasReputation  a character either 'true' or 'false'
halfLife  a numeric
ideasProfilePage  a character

Index

fullName  a character (inherited from Metadata)
fields  a IndexField
label  a character

IndexField

name  a character
sortDirection  a character

InsightType

fullName  a character (inherited from Metadata)
defaultTrendType  a InsightTrendType - which is a character taking one of the following values:
  • Positive
  • Negative
  • Informational
  • Suggestion
description  a character
isProtected  a character either 'true' or 'false'
masterLabel  a character
parentType  a InsightParentType - which is a character taking one of the following values:
  • Opportunity
  • Account
title  a character

InstalledPackage

fullName  a character (inherited from Metadata)
password  a character
versionNumber a character

IntegrationHubSettings

fullName a character (inherited from Metadata)
canonicalName a character
canonicalNameBindingChar a character
description a character
isEnabled a character either 'true' or 'false'
isProtected a character either 'true' or 'false'
masterLabel a character
setupData a character
setupDefinition a character
setupNamespace a character
setupSimpleName a character
uUID a character
version a character
versionBuild an integer
versionMajor an integer
versionMinor an integer

IntegrationHubSettingsType

fullName a character (inherited from Metadata)
canonicalName a character
canonicalNameBindingChar a character
description a character
isEnabled a character either 'true' or 'false'
isProtected a character either 'true' or 'false'
masterLabel a character
setupNamespace a character
setupSimpleName a character
uUID a character
version a character
versionBuild an integer
versionMajor an integer
versionMinor an integer

IpRange

description a character
end  a character
start  a character

KeyboardShortcuts

customShortcuts  a CustomShortcut
defaultShortcuts  a DefaultShortcut

Keyword

keyword  a character

KeywordList

fullName  a character (inherited from Metadata)
description  a character
keywords  a Keyword
masterLabel  a character

KnowledgeAnswerSettings

assignTo  a character
defaultArticleType  a character
enableArticleCreation  a character either ’true’ or ’false’

KnowledgeCaseField

name  a character

KnowledgeCaseFieldsSettings

field  a KnowledgeCaseField

KnowledgeCaseSettings

articlePDFCreationProfile  a character
articlePublicSharingCommunities  a KnowledgeCommunitiesSettings
articlePublicSharingSites  a KnowledgeSitesSettings
articlePublicSharingSitesChatterAnswers  a KnowledgeSitesSettings
assignTo  a character
customizationClass  a character
defaultContributionArticleType  a character
editor  a KnowledgeCaseEditor - which is a character taking one of the following values:
  • simple
  • standard
enableArticleCreation  a character either ’true’ or ’false’
enableArticlePublicSharingSites a character either 'true' or 'false'
enableCaseDataCategoryMapping a character either 'true' or 'false'
useProfileForPDFCreation a character either 'true' or 'false'

KnowledgeCommunitiesSettings

community a character

KnowledgeLanguage

active a character either 'true' or 'false'
defaultAssignee a character
defaultAssigneeType a KnowledgeLanguageLookupValueType - which is a character taking one of the following values:
  • User
  • Queue
defaultReviewer a character
defaultReviewerType a KnowledgeLanguageLookupValueType - which is a character taking one of the following values:
  • User
  • Queue
name a character

KnowledgeLanguageSettings

language a KnowledgeLanguage

KnowledgeSettings

fullName a character (inherited from Metadata)
answers a KnowledgeAnswerSettings
cases a KnowledgeCaseSettings
defaultLanguage a character
enableChatterQuestionKBDeflection a character either 'true' or 'false'
enableCreateEditOnArticlesTab a character either 'true' or 'false'
enableExternalMediaContent a character either 'true' or 'false'
enableKnowledge a character either 'true' or 'false'
enableLightningKnowledge a character either 'true' or 'false'
languages a KnowledgeLanguageSettings
showArticleSummariesCustomerPortal a character either 'true' or 'false'
showArticleSummariesInternalApp a character either 'true' or 'false'
showArticleSummariesPartnerPortal a character either 'true' or 'false'
showValidationStatusField a character either 'true' or 'false'
suggestedArticles a KnowledgeSuggestedArticlesSettings

KnowledgeSitesSettings

site a character

KnowledgeSuggestedArticlesSettings
caseFields a KnowledgeCaseFieldsSettings
useSuggestedArticlesForCase a character either ‘true’ or ‘false’
workOrderFields a KnowledgeWorkOrderFieldsSettings
workOrderLineItemFields a KnowledgeWorkOrderLineItemFieldsSettings

KnowledgeWorkOrderField

name a character

KnowledgeWorkOrderFieldsSettings

field a KnowledgeWorkOrderField

KnowledgeWorkOrderLineItemField

name a character

KnowledgeWorkOrderLineItemFieldsSettings

field a KnowledgeWorkOrderLineItemField

Layout

fullName a character (inherited from Metadata)
customButtons a character
customConsoleComponents a CustomConsoleComponents
emailDefault a character either ‘true’ or ‘false’
excludeButtons a character
feedLayout a FeedLayout
headers a LayoutHeader - which is a character taking one of the following values:
  • PersonalTagging
  • PublicTagging
layoutSections a LayoutSection
miniLayout a MiniLayout
multilineLayoutFields a character
platformActionList a PlatformActionList
quickActionList a QuickActionList
relatedContent a RelatedContent
relatedLists a RelatedListItem
relatedObjects a character
runAssignmentRulesDefault a character either 'true' or 'false'
showEmailCheckbox a character either 'true' or 'false'
showHighlightsPanel a character either 'true' or 'false'
showInteractionLogPanel a character either 'true' or 'false'
showKnowledgeComponent a character either 'true' or 'false'
showRunAssignmentRulesCheckbox a character either 'true' or 'false'
showSolutionSection a character either 'true' or 'false'
showSubmitAndAttachButton a character either 'true' or 'false'
summaryLayout a SummaryLayout

LayoutColumn

layoutItems a LayoutItem
reserved a character

LayoutItem

analyticsCloudComponent a AnalyticsCloudComponentLayoutItem
behavior a UiBehavior - which is a character taking one of the following values:
  - Edit
  - Required
  - Readonly
canvas a character
component a character
customLink a character
emptySpace a character either 'true' or 'false'
field a character
height an integer
page a character
reportChartComponent a ReportChartComponentLayoutItem
scontrol a character
showLabel a character either 'true' or 'false'
showScrollbars a character either 'true' or 'false'
width a character

LayoutSection

customLabel a character either 'true' or 'false'
detailHeading a character either 'true' or 'false'
**editHeading**  a character either 'true' or 'false'

**label**  a character

**layoutColumns**  a LayoutColumn

**style**  a LayoutSectionStyle - which is a character taking one of the following values:
- TwoColumnsTopToBottom
- TwoColumnsLeftToRight
- OneColumn
- CustomLinks

**LayoutSectionTranslation**

**label**  a character

**section**  a character

**LayoutTranslation**

**layout**  a character

**layoutType**  a character

**sections**  a LayoutSectionTranslation

**LeadConvertSettings**

**fullName**  a character (inherited from Metadata)

**allowOwnerChange**  a character either 'true' or 'false'

**objectMapping**  a ObjectMapping

**opportunityCreationOptions**  a VisibleOrRequired - which is a character taking one of the following values:
- VisibleOptional
- VisibleRequired
- NotVisible

**Letterhead**

**fullName**  a character (inherited from Metadata)

**available**  a character either 'true' or 'false'

**backgroundColor**  a character

**bodyColor**  a character

**bottomLine**  a LetterheadLine

**description**  a character

**footer**  a LetterheadHeaderFooter

**header**  a LetterheadHeaderFooter

**middleLine**  a LetterheadLine

**name**  a character
topLine  a LetterheadLine

LetterheadHeaderFooter

backgroundColor  a character
height  an integer
horizontalAlignment  a LetterheadHorizontalAlignment - which is a character taking one of the following values:
  • None
  • Left
  • Center
  • Right
logo  a character
verticalAlignment  a LetterheadVerticalAlignment - which is a character taking one of the following values:
  • None
  • Top
  • Middle
  • Bottom

LetterheadLine

color  a character
height  an integer

LicensedCustomPermissions

customPermission  a character
licenseDefinition  a character

LicenseDefinition

fullName  a character (inherited from Metadata)
aggregationGroup  a character
description  a character
isPublished  a character either 'true' or 'false'
label  a character
licensedCustomPermissions  a LicensedCustomPermissions
licensingAuthority  a character
licensingAuthorityProvider  a character
minPlatformVersion  an integer
origin  a character
revision  an integer
trialLicenseDuration an integer
trialLicenseQuantity an integer

LightningBolt

fullName a character (inherited from Metadata)
category a LightningBoltCategory - which is a character taking one of the following values:
• IT
• Marketing
• Sales
• Service

lightningBoltFeatures a LightningBoltFeatures
lightningBoltImages a LightningBoltImages
lightningBoltItems a LightningBoltItems
masterLabel a character
publisher a character
summary a character

LightningBoltFeatures
description a character
order an integer
title a character

LightningBoltImages
image a character
order an integer

LightningBoltItems
name a character
type a character

LightningComponentBundle

fullName a character (inherited from Metadata)
apiVersion a numeric
isExposed a character either ’true’ or ’false’

LightningExperienceTheme

fullName a character (inherited from Metadata)
defaultBrandingSet a character
description a character
masterLabel a character
shouldOverrideLoadingImage a character either 'true' or 'false'

ListMetadataQuery

folder a character
type a character

ListPlacement

height an integer
location a character
units a character
width an integer

ListView

fullName a character (inherited from Metadata)
booleanFilter a character
columns a character
division a character
filterScope a FilterScope - which is a character taking one of the following values:
  • Everything
  • Mine
  • Queue
  • Delegated
  • MyTerritory
  • MyTeamTerritory
  • Team
  • AssignedToMe

filters a ListViewFilter
label a character
language a Language - which is a character taking one of the following values:
  • en_US
  • de
  • es
  • fr
  • it
  • ja
  • sv
  • ko
  • zh_TW
  • zh_CN
• pt_BR
• nl_NL
• da
• th
• fi
• ru
• es_MX
• no
• hu
• pl
• cs
• tr
• in
• ro
• vi
• uk
• iw
• el
• bg
• en_GB
• ar
• sk
• pt_PT
• hr
• sl
• fr_CA
• ka
• sr
• sh
• en_AU
• en_MY
• en_IN
• en_PH
• en_CA
• ro_MD
• bs
• mk
• lv
• lt
• et
• sq
• sh_ME
- mt
- ga
- eu
- cy
- is
- ms
- tl
- lb
- rm
- hy
- hi
- ur
- bn
- de_AT
- de_CH
- ta
- ar_DZ
- ar_BH
- ar_EG
- ar_IQ
- ar_JO
- ar_KW
- ar_LB
- ar_LY
- ar_MA
- ar_OM
- ar_QA
- ar_SA
- ar_SD
- ar_SY
- ar_TN
- ar_AE
- ar_YE
- zh_SG
- zh_HK
- en_HK
- en_IE
- en_SG
- en_ZA
- fr_BE
- fr_LU
- fr_CH
metadata_type_validator

- de_BE
- de_LU
- it_CH
- nl_BE
- es_AR
- es_BO
- es_CL
- es_CO
- es_CR
- es_DO
- es_EC
- es_SV
- es_GT
- es_HN
- es_NI
- es_PA
- es_PY
- es_PE
- es_PR
- es_US
- es_UY
- es_VE
- ca
- eo
- iw_EO

queue a character

sharedTo a SharedTo

ListViewFilter

field a character

operation a FilterOperation - which is a character taking one of the following values:
  - equals
  - notEqual
  - lessThan
  - greaterThan
  - lessOrEqual
  - greaterOrEqual
  - contains
  - notContain
  - startsWith
  - includes
metadata_type_validator

- excludes
- within

value a character

LiveAgentConfig

enableLiveChat a character either 'true' or 'false'
openNewAccountSubtab a character either 'true' or 'false'
openNewCaseSubtab a character either 'true' or 'false'
openNewContactSubtab a character either 'true' or 'false'
openNewLeadSubtab a character either 'true' or 'false'
openNewVFPageSubtab a character either 'true' or 'false'
pageNamesToOpen a character
showKnowledgeArticles a character either 'true' or 'false'

LiveAgentSettings

fullName a character (inherited from Metadata)
enableLiveAgent a character either 'true' or 'false'

LiveChatAgentConfig

fullName a character (inherited from Metadata)
assignments a AgentConfigAssignments
autoGreeting a character
capacity an integer
criticalWaitTime an integer
customAgentName a character
enableAgentFileTransfer a character either 'true' or 'false'
enableAgentSneakPeek a character either 'true' or 'false'
enableAssistanceFlag a character either 'true' or 'false'
enableAutoAwayOnDecline a character either 'true' or 'false'
enableAutoAwayOnPushTimeout a character either 'true' or 'false'
enableChatConferencing a character either 'true' or 'false'
enableChatMonitoring a character either 'true' or 'false'
enableChatTransferToAgent a character either 'true' or 'false'
enableChatTransferToButton a character either 'true' or 'false'
enableChatTransferToSkill a character either 'true' or 'false'
enableLogoutSound a character either 'true' or 'false'
enableNotifications a character either 'true' or 'false'
enableRequestSound a character either 'true' or 'false'
enableSneakPeek  a character either 'true' or 'false'
enableVisitorBlocking  a character either 'true' or 'false'
enableWhisperMessage  a character either 'true' or 'false'
label  a character

supervisorDefaultAgentStatusFilter  a SupervisorAgentStatusFilter - which is a character taking one of the following values:
  - Online
  - Away
  - Offline

supervisorDefaultButtonFilter  a character
supervisorDefaultSkillFilter  a character
supervisorSkills  a SupervisorAgentConfigSkills
transferableButtons  a AgentConfigButtons
transferableSkills  a AgentConfigSkills

LiveChatButton

fullName  a character (inherited from Metadata)
animation  a LiveChatButtonPresentation - which is a character taking one of the following values:
  - Slide
  - Fade
  - Appear
  - Custom

autoGreeting  a character
chasitorIdleTimeout  an integer
chasitorIdleTimeoutWarning  an integer
chatPage  a character
customAgentName  a character
deployments  a LiveChatButtonDeployments
enableQueue  a character either 'true' or 'false'

inviteEndPosition  a LiveChatButtonInviteEndPosition - which is a character taking one of the following values:
  - TopLeft
  - Top
  - TopRight
  - Left
  - Center
  - Right
  - BottomLeft
  - Bottom
• BottomRight

**inviteImage** a character

**inviteStartPosition** a LiveChatButtonInviteStartPosition - which is a character taking one of the following values:

• TopLeft
• TopLeftTop
• Top
• TopRightTop
• TopRight
• TopRightRight
• Right
• BottomRightRight
• BottomRight
• BottomRightBottom
• Bottom
• BottomLeftBottom
• BottomLeft
• BottomLeftLeft
• Left
• TopLeftLeft

**isActive** a character either 'true' or 'false'

**label** a character

**numberOfReroutingAttempts** an integer

**offlineImage** a character

**onlineImage** a character

**optionsCustomRoutingIsEnabled** a character either 'true' or 'false'

**optionsHasChasitorIdleTimeout** a character either 'true' or 'false'

**optionsHasInviteAfterAccept** a character either 'true' or 'false'

**optionsHasInviteAfterReject** a character either 'true' or 'false'

**optionsHasRerouteDeclinedRequest** a character either 'true' or 'false'

**optionsIsAutoAccept** a character either 'true' or 'false'

**optionsIsInviteAutoRemove** a character either 'true' or 'false'

**overallQueueLength** an integer

**perAgentQueueLength** an integer

**postChatPage** a character

**postChatUrl** a character

**preChatFormPage** a character

**preChatFormUrl** a character

**pushTimeOut** an integer
routingType a LiveChatButtonRoutingType - which is a character taking one of the following values:
  - Choice
  - LeastActive
  - MostAvailable

site a character

skills a LiveChatButtonSkills

timeToRemoveInvite an integer

type a LiveChatButtonType - which is a character taking one of the following values:
  - Standard
  - Invite

windowLanguage a Language - which is a character taking one of the following values:
  - en_US
  - de
  - es
  - fr
  - it
  - ja
  - sv
  - ko
  - zh_TW
  - zh_CN
  - pt_BR
  - nl_NL
  - da
  - th
  - fi
  - ru
  - es_MX
  - no
  - hu
  - pl
  - cs
  - tr
  - in
  - ro
  - vi
  - uk
  - iw
  - el
  - bg
• en_GB
• ar
• sk
• pt_PT
• hr
• sl
• fr_CA
• ka
• sr
• sh
• en_AU
• en_MY
• en_IN
• en_PH
• en_CA
• ro_MD
• bs
• mk
• lv
• lt
• et
• sq
• sh_ME
• mt
• ga
• eu
• cy
• is
• ms
• tl
• lb
• rm
• hy
• hi
• ur
• bn
• de_AT
• de_CH
• ta
• ar_DZ
• ar_BH
• ar_EG
• ar_IQ
• ar_JO
• ar_KW
• ar_LB
• ar_LY
• ar_MA
• ar_OM
• ar_QA
• ar_SA
• ar_SD
• ar_SY
• ar_TN
• ar_AE
• ar_YE
• zh_SG
• zh_HK
• en_HK
• en_IE
• en_SG
• en_ZA
• fr_BE
• fr_LU
• fr_CH
• de_BE
• de_LU
• it_CH
• nl_BE
• es_AR
• es_BO
• es_CL
• es_CO
• es_CR
• es_DO
• es_EC
• es_SV
• es_GT
• es_HN
• es_NI
• es_PA
• es_PY
• es_PE
• es_PR
• es_US
• es_UY
• es_VE
• ca
• eo
• iw_EO

LiveChatButtonDeployments

deployment a character

LiveChatButtonSkills

skill a character

LiveChatDeployment

fullName a character (inherited from Metadata)
brandingImage a character
connectionTimeoutDuration an integer
connectionWarningDuration an integer
displayQueuePosition a character either 'true' or 'false'
domainWhiteList a LiveChatDeploymentDomainWhitelist
enablePrechatApi a character either 'true' or 'false'
enableTranscriptSave a character either 'true' or 'false'
label a character
mobileBrandingImage a character
site a character
windowTitle a character

LiveChatDeploymentDomainWhitelist

domain a character

LiveChatSensitiveDataRule

fullName a character (inherited from Metadata)
actionType a SensitiveDataActionType - which is a character taking one of the following values:
  • Remove
  • Replace
description a character
enforceOn an integer
isEnabled a character either 'true' or 'false'
pattern a character
replacement  a character

LiveMessageSettings

fullName  a character (inherited from Metadata)
enableLiveMessage  a character either ’true’ or ’false’

LogInfo

category  a LogCategory - which is a character taking one of the following values:
  • Db
  • Workflow
  • Validation
  • Callout
  • Apex_code
  • Apex_profiling
  • Visualforce
  • System
  • Wave
  • All

level  a LogCategoryLevel - which is a character taking one of the following values:
  • None
  • Finest
  • Finer
  • Fine
  • Debug
  • Info
  • Warn
  • Error

LookupFilter

active  a character either ’true’ or ’false’
booleanFilter  a character
description  a character
errorMessage  a character
filterItems  a FilterItem
infoMessage  a character
isOptional  a character either ’true’ or ’false’

LookupFilterTranslation

errorMessage  a character
informationalMessage  a character
MacroSettings

fullName a character (inherited from Metadata)
enableAdvancedSearch a character either 'true' or 'false'

ManagedTopic

fullName a character (inherited from Metadata)
managedTopicType a character
name a character
parentName a character
position an integer
topicDescription a character

ManagedTopics

fullName a character (inherited from Metadata)
managedTopic a ManagedTopic

MarketingActionSettings

fullName a character (inherited from Metadata)
enableMarketingAction a character either 'true' or 'false'

MarketingResourceType

description a character
masterLabel a character
object a character
provider a character

MatchingRule

fullName a character (inherited from Metadata)
booleanFilter a character
description a character
label a character
matchingRuleItems a MatchingRuleItem
ruleStatus a MatchingRuleStatus - which is a character taking one of the following values:
  • Inactive
  • DeactivationFailed
  • Activating
  • Deactivating
  • Active
• ActivationFailed

MatchingRuleItem

blankValueBehavior a BlankValueBehavior - which is a character taking one of the following values:
  • MatchBlanks
  • NullNotAllowed

fieldName a character

matchingMethod a MatchingMethod - which is a character taking one of the following values:
  • Exact
  • FirstName
  • LastName
  • CompanyName
  • Phone
  • City
  • Street
  • Zip
  • Title

MatchingRules

fullName a character (inherited from Metadata)

matchingRules a MatchingRule

Metadata

fullName a character

MetadataWithContent

fullName a character (inherited from Metadata)

content a character formed using base64encode

MilestoneType

fullName a character (inherited from Metadata)

description a character

recurrenceType a MilestoneTypeRecurrenceType - which is a character taking one of the following values:
  • none
  • recursIndependently
  • recursChained

MiniLayout
fields  a character
relatedLists  a RelatedListItem

MobileSettings

fullName  a character (inherited from Metadata)
chatterMobile  a ChatterMobileSettings
dashboardMobile  a DashboardMobileSettings
salesforceMobile  a SFDCMobileSettings
touchMobile  a TouchMobileSettings

ModeratedEntityField

entityName  a character
fieldName  a character
keywordList  a character

ModerationRule

fullName  a character (inherited from Metadata)
action  a ModerationRuleAction - which is a character taking one of the following values:
  • Block
  • FreezeAndNotify
  • Review
  • Replace
  • Flag
actionLimit  an integer
active  a character either ’true’ or ’false’
description  a character
entitiesAndFields  a ModeratedEntityField
masterLabel  a character
notifyLimit  an integer
timePeriod  a RateLimitTimePeriod - which is a character taking one of the following values:
  • Short
  • Medium
type  a ModerationRuleType - which is a character taking one of the following values:
  • Content
  • Rate
userCriteria  a character
userMessage  a character

NamedCredential
 fullName  a character (inherited from Metadata)
allowMergeFieldsInBody  a character either 'true' or 'false'
allowMergeFieldsInHeader  a character either 'true' or 'false'
authProvider  a character
certificate  a character
endpoint  a character
generateAuthorizationHeader  a character either 'true' or 'false'
label  a character
oauthRefreshToken  a character
oauthScope  a character
oauthToken  a character
password  a character
principalType  a ExternalPrincipalType - which is a character taking one of the following values:
   • Anonymous
   • PerUser
   • NamedUser
protocol  a AuthenticationProtocol - which is a character taking one of the following values:
   • NoAuthentication
   • Oauth
   • Password
username  a character

NameSettings
fullName  a character (inherited from Metadata)
enableMiddleName  a character either 'true' or 'false'
enableNameSuffix  a character either 'true' or 'false'

NavigationLinkSet

navigationMenuItems  a NavigationMenuItem

NavigationMenuItem

defaultListViewId  a character
label  a character
position  an integer
publiclyAvailable  a character either 'true' or 'false'
submenu  a NavigationSubMenu
target  a character
targetPreference  a character
type a character

NavigationSubMenu

navigationMenuItem a NavigationMenuItem

Network

fullName a character (inherited from Metadata)
allowInternalUserLogin a character either 'true' or 'false'
allowMembersToFlag a character either 'true' or 'false'
allowedExtensions a character
caseCommentEmailTemplate a character
changePasswordTemplate a character
communityRoles a CommunityRoles
description a character
disableReputationRecordConversations a character either 'true' or 'false'
emailFooterLogo a character
emailFooterText a character
emailSenderAddress a character
emailSenderName a character
enableCustomVFErrorPageOverides a character either 'true' or 'false'
enableDirectMessages a character either 'true' or 'false'
enableGuestChatter a character either 'true' or 'false'
enableGuestFileAccess a character either 'true' or 'false'
enableInvitation a character either 'true' or 'false'
enableKnowledgeable a character either 'true' or 'false'
enableNicknameDisplay a character either 'true' or 'false'
enablePrivateMessages a character either 'true' or 'false'
enableReputation a character either 'true' or 'false'
enableShowAllNetworkSettings a character either 'true' or 'false'
enableSiteAsContainer a character either 'true' or 'false'
enableTalkingAboutStats a character either 'true' or 'false'
enableTopicAssignmentRules a character either 'true' or 'false'
enableTopicSuggestions a character either 'true' or 'false'
enableUpDownVote a character either 'true' or 'false'
feedChannel a character
forgotPasswordTemplate a character
gatherCustomerSentimentData a character either 'true' or 'false'
logoutUrl a character
maxFileSizeKb an integer
navigationLinkSet a NavigationLinkSet
networkMemberGroups a NetworkMemberGroup
networkPageOverrides a NetworkPageOverride
newSenderAddress a character
picassoSite a character
recommendationAudience a RecommendationAudience
recommendationDefinition a RecommendationDefinition
reputationLevels a ReputationLevelDefinitions
reputationPointsRules a ReputationPointsRules
selfRegProfile a character
selfRegistration a character either 'true' or 'false'
sendWelcomeEmail a character either 'true' or 'false'
site a character
status a NetworkStatus - which is a character taking one of the following values:
  • UnderConstruction
  • Live
  • DownForMaintenance
tabs a NetworkTabSet
urlPathPrefix a character
welcomeTemplate a character

NetworkAccess

ipRanges a IpRange

NetworkBranding

content a character formed using base64encode (inherited from MetadataWithContent)
loginFooterText a character
loginLogo a character
loginLogoName a character
loginPrimaryColor a character
loginQuaternaryColor a character
loginRightFrameUrl a character
network a character
pageFooter a character
pageHeader a character
primaryColor a character
primaryComplementColor a character
quaternaryColor a character
quaternaryComplementColor a character
secondaryColor a character
staticLogoImageUrl a character
tertiaryColor a character
tertiaryComplementColor a character
tertiaryColor a character
zeronaryColor a character
zeronaryComplementColor a character

NetworkMemberGroup

permissionSet a character
profile a character

NetworkPageOverride

changePasswordPageOverrideSetting a NetworkPageOverrideSetting - which is a character taking one of the following values:
  • Designer
  • VisualForce
  • Standard

forgotPasswordPageOverrideSetting a NetworkPageOverrideSetting - which is a character taking one of the following values:
  • Designer
  • VisualForce
  • Standard

homePageOverrideSetting a NetworkPageOverrideSetting - which is a character taking one of the following values:
  • Designer
  • VisualForce
  • Standard

loginPageOverrideSetting a NetworkPageOverrideSetting - which is a character taking one of the following values:
  • Designer
  • VisualForce
  • Standard

selfRegProfilePageOverrideSetting a NetworkPageOverrideSetting - which is a character taking one of the following values:
  • Designer
  • VisualForce
  • Standard

NetworkTabSet
customTab a character
defaultTab a character
standardTab a character

NextAutomatedApprover

useApproverFieldOfRecordOwner a character either 'true' or 'false'
userHierarchyField a character

ObjectMapping

inputObject a character
mappingFields a ObjectMappingField
outputObject a character

ObjectMappingField

inputField a character
outputField a character

ObjectNameCaseValue

article a Article - which is a character taking one of the following values:
  • None
  • Indefinite
  • Definite
caseType a CaseType - which is a character taking one of the following values:
  • Nominative
  • Accusative
  • Genitive
  • Dative
  • Inessive
  • Elative
  • Illative
  • Adessive
  • Ablative
  • Allative
  • Essive
  • Translative
  • Partitive
  • Objective
  • Subjective
  • Instrumental
  • Prepositional
• Locative
• Vocative
• Sublative
• Superessive
• Delative
• Causalfinal
• Essiveformal
• Termanative
• Distributive
• Ergative
• Adverbial
• Abessive
• Comitative

plural  a character either 'true' or 'false'
possessive a Possessive - which is a character taking one of the following values:
• None
• First
• Second
value a character

ObjectRelationship

join a ObjectRelationship
outerJoin a character either 'true' or 'false'
relationship a character

ObjectSearchSetting

enhancedLookupEnabled a character either 'true' or 'false'
lookupAutoCompleteEnabled a character either 'true' or 'false'
name a character
resultsPerPageCount an integer

ObjectUsage

object a character

OpportunityListFieldsLabelMapping

field a character
label a character

OpportunityListFieldsSelectedSettings

field a character
OpportunityListFieldsUnselectedSettings

field  a character

OpportunitySettings

fullName  a character (inherited from Metadata)
activateNewReminders  a character either 'true' or 'false'
enableFindSimilarOpportunities  a character either 'true' or 'false'
enableOpportunityTeam  a character either 'true' or 'false'
enableUpdateReminders  a character either 'true' or 'false'
findSimilarOppFilter  a FindSimilarOppFilter
promptToAddProducts  a character either 'true' or 'false'

Orchestration

collection  a character formed using base64encode (inherited from MetadataWithContent)
context  a character
masterLabel  a character

OrchestrationContext

fullName  a character (inherited from Metadata)
description  a character
events  a OrchestrationContextEvent
masterLabel  a character
runtimeType  a character
salesforceObject  a character
salesforceObjectPrimaryKey  a character

OrchestrationContextEvent

eventType  a character
orchestrationEvent  a character
platformEvent  a character
platformEventPrimaryKey  a character

OrderSettings

fullName  a character (inherited from Metadata)
enableNegativeQuantity  a character either 'true' or 'false'
enableOrders  a character either 'true' or 'false'
enableReductionOrders  a character either 'true' or 'false'
enableZeroQuantity  a character either 'true' or 'false'
OrganizationSettingsDetail

settingName  a character
settingValue  a character either 'true' or 'false'

OrgPreferenceSettings

fullName  a character (inherited from Metadata)
preferences  a OrganizationSettingsDetail

Package

fullName  a character (inherited from Metadata)
apiAccessLevel  a APIAccessLevel - which is a character taking one of the following values:
  • Unrestricted
  • Restricted
description  a character
namespacePrefix  a character
objectPermissions  a ProfileObjectPermissions
packageType  a character
postInstallClass  a character
setupWeblink  a character
types  a PackageTypeMembers
uninstallClass  a character
version  a character

PackageTypeMembers

members  a character
name  a character

PackageVersion

majorNumber  an integer
minorNumber  an integer
namespace  a character

PasswordPolicies

apiOnlyUserHomePageURL  a character
complexity  a Complexity - which is a character taking one of the following values:
  • NoRestriction
  • AlphaNumeric
  • SpecialCharacters
  • UpperLowerCaseNumeric
metadata_type_validator

- UpperLowerCaseNumericSpecialCharacters

**expiration** a Expiration - which is a character taking one of the following values:
  - ThirtyDays
  - SixtyDays
  - NinetyDays
  - SixMonths
  - OneYear
  - Never

**historyRestriction** a character

**lockoutInterval** a LockoutInterval - which is a character taking one of the following values:
  - FifteenMinutes
  - ThirtyMinutes
  - SixtyMinutes
  - Forever

**maxLoginAttempts** a MaxLoginAttempts - which is a character taking one of the following values:
  - ThreeAttempts
  - FiveAttempts
  - TenAttempts
  - NoLimit

**minimumPasswordLength** a character

**minimumPasswordLifetime** a character either 'true' or 'false'

**obscureSecretAnswer** a character either 'true' or 'false'

**passwordAssistanceMessage** a character

**passwordAssistanceURL** a character

**questionRestriction** a QuestionRestriction - which is a character taking one of the following values:
  - None
  - DoesNotContainPassword

**PathAssistant**

**fullName** a character (inherited from Metadata)

**active** a character either 'true' or 'false'

**entityName** a character

**fieldName** a character

**masterLabel** a character

**pathAssistantSteps** a PathAssistantStep

**recordTypeName** a character

**PathAssistantSettings**
fullName a character (inherited from Metadata)
pathAssistantEnabled a character either 'true' or 'false'

PathAssistantStep

fieldNames a character
info a character
picklistValueName a character

PermissionSet

fullName a character (inherited from Metadata)
applicationVisibilities a PermissionSetApplicationVisibility
classAccesses a PermissionSetApexClassAccess
customPermissions a PermissionSetCustomPermissions
description a character
externalDataSourceAccesses a PermissionSetExternalDataSourceAccess
fieldPermissions a PermissionSetFieldPermissions
hasActivationRequired a character either 'true' or 'false'
label a character
license a character
objectPermissions a PermissionSetObjectPermissions
pageAccesses a PermissionSetApexPageAccess
recordTypeVisibilities a PermissionSetRecordTypeVisibility	
tabSettings a PermissionSetTabSetting
userPermissions a PermissionSetUserPermission

PermissionSetApexClassAccess

apexClass a character
enabled a character either 'true' or 'false'

PermissionSetApexPageAccess

apexPage a character
enabled a character either 'true' or 'false'

PermissionSetApplicationVisibility

application a character
visible a character either 'true' or 'false'

PermissionSetCustomPermissions

enabled a character either 'true' or 'false'
metadata_type_validator

name  a character

PermissionSetExternalDataSourceAccess

disabled  a character either 'true' or 'false'
externalDataSource  a character

PermissionSetFieldPermissions

disabled  a character either 'true' or 'false'
field  a character
readable  a character either 'true' or 'false'

PermissionSetGroup

fullName  a character (inherited from Metadata)
description  a character
isCalculatingChanges  a character either 'true' or 'false'
label  a character
permissionSets  a character

PermissionSetObjectPermissions

allowCreate  a character either 'true' or 'false'
allowDelete  a character either 'true' or 'false'
allowEdit  a character either 'true' or 'false'
allowRead  a character either 'true' or 'false'
modifyAllRecords  a character either 'true' or 'false'
object  a character
viewAllRecords  a character either 'true' or 'false'

PermissionSetRecordTypeVisibility

recordType  a character
visible  a character either 'true' or 'false'

PermissionSetTabSetting

tab  a character
visibility  a PermissionSetTabVisibility - which is a character taking one of the following values:
  • None
  • Available
  • Visible

PermissionSetUserPermission
enabled  a character either 'true' or 'false'
name a character

**PersonalJourneySettings**

fullName  a character (inherited from Metadata)
enableExactTargetForSalesforceApps  a character either 'true' or 'false'

**PersonListSettings**

fullName  a character (inherited from Metadata)
enablePersonList  a character either 'true' or 'false'

**PicklistEntry**

active  a character either 'true' or 'false'
defaultValue  a character either 'true' or 'false'
label  a character
validFor  a character
value  a character

**PicklistValue**

color  a character (inherited from GlobalPicklistValue)
default  a character either 'true' or 'false' (inherited from GlobalPicklistValue)
description  a character (inherited from GlobalPicklistValue)
isActive  a character either 'true' or 'false' (inherited from GlobalPicklistValue)
allowEmail  a character either 'true' or 'false'
closed  a character either 'true' or 'false'
controllingFieldValues  a character
converted  a character either 'true' or 'false'
cssExposed  a character either 'true' or 'false'
forecastCategory  a ForecastCategories - which is a character taking one of the following values:
  - Omitted
  - Pipeline
  - BestCase
  - Forecast
  - Closed
highPriority  a character either 'true' or 'false'
probability  an integer
reverseRole  a character
reviewed  a character either 'true' or 'false'
own  a character either 'true' or 'false'
PicklistValueTranslation

masterLabel a character
translation a character

PlatformActionList

fullName a character (inherited from Metadata)
actionListContext a PlatformActionListContext - which is a character taking one of the following values:
  • ListView
  • RelatedList
  • ListViewRecord
  • RelatedListRecord
  • Record
  • FeedElement
  • Chatter
  • Global
  • Flexipage
  • MruList
  • MruRow
  • RecordEdit
  • Photo
  • BannerPhoto
  • ObjectHomeChart
  • ListViewDefinition
  • Dockable
  • Lookup
  • Assistant

platformActionListItems a PlatformActionListItem

relatedSourceEntity a character

PlatformActionListItem

actionName a character
actionType a PlatformActionType - which is a character taking one of the following values:
  • QuickAction
  • StandardButton
  • CustomButton
  • ProductivityAction
  • ActionLink
  • InvocableAction

sortOrder an integer
subtype a character

PlatformCachePartition

fullName a character (inherited from Metadata)
description a character
isDefaultPartition a character either 'true' or 'false'
masterLabel a character
platformCachePartitionTypes a PlatformCachePartitionType

PlatformCachePartitionType

allocatedCapacity an integer
allocatedPurchasedCapacity an integer
allocatedTrialCapacity an integer
cacheType a PlatformCacheType - which is a character taking one of the following values:
  • Session
  • Organization

Portal

fullName a character (inherited from Metadata)
active a character either 'true' or 'false'
admin a character
defaultLanguage a character
description a character
emailSenderAddress a character
emailSenderName a character
enableSelfCloseCase a character either 'true' or 'false'
footerDocument a character
forgotPassTemplate a character
loginHeaderDocument a character
logoDocument a character
logoutUrl a character
newCommentTemplate a character
newPassTemplate a character
newUserTemplate a character
ownerNotifyTemplate a character
selfRegNewUserUrl a character
selfRegUserDefaultProfile a character

selfRegUserDefaultRole a PortalRoles - which is a character taking one of the following values:
  • Executive
  • Manager
  • Worker
  • PersonAccount

selfRegUserTemplate a character

showActionConfirmation a character either ‘true’ or ‘false’

stylesheetDocument a character

type a PortalType - which is a character taking one of the following values:
  • CustomerSuccess
  • Partner
  • Network

PostTemplate

fullName a character (inherited from Metadata)

default a character either ‘true’ or ‘false’

description a character

fields a character

label a character

PrimaryTabComponents

containers a Container

ProductSettings

fullName a character (inherited from Metadata)

enableCascadeActivateToRelatedPrices a character either ‘true’ or ‘false’

enableQuantitySchedule a character either ‘true’ or ‘false’

enableRevenueSchedule a character either ‘true’ or ‘false’

Profile

fullName a character (inherited from Metadata)

applicationVisibilities a ProfileApplicationVisibility

categoryGroupVisibilities a ProfileCategoryGroupVisibility

classAccesses a ProfileApexClassAccess

custom a character either ‘true’ or ‘false’

customPermissions a ProfileCustomPermissions

description a character

externalDataSourceAccesses a ProfileExternalDataSourceAccess
fieldPermissions a ProfileFieldLevelSecurity
layoutAssignments a ProfileLayoutAssignment
loginHours a ProfileLoginHours
loginIpRanges a ProfileLoginIpRange
objectPermissions a ProfileObjectPermissions
pageAccesses a ProfileApexPageAccess
profileActionOverrides a ProfileActionOverride
recordTypeVisibilities a ProfileRecordTypeVisibility
tabVisibilities a ProfileTabVisibility
userLicense a character
userPermissions a ProfileUserPermission

ProfileActionOverride

actionName a character
content a character
formFactor a FormFactor - which is a character taking one of the following values:

• Small
• Medium
• Large

pageOrSObjectType a character
recordType a character
type a ActionOverrideType - which is a character taking one of the following values:

• Default
• Standard
• Scontrol
• Visualforce
• Flexipage
• LightningComponent

ProfileApexClassAccess

apexClass a character
enabled a character either 'true' or 'false'

ProfileApexPageAccess

apexPage a character
enabled a character either 'true' or 'false'

ProfileApplicationVisibility

application a character
default a character either 'true' or 'false'
visible a character either 'true' or 'false'

ProfileCategoryGroupVisibility

dataCategories a character
dataCategoryGroup a character
visibility a CategoryGroupVisibility - which is a character taking one of the following values:
  • ALL
  • NONE
  • CUSTOM

ProfileCustomPermissions

enabled a character either 'true' or 'false'
name a character

ProfileExternalDataSourceAccess

enabled a character either 'true' or 'false'
externalDataSource a character

ProfileFieldLevelSecurity

editable a character either 'true' or 'false'
field a character
readable a character either 'true' or 'false'

ProfileLayoutAssignment

layout a character
recordType a character

ProfileLoginHours

fridayEnd a character
fridayStart a character
mondayEnd a character
mondayStart a character
saturdayEnd a character
saturdayStart a character
sundayEnd a character
sundayStart a character
thursdayEnd a character
thursdayStart a character
ProfileLoginIpRange

description a character
endAddress a character
startAddress a character

ProfileObjectPermissions

allowCreate a character either 'true' or 'false'
allowDelete a character either 'true' or 'false'
allowEdit a character either 'true' or 'false'
allowRead a character either 'true' or 'false'
modifyAllRecords a character either 'true' or 'false'
object a character
viewAllRecords a character either 'true' or 'false'

ProfilePasswordPolicy

fullName a character (inherited from Metadata)
lockoutInterval an integer
maxLoginAttempts an integer
minimumPasswordLength an integer
minimumPasswordLifetime a character either 'true' or 'false'
obscure a character either 'true' or 'false'
pASSWORDCOMPLEXITY an integer
passwordExpiration an integer
passwordHistory an integer
passwordQuestion an integer
profile a character

ProfileRecordTypeVisibility

default a character either 'true' or 'false'
personAccountDefault a character either 'true' or 'false'
recordType a character
visible a character either 'true' or 'false'

ProfileSessionSetting
**metadata_type_validator**

- **fullName** a character (inherited from Metadata)
- **externalCommunityUserIdentityVerif** a character either 'true' or 'false'
- **forceLogout** a character either 'true' or 'false'
- **profile** a character
- **requiredSessionLevel** a SessionSecurityLevel - which is a character taking one of the following values:
  - LOW
  - STANDARD
  - HIGH_ASSURANCE
- **sessionPersistence** a character either 'true' or 'false'
- **sessionTimeout** an integer
- **sessionTimeoutWarning** a character either 'true' or 'false'

**ProfileTabVisibility**

- **tab** a character
- **visibility** a TabVisibility - which is a character taking one of the following values:
  - Hidden
  - DefaultOff
  - DefaultOn

**ProfileUserPermission**

- **enabled** a character either 'true' or 'false'
- **name** a character

**PublicGroups**

- **publicGroup** a character

**PushNotification**

- **fieldNames** a character
- **objectName** a character

**Queue**

- **fullName** a character (inherited from Metadata)
- **doesSendEmailToMembers** a character either 'true' or 'false'
- **email** a character
- **name** a character
- **queueMembers** a QueueMembers
- **queueRoutingConfig** a character
- **queueSobject** a QueueSobject
QueueMembers

canGroups a PublicGroups
cRoleAndSubordinates a RoleAndSubordinates
croleAndSubordinatesInternal a RoleAndSubordinatesInternal
croles a Roles
cusers a Users

QueueSobject
cobjectType a character

QuickAction
cfullName a character (inherited from Metadata)
ccanvas a character
cdescription a character
cfieldOverrides a FieldOverride
cflowDefinition a character
cheight an integer
cicon a character
cisProtected a character either 'true' or 'false'
clabel a character
clightningComponent a character
coptionsCreateFeedItem a character either 'true' or 'false'
cpage a character
cquickActionLayout a QuickActionLayout
cquickActionSendEmailOptions a QuickActionSendEmailOptions
cstandardLabel a QuickActionLabel - which is a character taking one of the following values:
  • LogACall
  • LogANote
  • New
  • NewRecordType
  • Update
  • NewChild
  • NewChildRecordType
  • CreateNew
  • CreateNewRecordType
  • SendEmail
  • QuickRecordType
  • Quick
  • EditDescription
• Defer
• ChangeDueDate
• ChangePriority
• ChangeStatus
• SocialPost
• Escalate
• EscalateToRecord
• OfferFeedback
• RequestFeedback
• AddRecord
• AddMember
• Reply
• ReplyAll
• Forward

**successMessage** a character

**targetObject** a character

**targetParentField** a character

**targetRecordType** a character

**type** a QuickActionType - which is a character taking one of the following values:

• Create
• VisualforcePage
• Post
•SendEmail
• LogACall
• SocialPost
• Canvas
• Update
• LightningComponent
• Flow

**width** an integer

**QuickActionLayout**

**layoutSectionStyle** a LayoutSectionStyle - which is a character taking one of the following values:

• TwoColumnsTopToBottom
• TwoColumnsLeftToRight
• OneColumn
• CustomLinks

**quickActionLayoutColumns** a QuickActionLayoutColumn

**QuickActionLayoutColumn**

**quickActionLayoutItems** a QuickActionLayoutItem
QuickActionLayoutItem

emptySpace  a character either 'true' or 'false'
field  a character
uiBehavior  a UiBehavior - which is a character taking one of the following values:
  • Edit
  • Required
  • Readonly

QuickActionList

quickActionListItems  a QuickActionListItem

QuickActionListItem

quickActionName  a character

QuickActionSendEmailOptions

defaultEmailTemplateName  a character
ignoreDefaultEmailTemplateSubject  a character either 'true' or 'false'

QuickActionTranslation

label  a character
name  a character

QuotasSettings

showQuotas  a character either 'true' or 'false'

QuoteSettings

fullName  a character (inherited from Metadata)
enableQuote  a character either 'true' or 'false'

RecommendationAudience

recommendationAudienceDetails  a RecommendationAudienceDetail

RecommendationAudienceDetail

audienceCriteriaType  a AudienceCriteriaType - which is a character taking one of the following values:
  • CustomList
  • MaxDaysInCommunity
audienceCriteriaValue  a character
setupName  a character
RecommendationDefinition

recommendationDefinitionDetails a RecommendationDefinitionDetail

RecommendationDefinitionDetail

actionUrl a character
description a character
linkText a character
scheduledRecommendations a ScheduledRecommendation
setupName a character
title a character

RecommendationStrategy

fullName a character (inherited from Metadata)
description a character
masterLabel a character
recommendationStrategyName a character
strategyNode a StrategyNode

RecordType

fullName a character (inherited from Metadata)
active a character either 'true' or 'false'
businessProcess a character
compactLayoutAssignment a character
description a character
label a character
picklistValues a RecordTypePicklistValue

RecordTypePicklistValue

picklist a character
values a PicklistValue

RecordTypeTranslation

description a character
label a character
name a character

RelatedContent

relatedContentItems a RelatedContentItem
RelatedContentItem

layoutItem a LayoutItem

RelatedList

hideOnDetail a character either 'true' or 'false'

name a character

RelatedListItem

customButtons a character

excludeButtons a character

fields a character

relatedList a character

sortField a character

sortOrder a SortOrder - which is a character taking one of the following values:

  • Asc
  • Desc

RemoteSiteSetting

fullName a character (inherited from Metadata)

description a character

disableProtocolSecurity a character either 'true' or 'false'

isActive a character either 'true' or 'false'

url a character

Report

fullName a character (inherited from Metadata)

aggregates a ReportAggregate

block a Report

blockInfo a ReportBlockInfo

buckets a ReportBucketField

chart a ReportChart

colorRanges a ReportColorRange

columns a ReportColumn

crossFilters a ReportCrossFilter

currency a CurrencyIsoCode - which is a character taking one of the following values:

  • ADP
  • AED
  • AFA
• AFN
• ALL
• AMD
• ANG
• AOA
• ARS
• ATS
• AUD
• AWG
• AZM
• AZN
• BAM
• BBD
• BDT
• BEF
• BGL
• BGN
• BHD
• BIF
• BMD
• BND
• BOB
• BOV
• BRB
• BRL
• BSD
• BTN
• BWP
• BYB
• BYN
• BYR
• BZD
• CAD
• CDF
• CHF
• CLF
• CLP
• CNY
• COP
• CRC
• CSD
• CUC
- CUP
- CVE
- CYP
- CZK
- DEM
- DJF
- DKK
- DOP
- DZD
- ECS
- EEEK
- EGP
- ERN
- ESP
- ETB
- EUR
- FIM
- FJD
- FKP
- FRF
- GBP
- GEL
- GHC
- GHS
- GIP
- GMD
- GNF
- GRD
- GTQ
- GWP
- GYD
- HKD
- HNL
- HRD
- HRK
- HTG
- HUF
- IDR
- IEP
- ILS
- INR
- IQD
• IRR
• ISK
• ITL
• JMD
• JOD
• JPY
• KES
• KGS
• KHR
• KMF
• KPW
• KRW
• KWD
• KYD
• KZT
• LAK
• LBP
• LKR
• LRD
• LSL
• LTL
• LUF
• LVL
• LYD
• MAD
• MDL
• MGA
• MGF
• MKD
• MMK
• MNT
• MOP
• MRO
• MTL
• MUR
• MVR
• MWK
• MXN
• MXV
• MYR
• MZN
• MZN
- NAD
- NGN
- NIO
- NLG
- NOK
- NPR
- NZD
- OMR
- PAB
- PEN
- PGK
- PHP
- PKR
- PLN
- PTE
- PYG
- QAR
- RMB
- ROL
- RON
- RSD
- RUB
- RUR
- RWF
- SAR
- SBD
- SCR
- SDD
- SGD
- SEK
- SGD
- SHP
- SIT
- SKK
- SLL
- SOS
- SRD
- SRG
- SSP
- STD
- SUR
- SVC
• SYP
• SZL
• THB
• TJR
• TJS
• TMM
• TMT
• TND
• TOP
• TPE
• TRL
• TRY
• TTD
• TWD
• TZS
• UAH
• UGX
• USD
• UYU
• UZS
• VEB
• VEF
• VND
• VUV
• WST
• XAF
• XCD
• XOF
• XPF
• YER
• YUM
• ZAR
• ZMK
• ZMW
• ZWD
• ZWL

dataCategoryFilters a ReportDataCategoryFilter
description a character
division a character
filter a ReportFilter
folderName a character
format  a ReportFormat - which is a character taking one of the following values:
  • MultiBlock
  • Matrix
  • Summary
  • Tabular
groupingsAcross  a ReportGrouping
groupingsDown  a ReportGrouping
historicalSelector  a ReportHistoricalSelector
name  a character
numSubscriptions  an integer
params  a ReportParam
reportType  a character
roleHierarchyFilter  a character
rowLimit  an integer
scope  a character
showCurrentDate  a character either 'true' or 'false'
showDetails  a character either 'true' or 'false'
sortColumn  a character
sortOrder  a SortOrder - which is a character taking one of the following values:
  • Asc
  • Desc
territoryHierarchyFilter  a character
timeFrameFilter  a ReportTimeFrameFilter
userFilter  a character

ReportAggregate
acrossGroupingContext  a character
calculatedFormula  a character
datatype  a ReportAggregateDatatype - which is a character taking one of the following values:
  • currency
  • percent
  • number
description  a character
developerName  a character
downGroupingContext  a character
isActive  a character either 'true' or 'false'
isCrossBlock  a character either 'true' or 'false'
masterLabel  a character
reportType a character
scale an integer

ReportAggregateReference
aggregate a character

ReportBlockInfo
aggregateReferences a ReportAggregateReference
blockId a character
joinTable a character

ReportBucketField
bucketType a ReportBucketFieldType - which is a character taking one of the following values:
  • text
  • number
  • picklist
developerName a character
masterLabel a character
nullTreatment a ReportFormulaNullTreatment - which is a character taking one of the following values:
  • n
  • z
otherBucketLabel a character
sourceColumnName a character
useOther a character either 'true' or 'false'
values a ReportBucketFieldValue

ReportBucketFieldSourceValue
from a character
sourceValue a character
to a character

ReportBucketFieldValue
sourceValues a ReportBucketFieldSourceValue
value a character

ReportChart
backgroundColor1 a character
backgroundColor2 a character
backgroundFadeDir a ChartBackgroundDirection - which is a character taking one of the following values:
  • TopToBottom
  • LeftToRight
  • Diagonal
chartSummaries a ChartSummary
chartType a ChartType - which is a character taking one of the following values:
  • None
  • Scatter
  • ScatterGrouped
  • Bubble
  • BubbleGrouped
  • HorizontalBar
  • HorizontalBarGrouped
  • HorizontalBarStacked
  • HorizontalBarStackedTo100
  • VerticalColumn
  • VerticalColumnGrouped
  • VerticalColumnStacked
  • VerticalColumnStackedTo100
  • Line
  • LineGrouped
  • LineCumulative
  • LineCumulativeGrouped
  • Pie
  • Donut
  • Funnel
  • VerticalColumnLine
  • VerticalColumnGroupedLine
  • VerticalColumnStackedLine
  • Plugin
enableHoverLabels a character either ‘true’ or ‘false’
expandOthers a character either ‘true’ or ‘false’
groupingColumn a character
legendPosition a ChartLegendPosition - which is a character taking one of the following values:
  • Right
  • Bottom
  • OnChart
location a ChartPosition - which is a character taking one of the following values:
  • CHART_TOP
  • CHART_BOTTOM
secondaryGroupingColumn a character
showAxisLabels a character either 'true' or 'false'
showPercentage a character either 'true' or 'false'
showTotal a character either 'true' or 'false'
showValues a character either 'true' or 'false'
size a ReportChartSize - which is a character taking one of the following values:
  • Tiny
  • Small
  • Medium
  • Large
  • Huge
summaryAxisManualRangeEnd a numeric
summaryAxisManualRangeStart a numeric
summaryAxisRange a ChartRangeType - which is a character taking one of the following values:
  • Auto
  • Manual
textColor a character
textSize an integer
title a character
titleColor a character
titleSize an integer
ReportChartComponentLayoutItem
cacheData a character either 'true' or 'false'
contextFilterableField a character
error a character
hideOnError a character either 'true' or 'false'
includeContext a character either 'true' or 'false'
reportName a character
showTitle a character either 'true' or 'false'
size a ReportChartComponentSize - which is a character taking one of the following values:
  • SMALL
  • MEDIUM
  • LARGE
ReportColorRange
aggregate a ReportSummaryType - which is a character taking one of the following values:
  • Sum
  • Average
• Maximum
• Minimum
• None
columnName  a character
highBreakpoint  a numeric
highColor  a character
lowBreakpoint  a numeric
lowColor  a character
midColor  a character

ReportColumn

aggregateTypes  a ReportSummaryType - which is a character taking one of the following values:
• Sum
• Average
• Maximum
• Minimum
• None
field  a character
reverseColors  a character either 'true' or 'false'
showChanges  a character either 'true' or 'false'

ReportCrossFilter

criteriaItems  a ReportFilterItem
operation  a ObjectFilterOperator - which is a character taking one of the following values:
• with
• without
primaryTableColumn  a character
relatedTable  a character
relatedTableJoinColumn  a character

ReportDataCategoryFilter

dataCategory  a character
dataCategoryGroup  a character
operator  a DataCategoryFilterOperation - which is a character taking one of the following values:
• above
• below
• at
• aboveOrBelow

ReportFilter
booleanFilter a character

criteriaItems a ReportFilterItem

language a Language - which is a character taking one of the following values:

• en_US
• de
• es
• fr
• it
• ja
• sv
• ko
• zh_TW
• zh_CN
• pt_BR
• nl_NL
• da
• th
• fi
• ru
• es_MX
• no
• hu
• pl
• cs
• tr
• in
• ro
• vi
• uk
• iw
• el
• bg
• en_GB
• ar
• sk
• pt_PT
• hr
• sl
• fr_CA
• ka
• sr
• sh
• en_AU
• en_MY
• en_IN
• en_PH
• en_CA
• ro_MD
• bs
• mk
• lv
• lt
• et
• sq
• sh_ME
• mt
• ga
• eu
• cy
• is
• ms
• tl
• lb
• rm
• hy
• hi
• ur
• bn
• de_AT
• de_CH
• ta
• ar_DZ
• ar_BH
• ar_EG
• ar_IQ
• ar_JO
• ar_KW
• ar_LB
• ar_LY
• ar_MA
• ar_OM
• ar_QA
• ar_SA
• ar_SD
• ar_SY
• ar_TN
• ar_AE
• ar_YE
• zh_SG
• zh_HK
• en_HK
• en_IE
• en_SG
• en_ZA
• fr_BE
• fr_LU
• fr_CH
• de_BE
• de_LU
• it_CH
• nl_BE
• es_AR
• es_BO
• es_CL
• es_CO
• es_CR
• es_DO
• es_EC
• es_SV
• es_GT
• es_HN
• es_NI
• es_PA
• es_PY
• es_PE
• es_PR
• es_US
• es_UY
• es_VE
• ca
• eo
• iw EO

ReportFilterItem

column a character

columnToColumn a character either ‘true’ or ‘false’
isUnlocked: a character either 'true' or 'false'
operator: a FilterOperation - which is a character taking one of the following values:
  • equals
  • notEqual
  • lessThan
  • greaterThan
  • lessOrEqual
  • greaterOrEqual
  • contains
  • notContain
  • startsWith
  • includes
  • excludes
  • within
snapshot: a character
value: a character

ReportFolder

accessType: a FolderAccessType (inherited from Folder)
dfolderShares: a FolderShare (inherited from Folder)
name: a character (inherited from Folder)
publicFolderAccess: a PublicFolderAccess (inherited from Folder)
sharedTo: a SharedTo (inherited from Folder)

ReportGrouping

aggrigateType: a ReportAggrType - which is a character taking one of the following values:
  • Sum
  • Average
  • Maximum
  • Minimum
  • RowCount
dateGranularity: a UserDateGranularity - which is a character taking one of the following values:
  • None
  • Day
  • Week
  • Month
  • Quarter
  • Year
  • FiscalQuarter
  • FiscalYear
• MonthInYear
• DayInMonth
• FiscalPeriod
• FiscalWeek

field a character

sortByName a character

sortOrder a SortOrder - which is a character taking one of the following values:
  • Asc
  • Desc

sortType a ReportSortType - which is a character taking one of the following values:
  • Column
  • Aggregate
  • CustomSummaryFormula

ReportHistoricalSelector

snapshot a character

ReportLayoutSection

columns a ReportTypeColumn

masterLabel a character

ReportParam

name a character

value a character

ReportTimeFrameFilter

dateColumn a character

dendDate a character formatted as ’yyyy-mm-dd’

interval a UserDateInterval - which is a character taking one of the following values:
  • INTERVAL_CURRENT
  • INTERVAL_CURNEXT1
  • INTERVAL_CURPREV1
  • INTERVAL_NEXT1
  • INTERVAL_PREV1
  • INTERVAL_CURNEXT3
  • INTERVAL_CURFY
  • INTERVAL_PREVFY
  • INTERVAL_PREVFY
  • INTERVAL_AGO2FY
  • INTERVAL_NEXTFY
• INTERVAL_PREVCURFY
• INTERVAL_PREVCUR2FY
• INTERVAL_CURNEXTFY
• INTERVAL_CUSTOM
• INTERVAL_YESTERDAY
• INTERVAL_TODAY
• INTERVAL_TOMORROW
• INTERVAL_LASTWEEK
• INTERVAL_THISWEEK
• INTERVAL_NEXTWEEK
• INTERVAL_LASTMONTH
• INTERVAL_THISMONTH
• INTERVAL_NEXTMONTH
• INTERVAL_LASTTHISMONTH
• INTERVAL_THISNEXTMONTH
• INTERVAL_CURRENTQ
• INTERVAL_CURNEXTQ
• INTERVAL_CURPREVQ
• INTERVAL_NEXTQ
• INTERVAL_PREVQ
• INTERVAL_CURNEXT3Q
• INTERVAL_CURY
• INTERVAL_PREVY
• INTERVAL_PREV2Y
• INTERVAL_AGO2Y
• INTERVAL_NEXTY
• INTERVAL_PREVCURY
• INTERVAL_PREVCUR2Y
• INTERVAL_CURNEXTY
• INTERVAL_LAST7
• INTERVAL_LAST30
• INTERVAL_LAST60
• INTERVAL_LAST90
• INTERVAL_LAST120
• INTERVAL_NEXT7
• INTERVAL_NEXT30
• INTERVAL_NEXT60
• INTERVAL_NEXT90
• INTERVAL_NEXT120
• LAST_FISCALWEEK
• THIS_FISCALWEEK
• NEXT_FISCALWEEK
• LAST_FISCALPERIOD
• THIS_FISCALPERIOD
• NEXT_FISCALPERIOD
• LASTTHIS_FISCALPERIOD
• THISNEXT_FISCALPERIOD
• CURRENT_ENTITLEMENT_PERIOD
• PREVIOUS_ENTITLEMENT_PERIOD
• PREVIOUS_TWO_ENTITLEMENT_PERIODS
• TWO_ENTITLEMENT_PERIODS_AGO
• CURRENT_AND_PREVIOUS_ENTITLEMENT_PERIOD
• CURRENT_AND_PREVIOUS_TWO_ENTITLEMENT_PERIODS

startDate  a character formatted as 'yyyy-mm-dd'

ReportType

fullName  a character (inherited from Metadata)

autogenerated  a character either 'true' or 'false'

baseObject  a character

category  a ReportTypeCategory - which is a character taking one of the following values:
  • accounts
  • opportunities
  • forecasts
  • cases
  • leads
  • campaigns
  • activities
  • busop
  • products
  • admin
  • territory
  • other
  • content
  • usage_entitlement
  • wdc
  • calibration
  • territory2

deployed  a character either 'true' or 'false'

description  a character

join  a ObjectRelationship

label  a character

sections  a ReportLayoutSection
metadata_type_validator

**ReportTypeColumn**
- `checkedByDefault` a character either 'true' or 'false'
- `displayNameOverride` a character
- `field` a character
- `table` a character

**ReportTypeColumnTranslation**
- `label` a character
- `name` a character

**ReportTypeSectionTranslation**
- `columns` a ReportTypeColumnTranslation
- `label` a character
- `name` a character

**ReportTypeTranslation**
- `description` a character
- `label` a character
- `name` a character
- `sections` a ReportTypeSectionTranslation

**ReputationBranding**
- `smallImage` a character

**ReputationLevel**
- `branding` a ReputationBranding
- `label` a character
- `lowerThreshold` a numeric

**ReputationLevelDefinitions**
- `level` a ReputationLevel

**ReputationLevels**
- `chatterAnswersReputationLevels` a ChatterAnswersReputationLevel
- `ideaReputationLevels` a IdeaReputationLevel

**ReputationPointsRule**
- `eventType` a character
- `points` an integer
ReputationPointsRules
pointsRule a ReputationPointsRule

RetrieveRequest
apiVersion a numeric
packageNames a character
singlePackage a character either 'true' or 'false'
specificFiles a character
unpackaged a Package

Role
caseAccessLevel a character (inherited from RoleOrTerritory)
contactAccessLevel a character (inherited from RoleOrTerritory)
description a character (inherited from RoleOrTerritory)
mayForecastManagerShare a character either 'true' or 'false' (inherited from RoleOrTerritory)
name a character (inherited from RoleOrTerritory)
opportunityAccessLevel a character (inherited from RoleOrTerritory)
parentRole a character

RoleAndSubordinates
roleAndSubordinate a character

RoleAndSubordinatesInternal
roleAndSubordinateInternal a character

RoleOrTerritory
fullName a character (inherited from Metadata)
caseAccessLevel a character
contactAccessLevel a character
description a character
mayForecastManagerShare a character either 'true' or 'false'
name a character
opportunityAccessLevel a character

Roles
role a character

RuleEntry
assignedTo a character
assignedToType a AssignToLookupValueType - which is a character taking one of the following values:
  • User
  • Queue

booleanFilter a character

businessHours a character

businessHoursSource a BusinessHoursSourceType - which is a character taking one of the following values:
  • None
  • Case
  • Static

criteriaItems a FilterItem

disableEscalationWhenModified a character either 'true' or 'false'

escalationAction a EscalationAction

escalationStartTime a EscalationStartTimeType - which is a character taking one of the following values:
  • CaseCreation
  • CaseLastModified

formula a character

notifyCcRecipients a character either 'true' or 'false'

overrideExistingTeams a character either 'true' or 'false'

replyToEmail a character

senderEmail a character

senderName a character

team a character

template a character

SamlSsoConfig

fullName a character (inherited from Metadata)

attributeName a character

attributeNameIdFormat a character

decryptionCertificate a character

errorUrl a character

executionUserId a character

identityLocation a SamlIdentityLocationType - which is a character taking one of the following values:
  • SubjectNameId
  • Attribute

identityMapping a SamlIdentityType - which is a character taking one of the following values:
metadata_type_validator

- Username
- FederationId
- UserId

**issuer** a character

**loginUrl** a character

**logoutUrl** a character

**name** a character

**oauthTokenEndpoint** a character

**redirectBinding** a character either 'true' or 'false'

**requestSignatureMethod** a character

**requestSigningCertId** a character

**salesforceLoginUrl** a character

**samlEntityId** a character

**samlJitHandlerId** a character

**samlVersion** a SamlType - which is a character taking one of the following values:
  - SAML1_1
  - SAML2_0

**singleLogoutBinding** a SamlSpSLOBinding - which is a character taking one of the following values:
  - RedirectBinding
  - PostBinding

**singleLogoutUrl** a character

**userProvisioning** a character either 'true' or 'false'

**validationCert** a character

**ScheduledRecommendation**

**scheduledRecommendationDetails** a ScheduledRecommendationDetail

**ScheduledRecommendationDetail**

**channel** a RecommendationChannel - which is a character taking one of the following values:
  - DefaultChannel
  - CustomChannel1
  - CustomChannel2
  - CustomChannel3
  - CustomChannel4
  - CustomChannel5

**enabled** a character either 'true' or 'false'

**rank** an integer

**recommendationAudience** a character
Scontrol

content a character formed using base64encode (inherited from MetadataWithContent)
contentSource a SControlContentSource - which is a character taking one of the following values:
  • HTML
  • URL
  • Snippet
description a character
encodingKey a Encoding - which is a character taking one of the following values:
  • UTF-8
  • ISO-8859-1
  • Shift_JIS
  • ISO-2022-JP
  • EUC-JP
  • ks_c_5601-1987
  • Big5
  • GB2312
  • Big5-HKSCS
  • x-SJIS_0213

fileContent a character formed using base64encode
fileName a character
name a character
supportsCaching a character either 'true' or 'false'

ScontrolTranslation

label a character
name a character

SearchLayouts

customTabListAdditionalFields a character
excludedStandardButtons a character
listViewButtons a character
lookupDialogsAdditionalFields a character
lookupFilterFields a character
lookupPhoneDialogsAdditionalFields a character
searchFilterFields a character
searchResultsAdditionalFields a character
searchResultsCustomButtons a character

SearchSettings
fullName  a character (inherited from Metadata)
documentContentSearchEnabled  a character either 'true' or 'false'
optimizeSearchForCJKEnabled  a character either 'true' or 'false'
recentlyViewedUsersForBlankLookupEnabled  a character either 'true' or 'false'
searchSettingsByObject  a SearchSettingsByObject
sidebarAutoCompleteEnabled  a character either 'true' or 'false'
sidebarDropDownListEnabled  a character either 'true' or 'false'
sidebarLimitToItemsIOwnCheckboxEnabled  a character either 'true' or 'false'
singleSearchResultShortcutEnabled  a character either 'true' or 'false'
spellCorrectKnowledgeSearchEnabled  a character either 'true' or 'false'

SearchSettingsByObject

searchSettingsByObject  a ObjectSearchSetting

SecuritySettings

fullName  a character (inherited from Metadata)
networkAccess  a NetworkAccess
passwordPolicies  a PasswordPolicies
sessionSettings  a SessionSettings

ServiceCloudConsoleConfig

cOMPONENTList  a AppComponentList
detailPageRefreshMethod  a character
footerColor  a character
headerColor  a character
keyboardShortcuts  a KeyboardShortcuts
listPlacement  a ListPlacement
listRefreshMethod  a character
liveAgentConfig  a LiveAgentConfig
primaryTabColor  a character
pushNotifications  a PushNotification
tabLimitConfig  a TabLimitConfig
whitelistedDomains  a character

SessionSettings

disableTimeoutWarning  a character either 'true' or 'false'
enableCSPOnEmail  a character either 'true' or 'false'
enableCSRFOnGet  a character either 'true' or 'false'
enableCSRFOnPost  a character either 'true' or 'false'
enableCacheAndAutocomplete  a character either 'true' or 'false'
enableClickjackNonsetupSFDC  a character either 'true' or 'false'
enableClickjackNonsetupUser  a character either 'true' or 'false'
enableClickjackNonsetupUserHeaderless  a character either 'true' or 'false'
enableClickjackSetup  a character either 'true' or 'false'
enableContentSniffingProtection  a character either 'true' or 'false'
enablePostForSessions  a character either 'true' or 'false'
enableSMSIdentity  a character either 'true' or 'false'
enableUpgradeInsecureRequests  a character either 'true' or 'false'
enableXssProtection  a character either 'true' or 'false'
enforceIpRangesEveryRequest  a character either 'true' or 'false'
forceLogoutOnSessionTimeout  a character either 'true' or 'false'
forceRelogin  a character either 'true' or 'false'
httpsOnForcecomSites  a character either 'true' or 'false'
identityConfirmationOnEmailChange  a character either 'true' or 'false'
identityConfirmationOnTwoFactorRegistrationEnabled  a character either 'true' or 'false'
lockSessionsToDomain  a character either 'true' or 'false'
lockSessionsToIp  a character either 'true' or 'false'
logoutURL  a character
redirectionWarning  a character either 'true' or 'false'
referrerPolicy  a character either 'true' or 'false'
requireHttpOnly  a character either 'true' or 'false'
requireHttps  a character either 'true' or 'false'
securityCentralKillSession  a character either 'true' or 'false'
sessionTimeout  a SessionTimeout - which is a character taking one of the following values:
  - TwentyFourHours
  - TwelveHours
  - EightHours
  - FourHours
  - TwoHours
  - SixtyMinutes
  - ThirtyMinutes
  - FifteenMinutes

SFDCMobileSettings

enableMobileLite  a character either 'true' or 'false'
enableUserToDeviceLinking  a character either 'true' or 'false'
metadata_type_validator

**SharedTo**

- `allCustomerPortalUsers` a character
- `allInternalUsers` a character
- `allPartnerUsers` a character
- `channelProgramGroup` a character
- `channelProgramGroups` a character
- `group` a character
- `groups` a character
- `managerSubordinates` a character
- `managers` a character
- `portalRole` a character
- `portalRoleAndSubordinates` a character
- `queue` a character
- `role` a character
- `roleAndSubordinates` a character
- `roleAndSubordinatesInternal` a character
- `roles` a character
- `rolesAndSubordinates` a character
- `territories` a character
- `territoriesAndSubordinates` a character
- `territory` a character
- `territoryAndSubordinates` a character

**SharingBaseRule**

- `fullName` a character (inherited from Metadata)
- `accessLevel` a character
- `accountSettings` a AccountSharingRuleSettings
- `description` a character
- `label` a character
- `sharedTo` a SharedTo

**SharingCriteriaRule**

- `accessLevel` a character (inherited from SharingBaseRule)
- `accountSettings` a AccountSharingRuleSettings (inherited from SharingBaseRule)
- `description` a character (inherited from SharingBaseRule)
- `label` a character (inherited from SharingBaseRule)
- `sharedTo` a SharedTo (inherited from SharingBaseRule)
booleanFilter a character

criteriaItems a FilterItem

SharingOwnerRule

accessLevel a character (inherited from SharingBaseRule)
accountSettings a AccountSharingRuleSettings (inherited from SharingBaseRule)
description a character (inherited from SharingBaseRule)
label a character (inherited from SharingBaseRule)
sharedTo a SharedTo (inherited from SharingBaseRule)
sharedFrom a SharedTo

SharingReason

fullName a character (inherited from Metadata)
label a character

SharingReasonTranslation

label a character
name a character

SharingRecalculation

className a character

SharingRules

fullName a character (inherited from Metadata)
sharingCriteriaRules a SharingCriteriaRule
sharingOwnerRules a SharingOwnerRule
sharingTerritoryRules a SharingTerritoryRule

SharingSet

fullName a character (inherited from Metadata)
accessMappings a AccessMapping
description a character
name a character
profiles a character

SharingTerritoryRule

sharedFrom a SharedTo (inherited from SharingOwnerRule)

SidebarComponent
componentType  a character
createAction  a character
enableLinking  a character either 'true' or 'false'
height  an integer
label  a character
lookup  a character
page  a character
relatedLists  a RelatedList
unit  a character
updateAction  a character
width  an integer

SiteDotCom
content  a character formed using base64encode (inherited from MetadataWithContent)
label  a character
siteType  a SiteType - which is a character taking one of the following values:
  • Siteforce
  • Visualforce
  • User

SiteRedirectMapping
action  a SiteRedirect - which is a character taking one of the following values:
  • Permanent
  • Temporary
isActive  a character either 'true' or 'false'
source  a character
target  a character

SiteWebAddress
certificate  a character
domainName  a character
primary  a character either 'true' or 'false'

Skill
fullName  a character (inherited from Metadata)
assignments  a SkillAssignments
description  a character
label  a character
SkillAssignments

profiles a SkillProfileAssignments
users a SkillUserAssignments

SkillProfileAssignments

profile a character

SkillUserAssignments

user a character

SocialCustomerServiceSettings

fullName a character (inherited from Metadata)
caseSubjectOption a CaseSubjectOption - which is a character taking one of the following values:
  • SocialPostSource
  • SocialPostContent
  • BuildCustom

StandardFieldTranslation

label a character
name a character

StandardValue

color a character (inherited from CustomValue)
default a character either 'true' or 'false' (inherited from CustomValue)
description a character (inherited from CustomValue)
isActive a character either 'true' or 'false' (inherited from CustomValue)
label a character (inherited from CustomValue)
allowEmail a character either 'true' or 'false'
closed a character either 'true' or 'false'
converted a character either 'true' or 'false'
cssExposed a character either 'true' or 'false'
forecastCategory a ForecastCategories - which is a character taking one of the following values:
  • Omitted
  • Pipeline
  • BestCase
  • Forecast
  • Closed
groupingString a character
highPriority a character either 'true' or 'false'
**probability**  an integer
**reverseRole**  a character
**reviewed**  a character either 'true' or 'false'
**won**  a character either 'true' or 'false'

**StandardValueSet**

**fullName**  a character (inherited from Metadata)
**groupingStringEnum**  a character
**sorted**  a character either 'true' or 'false'
**standardValue**  a StandardValue

**StandardValueSetTranslation**

**fullName**  a character (inherited from Metadata)
**valueTranslation**  a ValueTranslation

**State**

**active**  a character either 'true' or 'false'
**integrationValue**  a character
**isoCode**  a character
**label**  a character
**standard**  a character either 'true' or 'false'
**visible**  a character either 'true' or 'false'

**StaticResource**

**content**  a character formed using `base64encode` (inherited from MetadataWithContent)
**cacheControl**  a StaticResourceCacheControl - which is a character taking one of the following values:
  - Private
  - Public
**contentType**  a character
**description**  a character

**StrategyNode**

**definition**  a character
**description**  a character
**name**  a character
**parentNode**  a character
**type**  an integer
SubtabComponents

containers a Container

SummaryLayout

masterLabel a character
sizeX an integer
sizeY an integer
sizeZ an integer
summaryLayoutItems a SummaryLayoutItem
summaryLayoutStyle a SummaryLayoutStyle - which is a character taking one of the following values:
  • Default
  • QuoteTemplate
  • DefaultQuoteTemplate
  • ServiceReportTemplate
  • ChildServiceReportTemplateStyle
  • DefaultServiceReportTemplate
  • CaseInteraction
  • QuickActionLayoutLeftRight
  • QuickActionLayoutTopDown
  • PathAssistant

SummaryLayoutItem

customLink a character
field a character
posX an integer
posY an integer
posZ an integer

SupervisorAgentConfigSkills

skill a character

SynonymDictionary

fullName a character (inherited from Metadata)
groups a SynonymGroup
isProtected a character either 'true' or 'false'
label a character

SynonymGroup
languages  a Language - which is a character taking one of the following values:

- en_US
- de
- es
- fr
- it
- ja
- sv
- ko
- zh_TW
- zh_CN
- pt_BR
- nl_NL
- da
- th
- fi
- ru
- es_MX
- no
- hu
- pl
- cs
- tr
- in
- ro
- vi
- uk
- iw
- el
- bg
- en_GB
- ar
- sk
- pt_PT
- hr
- sl
- fr_CA
- ka
- sr
- sh
- en_AU
- en_MY
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</thead>
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<td></td>
</tr>
<tr>
<td>en_PH</td>
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• es_CR
• es_DO
• es_EC
• es_SV
• es_GT
• es_HN
• es_NI
• es_PA
• es_PY
• es_PE
• es_PR
• es_US
• es_UY
• es_VE
• ca
• eo
• iw EO

**terms** a character

**TabLimitConfig**

**maxNumberOfPrimaryTabs** a character

**maxNumberOfSubTabs** a character
Territory

caseAccessLevel a character (inherited from RoleOrTerritory)
contactAccessLevel a character (inherited from RoleOrTerritory)
description a character (inherited from RoleOrTerritory)
mayForecastManagerShare a character either 'true' or 'false' (inherited from RoleOrTerritory)
name a character (inherited from RoleOrTerritory)
opportunityAccessLevel a character (inherited from RoleOrTerritory)
accountAccessLevel a character
parentTerritory a character

Territory2

fullName a character (inherited from Metadata)
accountAccessLevel a character
caseAccessLevel a character
contactAccessLevel a character
customFields a FieldValue
description a character
name a character
opportunityAccessLevel a character
parentTerritory a character
ruleAssociations a Territory2RuleAssociation
territory2Type a character

Territory2Model

fullName a character (inherited from Metadata)
customFields a FieldValue
description a character
name a character

Territory2Rule

fullName a character (inherited from Metadata)
active a character either 'true' or 'false'
booleanFilter a character
name a character
objectType a character
ruleItems a Territory2RuleItem

Territory2RuleAssociation
inherited a character either 'true' or 'false'
ruleName a character

Territory2RuleItem

field a character
operation a FilterOperation - which is a character taking one of the following values:
  • equals
  • notEqual
  • lessThan
  • greaterThan
  • lessOrEqual
  • greaterOrEqual
  • contains
  • notContain
  • startsWith
  • includes
  • excludes
  • within
value a character

Territory2Settings

fullName a character (inherited from Metadata)
defaultAccountAccessLevel a character
defaultCaseAccessLevel a character
defaultContactAccessLevel a character
defaultOpportunityAccessLevel a character
opportunityFilterSettings a Territory2SettingsOpportunityFilter

Territory2SettingsOpportunityFilter

apexClassName a character
enableFilter a character either 'true' or 'false'
runOnCreate a character either 'true' or 'false'

Territory2Type

fullName a character (inherited from Metadata)
description a character
name a character
priority an integer

TopicsForObjects
fullName a character (inherited from Metadata)
enableTopics a character either 'true' or 'false'
entityApiName a character

TouchMobileSettings

enableTouchAppIPad a character either 'true' or 'false'
enableTouchAppIPhone a character either 'true' or 'false'
enableTouchBrowserIPad a character either 'true' or 'false'
enableTouchIosPhone a character either 'true' or 'false'
enableVisualforceInTouch a character either 'true' or 'false'

TransactionSecurityAction

block a character either 'true' or 'false'
endSession a character either 'true' or 'false'
freezeUser a character either 'true' or 'false'
notifications a TransactionSecurityNotification
twoFactorAuthentication a character either 'true' or 'false'

TransactionSecurityNotification

inApp a character either 'true' or 'false'
sendEmail a character either 'true' or 'false'
user a character

TransactionSecurityPolicy

fullName a character (inherited from Metadata)
action a TransactionSecurityAction
active a character either 'true' or 'false'
apexClass a character
description a character
developerName a character
eventName a TransactionSecurityEventName - which is a character taking one of the following values:
  • ReportEvent
  • ApiEvent
  • AdminSetupEvent
  • LoginEvent
eventType a MonitoredEvents - which is a character taking one of the following values:
  • AuditTrail
  • Login
- Entity
- DataExport
- AccessResource

**executionUser** a character

**flow** a character

**masterLabel** a character

**resourceName** a character

**type** a TxnSecurityPolicyType - which is a character taking one of the following values:
- CustomApexPolicy
- CustomConditionBuilderPolicy

**Translations**

**fullName** a character (inherited from Metadata)

**customApplications** a CustomApplicationTranslation

**customDataTypeTranslations** a CustomDataTypeTranslation

**customLabels** a CustomLabelTranslation

**customPageWebLinks** a CustomPageWebLinkTranslation

**customTabs** a CustomTabTranslation

**flowDefinitions** a FlowDefinitionTranslation

**quickActions** a GlobalQuickActionTranslation

**reportTypes** a ReportTypeTranslation

**scontrols** a ScontrolTranslation

**UiFormulaCriterion**

**leftValue** a character

**operator** a character

**rightValue** a character

**UiFormulaRule**

**booleanFilter** a character

**criteria** a UiFormulaCriterion

**UiPlugin**

**content** a character formed using `base64encode` (inherited from MetadataWithContent)

**description** a character

**extensionPointIdentifier** a character

**isEnabled** a character either 'true' or 'false'

**language** a character

**masterLabel** a character
UserCriteria

fullName a character (inherited from Metadata)
creationAgeInSeconds an integer
description a character
lastChatterActivityAgeInSeconds an integer
masterLabel a character
profiles a character
userTypes a NetworkUserType - which is a character taking one of the following values:
  • Internal
  • Customer
  • Partner

Users

user a character

ValidationRule

fullName a character (inherited from Metadata)
active a character either 'true' or 'false'
description a character
errorConditionFormula a character
errorDisplayField a character
errorMessage a character

ValidationRuleTranslation

errrorMessage a character
name a character

ValueSet

controllingField a character
restricted a character either 'true' or 'false'
valueSetDefinition a ValueSetValuesDefinition
valueSetName a character
valueSettings a ValueSettings

ValueSettings

controllingFieldValue a character
valueName a character

ValueSetValuesDefinition
sorted a character either 'true' or 'false'

value a CustomValue

ValueTranslation

masterLabel a character

translation a character

ValueTypeField

fields a ValueTypeField

foreignKeyDomain a character

isForeignKey a character either 'true' or 'false'

isNameField a character either 'true' or 'false'

minOccurs an integer

name a character

picklistValues a PicklistEntry

soapType a character

valueRequired a character either 'true' or 'false'

VisualizationPlugin

fullName a character (inherited from Metadata)

description a character

developerName a character

icon a character

masterLabel a character

visualizationResources a VisualizationResource

visualizationTypes a VisualizationType

VisualizationResource

description a character

file a character

rank an integer

type a VisualizationResourceType - which is a character taking one of the following values:

- js
- css

VisualizationType

description a character

developerName a character

icon a character
masterLabel a character
scriptBootstrapMethod a character

WaveApplication

fullName a character (inherited from Metadata)
assetIcon a character
description a character
folder a character
masterLabel a character
shares a FolderShare
templateOrigin a character
templateVersion a character

WaveDashboard

content a character formed using base64encode (inherited from MetadataWithContent)
application a character
description a character
masterLabel a character
templateAssetSourceName a character

WaveDataflow

content a character formed using base64encode (inherited from MetadataWithContent)
dataflowType a character
description a character
masterLabel a character

WaveDataset

fullName a character (inherited from Metadata)
application a character
description a character
masterLabel a character
templateAssetSourceName a character

WaveLens

content a character formed using base64encode (inherited from MetadataWithContent)
application a character
datasets a character
description a character
metadata_type_validator

```plaintext
masterLabel        a character
templateAssetSourceName a character
visualizationType   a character

WaveRecipe

collection        a character formed using base64encode (inherited from MetadataWithContent)
dataflow            a character
masterLabel        a character
securityPredicate  a character
targetDatasetAlias a character

WaveTemplateBundle

fullName        a character (inherited from Metadata)
assetIcon       a character
assetVersion    a numeric
description     a character
label           a character
templateBadgeIcon a character
templateDetailIcon a character
templateType     a character

WaveXmd

fullName        a character (inherited from Metadata)
application     a character
dataset         a character
datasetConnector a character
datasetFullyQualifiedName  a character
dates           a WaveXmdDate
dimensions      a WaveXmdDimension
measures        a WaveXmdMeasure
organizations   a WaveXmdOrganization
origin          a character
type            a character
waveVisualization a character

WaveXmdDate

alias           a character
compact         a character either 'true' or 'false'
```
dateFieldDay a character
dateFieldEpochDay a character
dateFieldEpochSecond a character
dateFieldFiscalMonth a character
dateFieldFiscalQuarter a character
dateFieldFiscalWeek a character
dateFieldFiscalYear a character
dateFieldFullYear a character
dateFieldHour a character
dateFieldMinute a character
dateFieldMonth a character
dateFieldQuarter a character
dateFieldSecond a character
dateFieldWeek a character
dateFieldYear a character
description a character
firstDayOfWeek an integer
fiscalMonthOffset an integer
isYearEndFiscalYear a character either 'true' or 'false'
label a character
showInExplorer a character either 'true' or 'false'
sortIndex an integer

WaveXmdDimension

customActions a WaveXmdDimensionCustomAction
customActionsEnabled a character either 'true' or 'false'
dateFormat a character
description a character
field a character
fullyQualifiedName a character
imageTemplate a character
isDerived a character either 'true' or 'false'
isMultiValue a character either 'true' or 'false'
label a character
linkTemplate a character
linkTemplateEnabled a character either 'true' or 'false'
linkTooltip a character
members a WaveXmdDimensionMember
origin a character
recordDisplayFields a WaveXmdRecordDisplayLookup
recordIdField a character
recordOrganizationIdField a character
salesforceActions a WaveXmdDimensionSalesforceAction
salesforceActionsEnabled a character either 'true' or 'false'
showDetailsDefaultFieldIndex an integer
showInExplorer a character either 'true' or 'false'
sortIndex an integer

WaveXmdDimensionCustomAction
customActionName a character
enabled a character either 'true' or 'false'
icon a character
method a character
sortIndex an integer
target a character
tooltip a character
url a character

WaveXmdDimensionMember
color a character
label a character
member a character
sortIndex an integer

WaveXmdDimensionSalesforceAction
enabled a character either 'true' or 'false'
salesforceActionName a character
sortIndex an integer

WaveXmdMeasure
dateFormat a character
description a character
field a character
formatCustomFormat a character
formatDecimalDigits an integer
formatIsNegativeParens a character either 'true' or 'false'
formatPrefix a character
formatSuffix a character
formatUnit a character
formatUnitMultiplier a numeric
fullyQualifiedName a character
isDerived a character either 'true' or 'false'
label a character
origin a character
showDetailsDefaultFieldIndex an integer
showInExplorer a character either 'true' or 'false'
sortIndex an integer

WaveXmdOrganization

instanceUrl a character
label a character
organizationIdentifier a character
sortIndex an integer

WaveXmdRecordDisplayLookup

recordDisplayField a character

WebLink

fullName a character (inherited from Metadata)
availability a WebLinkAvailability - which is a character taking one of the following values:
  • online
  • offline
description a character
displayType a WebLinkDisplayType - which is a character taking one of the following values:
  • link
  • button
  • massActionButton
encodingKey a Encoding - which is a character taking one of the following values:
  • UTF-8
  • ISO-8859-1
  • Shift_JIS
  • ISO-2022-JP
  • EUC-JP
  • ks_c_5601-1987
- Big5
- GB2312
- Big5-HKSCS
- x-SJIS_0213

`hasMenubar` a character either ‘true’ or ‘false’

`hasScrollbars` a character either ‘true’ or ‘false’

`hasToolbar` a character either ‘true’ or ‘false’

`height` an integer

`isResizable` a character either ‘true’ or ‘false’

`linkType` a WebLinkType - which is a character taking one of the following values:
  - url
  - sControl
  - javascript
  - page
  - flow

`masterLabel` a character

`openType` a WebLinkWindowType - which is a character taking one of the following values:
  - newWindow
  - sidebar
  - noSidebar
  - replace
  - onClickJavaScript

`page` a character

`position` a WebLinkPosition - which is a character taking one of the following values:
  - fullScreen
  - none
  - topLeft

`protected` a character either ‘true’ or ‘false’

`requireRowSelection` a character either ‘true’ or ‘false’

`scontrol` a character

`showsLocation` a character either ‘true’ or ‘false’

`showsStatus` a character either ‘true’ or ‘false’

`url` a character

`width` an integer

`WebLinkTranslation`

`label` a character

`name` a character

`WebToCaseSettings`
caseOrigin a character
defaultResponseTemplate a character
enableWebToCase a character either 'true' or 'false'

WeightedSourceCategory

sourceCategoryApiName a character
weight a numeric

Workflow

fullName a character (inherited from Metadata)
alerts a WorkflowAlert
fieldUpdates a WorkflowFieldUpdate
flowActions a WorkflowFlowAction
knowledgePublishes a WorkflowKnowledgePublish
outboundMessages a WorkflowOutboundMessage
rules a WorkflowRule
send a WorkflowSend
tasks a WorkflowTask

WorkflowAction

fullName a character (inherited from Metadata)

WorkflowActionReference

name a character
type a WorkflowActionType - which is a character taking one of the following values:
  • FieldUpdate
  • KnowledgePublish
  • Task
  • Alert
  • Send
  • OutboundMessage
  • FlowAction

WorkflowAlert

extends WorkflowAction see documentation for WorkflowAction
ccEmails a character
description a character
protected a character either 'true' or 'false'
recipients a WorkflowEmailRecipient
senderAddress a character
senderType a ActionEmailSenderType - which is a character taking one of the following values:

-CurrentUser
-OrgWideEmailAddress
-DefaultWorkflowUser

template a character

WorkflowEmailRecipient

field a character
recipient a character
type a ActionEmailRecipientTypes - which is a character taking one of the following values:

- group
- role
- user
- opportunityTeam
- accountTeam
- roleSubordinates
- owner
- creator
- partnerUser
- accountOwner
- customerPortalUser
- portalRole
- portalRoleSubordinates
- contactLookup
- userLookup
- roleSubordinatesInternal
- email
- caseTeam
- campaignMemberDerivedOwner

WorkflowFieldUpdate

extends WorkflowAction see documentation for WorkflowAction
description a character
field a character
formula a character
literalValue a character
lookupValue a character
lookupValueType a LookupValueType - which is a character taking one of the following values:

- User
• Queue
• RecordType

**name** a character

**notifyAssignee** a character either 'true' or 'false'

**operation** a FieldUpdateOperation - which is a character taking one of the following values:
• Formula
• Literal
• Null
• NextValue
• PreviousValue
• LookupValue

**protected** a character either 'true' or 'false'

**reevaluateOnChange** a character either 'true' or 'false'

**targetObject** a character

**WorkflowFlowAction**

extends **WorkflowAction** see documentation for WorkflowAction

description a character

flow a character

**flowInputs** a WorkflowFlowActionParameter

label a character

**language** a character

**protected** a character either 'true' or 'false'

**WorkflowFlowActionParameter**

name a character

value a character

**WorkflowKnowledgePublish**

extends **WorkflowAction** see documentation for WorkflowAction

**action** a KnowledgeWorkflowAction - which is a character taking one of the following values:
• PublishAsNew
• Publish

description a character

label a character

**language** a character

**protected** a character either 'true' or 'false'

**WorkflowRule**
**metadata_type_validator**

- **fullName** a character (inherited from Metadata)
- **actions** a WorkflowActionReference
- **active** a character either 'true' or 'false'
- **booleanFilter** a character
- **criteriaItems** a FilterItem
- **description** a character
- **formula** a character

**triggerType** a WorkflowTriggerTypes - which is a character taking one of the following values:
- onCreateOnly
- onCreateOrTriggeringUpdate
- onAllChanges
- OnRecursiveUpdate

**workflowTimeTriggers** a WorkflowTimeTrigger

**WorkflowSend**

extends **WorkflowAction** see documentation for WorkflowAction

- **action** a SendAction - which is a character taking one of the following values:
  - Send
- **description** a character
- **label** a character
- **language** a character
- **protected** a character either 'true' or 'false'

**WorkflowTask**

extends **WorkflowAction** see documentation for WorkflowAction

- **assignedTo** a character

**assignedToType** a ActionTaskAssignedToTypes - which is a character taking one of the following values:
- user
- role
- opportunityTeam
- accountTeam
- owner
- accountOwner
- creator
- accountCreator
- partnerUser
- portalRole

- **description** a character
dueDateOffset an integer
notifyAssignee a character either 'true' or 'false'
offsetFromField a character
priority a character
protected a character either 'true' or 'false'
status a character
subject a character

WorkflowTaskTranslation

description a character
name a character
subject a character

WorkflowTimeTrigger

actions a WorkflowActionReference
offsetFromField a character
timeLength a character
workflowTimeTriggerUnit a WorkflowTimeUnits - which is a character taking one of the following values:
- Hours
- Days

WorkspaceMapping

fieldName a character

Value

a list that can be used as input to one of the CRUD Metadata API operations: sf_create_metadata, sf_update_metadata, sf_update_metadata
parameterized_search_control

Auxiliary for Controlling Parametrized Searches

Description

A function for allowing finer grained control over how a search is performed when not using SOSL

Usage

parameterized_search_control(
  objects = NULL,
  fields_scope = c("ALL", "NAME", "EMAIL", "PHONE", "SIDEBAR"),
  fields = NULL,
  overall_limit = 2000,
  default_limit = 200,
  spellCorrection = TRUE
)

Arguments

objects character; objects to search and return in the response. Multiple objects can be provided as a character vector
fields_scope character; scope of fields to search in order to limit the resources used and improve performance
fields character; one or more fields to return in the response for each sobject specified. If no fields are specified only the Ids of the matching records are returned.
overall_limit numeric; the maximum number of results to return across all objects in the search.
default_limit numeric; the maximum number of results to return for each of the specified objects. This parameter is ignored if the objects argument is left NULL.
spell_correction logical; specifies whether spell correction should be enabled for a user’s search.

Value

list of parameters passed onto sf_search

References

https://developer.salesforce.com/docs/atlas.en-us.api_rest.meta/api_rest/resources_search_parameterized.htm#resources_search_parameterized
Examples

```r
## Not run:
# free text search only on Contact record Phone fields
# this will improve the performance of the search
my_phone_search <- "(336)"
search_result <- sf_search(my_phone_search,
                          objects = c("Contact", "Lead"),
                          fields_scope = "PHONE",
                          fields = c("Id", "FirstName", "LastName"))
## End(Not run)
```

---

**rforcecom.bulkAction**  
*The salesforce backwards compatible version of the RForcecom function rforcecom.bulkAction*

Description

[Soft-deprecated]

This function is a convenience wrapper for submitting bulk API jobs

Usage

```r
rforcecom.bulkAction(
  session,  
  operation = c("insert", "delete", "upsert", "update", "hardDelete"),
  data,      
  object,    
  external_id_fieldname = NULL,  
  multiBatch = TRUE,  
  batchSize = 10000,  
  interval_seconds = 5,  
  max_attempts = 100,  
  verbose = FALSE    
)
```

Arguments

- **session**: list; a list containing "sessionID", "instanceURL", and "apiVersion" as returned by `RForcecom::rforcecom.login`. This argument is ignored in all backward compatible calls because the authorization credentials are stored in an environment internal to the `salesforcer` package, so it is no longer necessary to pass the session in each function call.
- **operation**: a character string defining the type of operation being performed
- **data**: a matrix or data.frame that can be coerced into a CSV file for submitting as batch request
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<th>parameter</th>
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<tr>
<td>object</td>
<td>a character string defining the target salesforce object that the operation will be performed on</td>
</tr>
<tr>
<td>external_id_fieldname</td>
<td>character; string identifying a custom field on the object that has been set as an “External ID” field. This field is used to reference objects during upserts to determine if the record already exists in Salesforce or not.</td>
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<tr>
<td>multiBatch</td>
<td>a boolean value defining whether or not submit data in batches to the API</td>
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<tr>
<td>batchSize</td>
<td>an integer value defining the number of records to submit if multiBatch is true. The max value is 10,000 in accordance with Salesforce limits.</td>
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<td>interval_seconds</td>
<td>an integer defining the seconds between attempts to check for job completion</td>
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<tr>
<td>max_attempts</td>
<td>an integer defining then max number attempts to check for job completion before stopping</td>
</tr>
<tr>
<td>verbose</td>
<td>logical; an indicator of whether to print additional detail for each API call, which is useful for debugging. More specifically, when set to TRUE the URL, header, and body will be printed for each request, along with additional diagnostic information where available.</td>
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</tbody>
</table>

**Value**

A tbl_df of the results of the bulk job

**References**


**Examples**

```r
## Not run:
# update Account object
updates <- rforcecom.bulkAction(session,
  operation = 'update',
  data = my_data,
  object = 'Account')

## End(Not run)
```
Usage

rforcecom.bulkQuery(
    session,
    soqlQuery,
    object,
    interval_seconds = 5,
    max_attempts = 100,
    verbose = FALSE
)

Arguments

session list: a list containing "sessionId", "instanceURL", and "apiVersion" as returned by RForcecom::rforcecom.login. This argument is ignored in all backward compatible calls because the authorization credentials are stored in an environment internal to the salesforcer package, so it is no longer necessary to pass the session in each function call.

soqlQuery character; a string defining a SOQL query (e.g. "SELECT Id, Name FROM Account").

object character; the name of one Salesforce objects that the function is operating against (e.g. "Account", "Contact", "CustomObject__c")

interval_seconds an integer defining the seconds between attempts to check for job completion

max_attempts an integer defining then max number attempts to check for job completion before stopping

verbose logical; an indicator of whether to print additional detail for each API call, which is useful for debugging. More specifically, when set to TRUE the URL, header, and body will be printed for each request, along with additional diagnostic information where available.

Value

A data.frame of the recordset returned by query

---

rforcecom.create  The salesforcer backwards compatible version of RForcecom::rforcecom.create

Description

[Soft-deprecated]

Usage

rforcecom.create(session, objectName, fields)
**rforcecom.delete**

*The salesforcer backwards compatible version of RForcecom::rforcecom.delete*

---

**Description**

[Soft-deprecated]

**Usage**

```r
rforcecom.delete(session, objectName, id)
```

**Arguments**

- **session**
  - list: a list containing "sessionID", "instanceURL", and "apiVersion" as returned by RForcecom::rforcecom.login. This argument is ignored in all backward compatible calls because the authorization credentials are stored in an environment internal to the salesforcer package, so it is no longer necessary to pass the session in each function call.

- **objectName**
  - character: the name of the Salesforce object that the function is operating against (e.g. "Account", "Contact", "CustomObject__c").

- **id**
  - Record ID to delete. (ex: "999x000000xxxxxZZZ")

**Value**

- NULL if successful otherwise the function errors out
rforcecom.getServerTimestamp

The salesforce backwards compatible version of RForcecom::rforcecom.getServerTimestamp

Description

[Soft-deprecated]

Usage

rforcecom.getServerTimestamp(session)

Arguments

session list; a list containing "sessionID", "instanceURL", and "apiVersion" as returned by RForcecom::rforcecom.login. This argument is ignored in all backward compatible calls because the authorization credentials are stored in an environment internal to the salesforcer package, so it is no longer necessary to pass the session in each function call.

objectName character; the name of the Salesforce object that the function is operating against (e.g. "Account", "Contact", "CustomObject__c").

Value

Object descriptions

Note

This function returns a data.frame with one row per field for an object.
rforcecom.login

Arguments

session list: a list containing "sessionID", "instanceURL", and "apiVersion" as returned by RForcecom::rforcecom.login. This argument is ignored in all backward compatible calls because the authorization credentials are stored in an environment internal to the salesforceer package, so it is no longer necessary to pass the session in each function call.

rforcecom.login  The salesforcer backwards compatible version of RForcecom::rforcecom.login

Description

[Soft-deprecated]

Usage

rforcecom.login(
    username,
    password,
    loginURL = "https://login.salesforce.com/",
    apiVersion = "35.0"
)

Arguments

username Your username for login to the Salesforce.com. In many cases, username is your E-mail address.

password Your password for login to the Salesforce.com. Note: DO NOT FORGET your Security Token. (Ex.) If your password is "Pass1234" and your security token is "XYZXYZXYZXYZ", you should set "Pass1234XYZXYZXYZXYZ".

loginURL (optional) Login URL. If your environment is sandbox specify (ex:) "https://test.salesforce.com".

apiVersion (optional) Version of the REST API and SOAP API that you want to use. (ex:) "35.0" Supported versions from v20.0 and up.

Value

sessionID Session ID.

instanceURL Instance URL.

apiVersion API Version.
rforcecom.query

The salesforce backwards compatible version of RForcecom::rforcecom.query

Description

[Soft-deprecated]

Usage

rforcecom.query(session, soqlQuery, queryAll = FALSE)

Arguments

session list: a list containing "sessionId", "instanceURL", and "apiVersion" as returned by RForcecom::rforcecom.login. This argument is ignored in all backward compatible calls because the authorization credentials are stored in an environment internal to the salesforcer package, so it is no longer necessary to pass the session in each function call.

soqlQuery character: a string defining a SOQL query (e.g. "SELECT Id, Name FROM Account").

queryAll logical: indicating if the query recordset should include deleted and archived records (available only when querying Task and Event records)

Value

Result dataset.

rforcecom.retrieve

The salesforce backwards compatible version of RForcecom::rforcecom.retrieve

Description

[Soft-deprecated]

Usage

rforcecom.retrieve(
  session,
  objectName,
  fields,
  limit = NULL,
  id = NULL,
  offset = NULL,
Arguments

session list; a list containing "sessionID", "instanceURL", and "apiVersion" as returned by RForcecom::rforcecom.login. This argument is ignored in all backward compatible calls because the authorization credentials are stored in an environment internal to the salesforcer package, so it is no longer necessary to pass the session in each function call.

objectName character; the name of the Salesforce object that the function is operating against (e.g. "Account", "Contact", "CustomObject__c").

fields A List of field names. (ex: c("Id", "Name", "Industry", "AnnualRevenue")

limit Number of the records to retrieve. (ex: 5)

id Record ID to retrieve. (ex: "999x000000xxxxxZZZ")

offset Specifies the starting row offset. (ex: "100")

order A list for controlling the order of query results. (ex: c("Industry","Name"))

inverse If it is TRUE, the results are ordered in descending order. This parameter works when order parameter has been set. (Default: FALSE)

nullsLast If it is TRUE, null records list in last. If not null records list in first. This parameter works when order parameter has been set. (Default: FALSE)

---

rforcecom.search The salesforcer backwards compatible version of RForcecom::rforcecom.search

Description

[Soft-deprecated]

Usage

rforcecom.search(session, queryString)

Arguments

session list; a list containing "sessionID", "instanceURL", and "apiVersion" as returned by RForcecom::rforcecom.login. This argument is ignored in all backward compatible calls because the authorization credentials are stored in an environment internal to the salesforcer package, so it is no longer necessary to pass the session in each function call.

queryString Query strings to search. (ex: "United", "Electronics")
rforcecom.update  
The salesforcer backwards compatible version of RForcecom::rforcecom.update

Description

[Soft-deprecated]

Usage

rforcecom.update(session, objectName, id, fields)

Arguments

session  list; a list containing "sessionId", "instanceURL", and "apiVersion" as returned by RForcecom::rforcecom.login. This argument is ignored in all backward compatible calls because the authorization credentials are stored in an environment internal to the salesforcer package, so it is no longer necessary to pass the session in each function call.

objectName  character; the name of the Salesforce object that the function is operating against (e.g. "Account", "Contact", "CustomObject__c").

id  Record ID to update. (ex: "999x000000xxxxxZZZ")

fields  Field names and values. (ex: Name="CompanyName", Phone="000-000-000")

Value

NULL if successful otherwise the function errors out

rforcecom.upsert  The salesforcer backwards compatible version of RForcecom::rforcecom.upsert

Description

[Soft-deprecated]

Usage

rforcecom.upsert(session, objectName, externalIdField, externalId, fields)
Arguments

session list: a list containing "sessionID", "instanceURL", and "apiVersion" as returned by RForcecom::rforcecom.login. This argument is ignored in all backward compatible calls because the authorization credentials are stored in an environment internal to the salesforcer package, so it is no longer necessary to pass the session in each function call.

objectName character; the name of the Salesforce object that the function is operating against (e.g. "Account", "Contact", "CustomObject__c").

externalIdField An external Key's field name. (ex: "AccountMaster__c")

externalId An external Key's ID. (ex: "999x000000xxxxxZZZ")

fields Field names and values. (ex: Name="CompanyName", Phone="000-000-000")

Value

NULL if successful otherwise the function errors out

---

sf_abort_job_bulk Abort Bulk API Job

---

Description

This function aborts a Job in the Salesforce Bulk API

Usage

sf_abort_job_bulk(
  job_id,
  api_type = c("Bulk 1.0", "Bulk 2.0"),
  verbose = FALSE
)

Arguments

job_id character; the Salesforce Id assigned to a submitted job as returned by sf_create_job_bulk. It will start with "750".

api_type character; one of "REST", "SOAP", "Bulk 1.0", or "Bulk 2.0" indicating which API to use when making the request.

verbose logical; an indicator of whether to print additional detail for each API call, which is useful for debugging. More specifically, when set to TRUE the URL, header, and body will be printed for each request, along with additional diagnostic information where available.

Value

A list of parameters defining the now aborted job
References

https://developer.salesforce.com/docs/atlas.en-us.api_asynch.meta/api_asynch/

Examples

## Not run:
job_info <- sf_create_job_bulk('insert', 'Account')
sf_abort_job_bulk(job_info$id)

## End(Not run)

sf_analytics_notifications_limits

Return limits of analytics notifications

Description

[Experimental]

Usage

sf_analytics_notifications_limits(
  source = c("lightningDashboardSubscribe", "lightningReportSubscribe",
              "waveNotification"),
  record_id = NULL
)

Arguments

source character; a vector of character to specify what type of analytics notification to return. Valid values are:

  lightningDashboardSubscribe Dashboard subscriptions
  lightningReportSubscribe Report subscriptions
  waveNotification Einstein Analytics notifications

By default, all 3 sources will be returned in the results.

record_id character; specify if wanting to return the notification details for a single record. Valid values are either a unique report Id (these reference Ids start with "00O") or an Einstein Analytics lens ID (these reference Ids start with "0FK").

Value

list
**sf_analytics_notifications_list**

*List analytics notifications*

**Description**

*[Experimental]*

**Usage**

```r
sf_analytics_notifications_list(
  source = c("lightningDashboardSubscribe", "lightningReportSubscribe", 
              "waveNotification"),
  owner_id = NULL,
  record_id = NULL
)
```

**Arguments**

- **source** character; a vector of character to specify what type of analytics notification to return. Valid values are:
  - **lightningDashboardSubscribe** Dashboard subscriptions
  - **lightningReportSubscribe** Report subscriptions
  - **waveNotification** Einstein Analytics notifications

  By default, all 3 sources will be returned in the results.

- **owner_id** character; Allows users with Manage Analytics Notifications permission to get notifications for another user with the specified Salesforce Id representing the owner, which is a User record (i.e. the Id will start with "005").

- **record_id** character; specify if wanting to return the notification details for a single record. Valid values are either a unique report Id (these reference Ids start with "00O") or an Einstein Analytics lens ID (these reference Ids start with "0FK").

**Value**

- list

---

**sf_analytics_notification_create**

*Create an analytics notification*

**Description**

*[Experimental]*
**sf_analytics_notification_create**

**Usage**

`sf_analytics_notification_create(body)`

**Arguments**

- `body` (list): a list of data to be formatted as JSON before being sent to an API endpoint. This is NOT validated and is only experimental in allowing users to utilize the API functionality before wrapper functions have been written in R to format and validate the request in a more user-friendly format.

**sf_analytics_notification_delete**

*Delete an analytics notification*

**Value**

- `logical`

**sf_analytics_notification_delete**

**Usage**

`sf_analytics_notification_delete(notification_id)`

**Arguments**

- `notification_id` (character): the Salesforce Id assigned to a created analytics notification. It will start with "0Au".

**Value**

- `logical`
sf_analytics_notification_describe

Describe an analytics notification

Description

[Experimental]

Usage

sf_analytics_notification_describe(notification_id)

Arguments

notification_id
character; the Salesforce Id assigned to a created analytics notification. It will start with "0Au".

Value

list

sf_analytics_notification_update

Update an analytics notification

Description

[Experimental]

Usage

sf_analytics_notification_update(notification_id, body)

Arguments

notification_id
character; the Salesforce Id assigned to a created analytics notification. It will start with "0Au".

body
list; a list of data to be formatted as JSON before being sent to an API end-point. This is NOT validated and is only experimental in allowing users to utilize the API functionality before wrapper functions have been written in R to format and validate the request in a more user-friendly format.

Value

list
**sf_auth**

Log in to Salesforce

**Description**

[Stable]

Log in using Basic (Username-Password) or OAuth 2.0 authentication. OAuth does not require sharing passwords, but will require authorizing salesforcer as a connected app to view and manage your organization. You will be directed to a web browser, asked to sign in to your Salesforce account, and to grant salesforcer permission to operate on your behalf. By default, these user credentials are cached in a file named `.httr-oauth-salesforcer` in the current working directory.

**Usage**

```r
sf_auth(
  username = NULL,
  password = NULL,
  security_token = NULL,
  login_url = getOption("salesforcer.login_url"),
  token = NULL,
  consumer_key = getOption("salesforcer.consumer_key"),
  consumer_secret = getOption("salesforcer.consumer_secret"),
  callback_url = getOption("salesforcer.callback_url"),
  cache = getOption("salesforcer.httr_oauth_cache"),
  verbose = FALSE
)
```

**Arguments**

- `username` Salesforce username, typically an email address
- `password` Salesforce password
- `security_token` Salesforce security token. Note: A new security token is generated whenever your password is changed.
- `login_url` a custom login url; defaults to `https://login.salesforce.com`. If needing to log into a sandbox or dev environment then provide its login URL (e.g. `https://test.salesforce.com`)
- `token` optional; an actual token object or the path to a valid token stored as an `.rds` file
- `consumer_key, consumer_secret, callback_url` the "Consumer Key","Consumer Secret", and "Callback URL" when using a connected app; defaults to the salesforcer connected apps' consumer key, secret, and callback url
- `cache` logical or character; TRUE means to cache using the default cache file `.httr-oauth-salesforcer`, FALSE means do not cache. A string means use the specified path as the cache file.
sf_auth

verbose logical; an indicator of whether to print additional detail for each API call, which is useful for debugging. More specifically, when set to TRUE the URL, header, and body will be printed for each request, along with additional diagnostic information where available.

Value

list invisibly that contains 4 elements detailing the authentication state

Note

The link{sf_auth} function invisibly returns the following 4 pieces of information which can be reused in other operations:

- **auth_method** character; One of two options 'Basic' or 'OAuth'. If a username, password, and security token were supplied, then this would result in 'Basic' authentication.
- **token** Token2.0; The object returned by oauth2.0_token. This value is NULL if auth_method='Basic'.
- **session_id** character; A unique ID associated with this user session. The session ID is obtained from the X-SFDC-Session header fetched with SOAP API's login() call. This value is NULL if auth_method='OAuth'.
- **instance_url** character; The domain address of the server that your Salesforce org is on and where subsequent API calls will be directed to. For example, https://na21.salesforce.com refers to an org located on the 'NA21' server instance located in Chicago, USA / Washington DC, USA per this Knowledge Article: https://help.salesforce.com/articleView?id=000314281.

Examples

```r
## Not run:
# log in using basic authentication (username-password)
sf_auth(username = "test@gmail.com",
password = "test_password",
security_token = "test_token")

# log in using OAuth 2.0 (via browser or cached .httr-oauth-salesforcer)
sf_auth()

# log in to a Sandbox environment
# Via brower or refresh of .httr-oauth-salesforcer
sf_auth(login_url = "https://test.salesforce.com")

# Save token to disk and log in using it
saveRDS(salesforcer_state()$token, "token.rds")
sf_auth(token = "token.rds")
```

## End(Not run)
The function `sf_batch_details_bulk` is used to return detailed (row-by-row) information on an existing batch which has already been submitted to the Bulk API Job.

**Usage**

```r
sf_batch_details_bulk(
  job_id,
  batch_id,
  api_type = c("Bulk 1.0"),
  verbose = FALSE
)
```

**Arguments**

- `job_id` character; the Salesforce Id assigned to a submitted job as returned by `sf_create_job_bulk`. It will start with "750".
- `batch_id` character; the Salesforce Id assigned to a submitted batch as returned by `sf_create_batches_bulk`. It will start with "751".
- `api_type` character; one of "REST", "SOAP", "Bulk 1.0", or "Bulk 2.0" indicating which API to use when making the request.
- `verbose` logical; an indicator of whether to print additional detail for each API call, which is useful for debugging. More specifically, when set to TRUE the URL, header, and body will be printed for each request, along with additional diagnostic information where available.

**Value**

A `tbl_df`, formatted by Salesforce, with information containing the success or failure or certain rows in a submitted batch, unless the operation was query, then it is a `data.frame` containing the `result_id` for retrieving the recordset.

**Note**

This is a legacy function used only with Bulk 1.0.

**References**

https://developer.salesforce.com/docs/atlas.en-us.api_asynch.meta/api_asynch/
Examples

```r
## Not run:
job_info <- sf_create_job_bulk(operation = "query", object = "Account")
sq1 <- "SELECT Id, Name FROM Account LIMIT 10"
batch_query_info <- sf_submit_query_bulk(job_id = job_info$id, sq1 = sq1)
batch_details <- sf_batch_details_bulk(job_id=batch_query_info$jobId,
                                      batch_id=batch_query_info$id)
sf_close_job_bulk(job_info$id)

## End(Not run)
```

### Description

This function checks on and returns status information on an existing batch which has already been submitted to Bulk API Job.

#### Usage

```r
def sf_batch_status_bulk(
  job_id,
  batch_id,
  api_type = c("REST", "SOAP", "Bulk 1.0", "Bulk 2.0"),
  verbose = FALSE
)
```

#### Arguments

- **job_id** character; the Salesforce Id assigned to a submitted job as returned by `sf_create_job_bulk`. It will start with "750".
- **batch_id** character; the Salesforce Id assigned to a submitted batch as returned by `sf_create_batches_bulk`. It will start with "751".
- **api_type** character; one of "REST", "SOAP", "Bulk 1.0", or "Bulk 2.0" indicating which API to use when making the request.
- **verbose** logical; an indicator of whether to print additional detail for each API call, which is useful for debugging. More specifically, when set to TRUE the URL, header, and body will be printed for each request, along with additional diagnostic information where available.

#### Value

A `tbl_df` of parameters defining the batch identified by the batch_id.

#### Note

This is a legacy function used only with Bulk 1.0.
**References**

https://developer.salesforce.com/docs/atlas.en-us.api_asynch.meta/api_asynch/

**Examples**

```r
## Not run:
job_info <- sf_create_job_bulk(operation = "query", object = "Account")
soql <- "SELECT Id, Name FROM Account LIMIT 10"
batch_query_info <- sf_submit_query_bulk(job_id = job_info$id, soql = soql)
batch_status <- sf_batch_status_bulk(job_id = batch_query_info$jobId,
                                  batch_id = batch_query_info$id)
job_close_ind <- sf_close_job_bulk(job_info$id)
sf_get_job_bulk(job_info$id)

## End(Not run)
```

---

**sf_close_job_bulk**

*Close Bulk API Job*

**Description**

This function closes a Job in the Salesforce Bulk API

**Usage**

```r
sf_close_job_bulk(
  job_id,
  api_type = c("Bulk 1.0", "Bulk 2.0"),
  verbose = FALSE
)
```

**Arguments**

- `job_id` character; the Salesforce Id assigned to a submitted job as returned by `sf_create_job_bulk`. It will start with "750".
- `api_type` character; one of "REST", "SOAP", "Bulk 1.0", or "Bulk 2.0" indicating which API to use when making the request.
- `verbose` logical; an indicator of whether to print additional detail for each API call, which is useful for debugging. More specifically, when set to TRUE the URL, header, and body will be printed for each request, along with additional diagnostic information where available.

**Value**

A list of parameters defining the now closed job
**sf_control**

**Note**

This is a legacy function used only with Bulk 1.0.

**References**

https://developer.salesforce.com/docs/atlas.en-us.api_asynch.meta/api_asynch/

**Examples**

```r
## Not run:
my_query <- "SELECT Id, Name FROM Account LIMIT 10"
job_info <- sf_create_job_bulk(operation=quote("query"), object=quote("Account"))
query_info <- sf_submit_query_bulk(job_id=job_info$id, soql=my_query)
recordset <- sf_query_result_bulk(job_id = query_info$jobId,
                                   batch_id = query_info$id,
                                   result_id = result$result)
sf_close_job_bulk(job_info$id)

## End(Not run)
```

---

**sf_control**

*Auxiliary for Controlling Calls to Salesforce APIs*

**Description**

Typically only used internally by functions when control parameters are passed through via dots (...), but it can be called directly to control the behavior of API calls. This function behaves exactly like **glm.control** for the **glm** function.

**Usage**

```r
sf_control(
    AllOrNoneHeader = list(allOrNone = FALSE),
    AllowFieldTruncationHeader = list(allowFieldTruncation = FALSE),
    AssignmentRuleHeader = list(useDefaultRule = TRUE),
    DisableFeedTrackingHeader = list(disableFeedTracking = FALSE),
    DuplicateRuleHeader = list(allowSave = FALSE, includeRecordDetails = FALSE,
                               runAsCurrentUser = TRUE),
    EmailHeader = list(triggerAutoResponseEmail = FALSE, triggerOtherEmail = FALSE,
                        triggerUserEmail = TRUE),
    LocaleOptions = list(language = "en_US"),
    MruHeader = list(updateMru = FALSE),
    OwnerChangeOptions = list(options = list(list(execute = TRUE, type = "EnforceNewOwnerHasReadAccess"),
                                       list(execute = FALSE, type = "KeepAccountTeam"),
                                       list(execute = FALSE, type = "KeepSalesTeam"),
                                       list(execute = FALSE, type = "KeepSalesTeamGrantCurrentOwnerReadWriteAccess"),
                                       list(execute = FALSE, type = "SendEmail"),
                                       list(execute = FALSE, type = "TransferAllOwnedCases"),
                                       list(execute = TRUE, type = "TransferContacts"),
                                       list(execute = TRUE, type = "TransferContracts"),
                                       list(execute = FALSE, type = "TransferContacts")),
)```
Arguments

AllOrNoneHeader

list; containing the allOrNone element with a value of TRUE or FALSE. This control specifies whether a call rolls back all changes unless all records are processed successfully. This control is available in SOAP, REST, and Metadata APIs for the following functions: sf_create, sf_delete, sf_update, sf_upsert, sf_create_metadata, sf_delete_metadata, sf_update_metadata, sf_upsert_metadata. For more information, read the Salesforce documentation here.

AllowFieldTruncationHeader

list; containing the allowFieldTruncation element with a value of TRUE or FALSE. This control specifies the truncation behavior for some field types in SOAP API version 15.0 and later for the following functions: sf_create, sf_update, sf_upsert. For more information, read the Salesforce documentation here.

AssignmentRuleHeader

list; containing the useDefaultRule element with a value of TRUE or FALSE or the assignmentRuleId element. This control specifies the assignment rule to use when creating or updating an Account, Case, or Lead for the following functions: sf_create, sf_update, sf_upsert. For more information, read the Salesforce documentation here.

DisableFeedTrackingHeader

list; containing the disableFeedTracking element with a value of TRUE or FALSE. This control specifies whether the changes made in the current call are tracked in feeds for SOAP API calls made with the following functions: sf_create, sf_delete, sf_update, sf_upsert. For more information, read the Salesforce documentation here.

DuplicateRuleHeader

list; containing the allowSave, includeRecordDetails, and runAsCurrentUser elements each with a value of TRUE or FALSE. This control specifies how duplicate rules should be applied when using the following functions: sf_create, sf_update, sf_upsert. For more information, read the Salesforce documentation here.
**EmailHeader** list; containing the triggerAutoResponseEmail, triggerOtherEmail, and triggerUserEmail elements each with a value of TRUE or FALSE. This control determines if an email notification should be sent when a request is processed by SOAP API calls made with the following functions: sf_create, sf_delete, sf_update, sf_upsert, sf_reset_password. For more information, read the Salesforce documentation here.

**LocaleOptions** list; containing the language element. This control specifies the language of the labels returned by the sf_describe_objects function using the SOAP API. The value must be a valid user locale (language and country), such as de_DE or en_GB. For more information, read the Salesforce documentation here. The list of valid user locales is available here.

**MruHeader** list; containing the updateMru element with a value of TRUE or FALSE. This control indicates whether to update the list of most recently used items (TRUE) or not (FALSE) in the Recent Items section of the sidebar in the Salesforce user interface. This works for SOAP API calls made with the following functions: sf_create, sf_update, sf_upsert, sf_retrieve, sf_query. For more information, read the Salesforce documentation here.

**OwnerChangeOptions** list; containing the options element. This control specifies the details of ownership of attachments and notes when a record’s owner is changed. This works for SOAP API calls made with the following functions: sf_update, sf_upsert. For more information, read the Salesforce documentation here.

**QueryOptions** list; containing the batchSize element. This control specifies the batch size for query results. This works for SOAP or REST API calls made with the following functions: sf_query, sf_retrieve. For more information, read the Salesforce documentation here.

**UserTerritoryDeleteHeader** list; containing the transferToUserId element. This control specifies a user to whom open opportunities are assigned when the current owner is removed from a territory. This works for the sf_delete function using the SOAP API. For more information, read the Salesforce documentation here.

**BatchRetryHeader** list; containing the Sforce-Disable-Batch-Retry element. When you create a bulk job, the Batch Retry control lets you disable retries for unfinished batches included in the job. This works for most operations run through the Bulk 1.0 API (e.g. sf_create(. api_type = "Bulk 1.0")) or creating a Bulk 1.0 job with sf_create_job_bulk. For more information, read the Salesforce documentation here.

**LineEndingHeader** list; containing the Sforce-Line-Ending element. When you’re creating a bulk upload job, the Line Ending control lets you specify whether line endings are read as line feeds (LFs) or as carriage returns and line feeds (CRLFs) for fields of type Text Area and Text Area (Long). This works for most operations run through the Bulk APIs and/or creating a Bulk job from scratch with sf_create_job_bulk. However, note that as of readr v1.3.1 all CSV files end with the line feed character ("\n") regardless of the operating system. So it is usually best to not specify this argument. For more information, read the Salesforce documentation here.
PKChunkingHeader

List containing the Sforce-Enable-PKChunking element. Use the PK Chunking control to enable automatic primary key (PK) chunking for a bulk query job. This works for queries run through the Bulk 1.0 API either via \texttt{sf_query(.)} or \texttt{sf_query_bulk}. For more information, read the Salesforce documentation here.

api_type

Character indicating which API to use when making the request.

operation

Character; a string defining the type of operation being performed (e.g. "insert", "update", "upsert", "delete", "hardDelete", "query", "queryall").

Examples

\begin{verbatim}
## Not run:
this_control <- sf_control(DuplicateRuleHeader=list(allowSave=TRUE,
               includeRecordDetails=FALSE,
               runAsCurrentUser=TRUE))

new_contact <- c(FirstName = "Test", LastName = "Contact-Create")
new_record <- sf_create(new_contact, "Contact", control = this_control)

# specifying the controls directly and are picked up by dots
new_record <- sf_create(new_contact, "Contact",
               DuplicateRuleHeader = list(allowSave=TRUE,
               includeRecordDetails=FALSE,
               runAsCurrent User=TRUE))

## End(Not run)
\end{verbatim}

sf_convert_lead

\textit{Convert Leads}

Description

[Experimental]

Converts Leads each into an Account, Contact, as well as (optionally) an Opportunity.

Usage

\begin{verbatim}
sf_convert_lead(
   input_data,
   guess_types = TRUE,
   api_type = c("SOAP"),
   control = list(...),
   ...
   verbose = FALSE
)
\end{verbatim}
sf_convert_lead

Arguments

input_data  named vector, matrix, data.frame, or tbl_df; data can be coerced into a data.frame. See the details below on how format your input data to control things like whether an opportunity will be created, an email will be sent to the new owner, and other control options.

guess_types  logical; indicating whether or not to use col_guess() to try and cast the data returned in the recordset. If TRUE then col_guess() is used, if FALSE then all fields will be returned as character. This is helpful when col_guess() will mangle field values in Salesforce that you’d like to preserve during translation into a tbl_df, like numeric looking values that must be preserved as strings ("48.0").

api_type  character; one of "REST", "SOAP", "Bulk 1.0", or "Bulk 2.0" indicating which API to use when making the request.

control  list; a list of parameters for controlling the behavior of the API call being used. For more information of what parameters are available look at the documentation for sf_control.

...  arguments passed to sf_control

verbose  logical; an indicator of whether to print additional detail for each API call, which is useful for debugging. More specifically, when set to TRUE the URL, header, and body will be printed for each request, along with additional diagnostic information where available.

Details

When converting leads owned by a queue, the owner must be specified. This is because accounts and contacts cannot be owned by a queue. Below is a complete list of options to control the conversion process. Include a column in your input data to specify an option for each record. For example, if you want opportunities to not be created for each converted lead then add a column in your input data called doNotCreateOpportunity and set its value to TRUE. The default is FALSE which creates opportunities. The order of columns in the input data does not matter, just that the names match (case-insensitive).

leadId  ID of the Lead to convert. Required.

convertedStatus  Valid LeadStatus value for a converted lead. Required.

accountId  Id of the Account into which the lead will be merged. Required only when updating an existing account, including person accounts. If no accountId is specified, then the API creates a new account.

contactId  Id of the Contact into which the lead will be merged (this contact must be associated with the specified accountId, and an accountId must be specified). Required only when updating an existing contact. If no contactId is specified, then the API creates a new contact that is implicitly associated with the Account.

ownerId  Specifies the Id of the person to own any newly created account, contact, and opportunity. If the client application does not specify this value, then the owner of the new object will be the owner of the lead.
**opportunityId** The Id of an existing opportunity to relate to the lead. The opportunityId and opportunityName arguments are mutually exclusive. Specifying a value for both results in an error. If doNotCreateOpportunity argument is TRUE, then no Opportunity is created and this field must be left blank; otherwise, an error is returned.

**doNotCreateOpportunity** Specifies whether to create an Opportunity during lead conversion (FALSE, the default) or not (TRUE). Set this flag to TRUE only if you do not want to create an opportunity from the lead. An opportunity is created by default.

**opportunityName** Name of the opportunity to create. If no name is specified, then this value defaults to the company name of the lead. The maximum length of this field is 80 characters. The opportunityId and opportunityName arguments are mutually exclusive. Specifying a value for both results in an error. If doNotCreateOpportunity argument is TRUE, then no Opportunity is created and this field must be left blank; otherwise, an error is returned.

**overwriteLeadSource** Specifies whether to overwrite the LeadSource field on the target Contact object with the contents of the LeadSource field in the source Lead object (TRUE), or not (FALSE, the default). To set this field to TRUE, the client application must specify a contactId for the target contact.

**sendNotificationEmail** Specifies whether to send a notification email to the owner specified in the ownerId (TRUE) or not (FALSE, the default).

Salesforce Documentation

**Value**

`tbl_df` with details of the converted record

**Examples**

```r
## Not run:
# create a new lead at Grand Hotels & Resorts Ltd
new_lead <- tibble(FirstName = "Test", LastName = "Prospect",
                   Company = "Grand Hotels & Resorts Ltd")
rec <- sf_create(new_lead, "Lead")

# find the Id of matching account to link to
acct_id <- sf_query("SELECT Id from Account WHERE name = 'Grand Hotels & Resorts Ltd' LIMIT 1")

# create the row(s) for the leads to convert
to_convert <- tibble(leadId = rec$id,
                     convertedStatus = "Closed - Converted",
                     accountId = acct_id$id)
converted_lead <- sf_convert_lead(to_convert)

## End(Not run)
```
sf_copy_report  Copy a report

Description

[Experimental]  Creates a copy of a custom, standard, or public report by sending a POST request to the Report List resource.

Usage

sf_copy_report(report_id, name = NULL, verbose = FALSE)

Arguments

report_id character; the Salesforce Id assigned to a created analytics report. It will start with "00O".

name character; a user-specified name for the newly cloned report. If left NULL, then the new name will be the same name as the report being cloned appended with " = Copy" that is prefixed with a number if that name is not unique. It is highly recommended to provide a name, if possible.

verbose logical; an indicator of whether to print additional detail for each API call, which is useful for debugging. More specifically, when set to TRUE the URL, header, and body will be printed for each request, along with additional diagnostic information where available.

Value

list representing the newly cloned report with up to 4 properties that describe the report:

attributes  Report type along with the URL to retrieve common objects and joined metadata.
reportMetadata  Unique identifiers for groupings and summaries.
reportTypeMetadata  Fields in each section of a report type plus filter information for those fields.
reportExtendedMetadata  Additional information about summaries and groupings.

Salesforce Documentation

- Documentation

See Also

Examples

```r
## Not run:
# only the 200 most recently viewed reports
most_recent_reports <- sf_report_list()

# all possible reports in your Org
all_reports <- sf_query("SELECT Id, Name FROM Report")

# id of the report to copy
this_report_id <- all_reports$Id[1]

# not providing a name appends " - Copy" to the name of the report being cloned
report_details <- sf_copy_report(this_report_id)

# example of providing new name to the copied report
report_details <- sf_copy_report(this_report_id, "My New Copy of Report ABC")

## End(Not run)
```

---

**sf_create**

Create Records

Description

[Stable]

Adds one or more new records to your organization’s data.

Usage

```r
sf_create(
  input_data,
  object_name,
  api_type = c("SOAP", "REST", "Bulk 1.0", "Bulk 2.0"),
  guess_types = TRUE,
  control = list(...),
  ...,
  all_or_none = deprecated(),
  verbose = FALSE
)
```

Arguments

- **input_data**: named vector, matrix, data.frame, or tbl_df; data can be coerced into a data.frame. If performing an update, upsert, or delete operation, then one column or field must be the Id of the record to modify or delete.
- **object_name**: character; the name of the Salesforce object that the function is operating against (e.g. "Account", "Contact", "CustomObject__c").
api_type character; one of "REST", "SOAP", "Bulk 1.0", or "Bulk 2.0" indicating which API to use when making the request.

guess_types logical; indicating whether or not to use col_guess() to try and cast the data returned in the recordset. If TRUE then col_guess() is used, if FALSE then all fields will be returned as character. This is helpful when col_guess() will mangle field values in Salesforce that you’d like to preserve during translation into a tbl_df, like numeric looking values that must be preserved as strings ("48.0").

control list; a list of parameters for controlling the behavior of the API call being used. For more information of what parameters are available look at the documentation for sf_control.

... arguments passed to sf_control or further downstream to sf_bulk_operation

all_or_none logical; allows a call to roll back all changes unless all records are processed successfully.

verbose logical; an indicator of whether to print additional detail for each API call, which is useful for debugging. More specifically, when set to TRUE the URL, header, and body will be printed for each request, along with additional diagnostic information where available.

Value
tbl_df of records with success indicator

Note
Because the SOAP and REST calls chunk data into batches of 200 records the AllOrNoneHeader will only apply to the success or failure of every batch of records and not all records submitted to the function.

Examples

```r
## Not run:
n <- 2
new_contacts <- tibble(FirstName = rep("Test", n),
  LastName = paste0("Contact", 1:n))
new_recs1 <- sf_create(new_contacts, object_name = "Contact")

# add control to allow the creation of records that violate a duplicate rules
new_recs2 <- sf_create(new_contacts, object_name = "Contact",
  DuplicateRuleHeader=list(allowSave=TRUE,
    includeRecordDetails=FALSE,
    runAsCurrentUser=TRUE))

# example using the Bulk 1.0 API to insert records
new_recs3 <- sf_create(new_contacts, object_name = "Contact",
  api_type = "Bulk 1.0")

## End(Not run)
```
sf_create_attachment  
Create Attachments

Description

[Experimental]
This function will allow you to create attachments (and other blob data, such as Documents) by supplying file paths (absolute or relative) to media that you would like to upload to Salesforce along with accompanying metadata, such as a Description, Keywords, ParentId, FolderId, etc.

Usage

sf_create_attachment(
  attachment_input_data,
  object_name = c("Attachment", "Document"),
  api_type = c("SOAP", "REST", "Bulk 1.0", "Bulk 2.0"),
  control = list(...),
  ...
  verbose = FALSE
)

Arguments

attachment_input_data  
named vector, matrix, data.frame, or tbl_df; data can be coerced into a data.frame. The input must contain a column entitled 'Body' with an absolute or relative file path (unless creating a Document using a Url) along with other required fields depending on the object. If performing an update operation, then one column or field of the input must be the Id of the record to modify.

object_name  
character; the name of the Salesforce object that the function is operating against (e.g. "Account", "Contact", "CustomObject__c").

api_type  
character; one of "REST", "SOAP", "Bulk 1.0", or "Bulk 2.0" indicating which API to use when making the request.

control  
list; a list of parameters for controlling the behavior of the API call being used. For more information of what parameters are available look at the documentation for sf_control.

...  
arguments passed to sf_control or further downstream to sf_bulk_operation

verbose  
logical; an indicator of whether to print additional detail for each API call, which is useful for debugging. More specifically, when set to TRUE the URL, header, and body will be printed for each request, along with additional diagnostic information where available.

Value

tbl_df with details of the created records
Salesforce Documentation

- Attachment Object (SOAP)
- Document Object (SOAP)
- Insert or Update Blob Data

Note

The length of any file name can’t exceed 512 bytes (per Bulk 1.0 API). The SOAP API create call restricts these files to a maximum size of 25 MB. For a file attached to a Solution, the limit is 1.5 MB. The maximum email attachment size is 3 MB. You can only create or update documents to a maximum size of 5 MB. The REST API allows you to insert or update blob data limited to 50 MB of text data or 37.5 MB of base64–encoded data.

See Also

Other Attachment functions: `check_and_encode_files()`, `sf_delete_attachment()`, `sf_download_attachment()`, `sf_update_attachment()`

Examples

```r
## Not run:
# upload two PDFs from working directory to a particular record as Attachments
file_path1 <- here::here("doc1.pdf")
file_path2 <- here::here("doc2.pdf")
parent_record_id <- "0036A000002C6MmQAK"
attachment_details <- tibble(Body = c(file_path1, file_path2),
                           ParentId = rep(parent_record_id, 2))
result <- sf_create_attachment(attachment_details)

# the function supports inserting all blob content, just update the
# object_name argument to add the PDF as a Document instead of an Attachment
document_details <- tibble(Name = "doc1.pdf",
                           Description = "Test Document 1",
                           Body = file_path1,
                           FolderId = "0016A000001EgIwQAK", # replace with your FolderId!
                           Keywords = "example,test,document")
result <- sf_create_attachment(document_details, object_name = "Document")

# the Bulk API can be invoked using api_type="Bulk 1.0" which will automatically
# take a data.frame of Attachment info and create a ZIP file with CSV manifest
# that is required for that API
result <- sf_create_attachment(attachment_details, api_type="Bulk 1.0")

## End(Not run)
```
sf_create_batches_bulk

Add Batches to a Bulk API Job

Description

This function takes a data frame and submits it in batches to a an already existing Bulk API Job by chunking into temp files

Usage

```r
sf_create_batches_bulk(
  job_id,
  input_data,
  batch_size = NULL,
  api_type = c("Bulk 1.0", "Bulk 2.0"),
  verbose = FALSE
)
```

Arguments

- `job_id` character; the Salesforce Id assigned to a submitted job as returned by `sf_create_job_bulk`. It will start with "750".
- `input_data` named vector, matrix, data.frame, or tbl_df; data can be coerced into CSV file for submitting as batch request
- `batch_size` integer; the number of individual records to be included in a single batch uploaded to the Bulk APIs (1.0 or 2.0).
- `api_type` character; one of "REST", "SOAP", "Bulk 1.0", or "Bulk 2.0" indicating which API to use when making the request.
- `verbose` logical; an indicator of whether to print additional detail for each API call, which is useful for debugging. More specifically, when set to TRUE the URL, header, and body will be printed for each request, along with additional diagnostic information where available.

Value

a tbl_df containing details of each batch

References

https://developer.salesforce.com/docs/atlas.en-us.api_asynch.meta/api_asynch/
Examples

```r
## Not run:
# NOTE THAT YOU MUST FIRST CREATE AN EXTERNAL ID FIELD CALLED My_External_Id
# BEFORE RUNNING THIS EXAMPLE
# inserting 2 records
my_data <- tibble(Name=c("New Record 1", 'New Record 2'),
                 My_External_Id__c=c('11111', '22222'))
job_info <- sf_create_job_bulk(operation='insert',
                                object='Account')
batches_ind <- sf_create_batches_bulk(job_id = job_info$id,
                                       input_data = my_data)

# upserting 3 records
my_data2 <- tibble(MY_External_Id__c=c('11111', '22222', '99999'),
                   Name=c("Updated_Name1", "Updated_Name2", "Upserted_Record"))
job_info <- sf_create_job_bulk(operation='upsert',
                                externalIdFieldName='My_External_Id__c',
                                object='Account')
batches_ind <- sf_create_batches_bulk(job_id = job_info$id,
                                       input_data = my_data2)

sf_get_job_bulk(job_info$id)
## End(Not run)
```

---

**sf_create_job_bulk**  
Create Bulk API Job

**Description**

This function initializes a Job in the Salesforce Bulk API

**Usage**

```r
sf_create_job_bulk(
  operation = c("insert", "delete", "upsert", "update", "hardDelete", "query", "queryall"),
  object_name,
  soql = NULL,
  external_id_fieldname = NULL,
  api_type = c("Bulk 1.0", "Bulk 2.0"),
  content_type = c("CSV", "ZIP_CSV", "ZIP_XML", "ZIP_JSON"),
  concurrency_mode = c("Parallel", "Serial"),
  column_delimiter = c("COMMA", "TAB", "PIPE", "SEMICOLON", "CARET", "BACKQUOTE"),
  control = list(...),
  line_ending = deprecated(),
  verbose = FALSE
)
```
Arguments

operation character; a string defining the type of operation being performed (e.g. "insert", "update", "upsert", "delete", "hardDelete", "query", "queryAll").

object_name character; the name of the Salesforce object that the function is operating against (e.g. "Account", "Contact", "CustomObject__c").

soql character; a string defining a SOQL query (e.g. "SELECT Id, Name FROM Account").

external_id_fieldname character; string identifying a custom field on the object that has been set as an "External ID" field. This field is used to reference objects during upserts to determine if the record already exists in Salesforce or not.

api_type character; one of "REST", "SOAP", "Bulk 1.0", or "Bulk 2.0" indicating which API to use when making the request.

content_type character; being one of 'CSV', 'ZIP_CSV', 'ZIP_XML', or 'ZIP_JSON' to indicate the type of data being passed to the Bulk APIs. For the Bulk 2.0 API the only valid value (and the default) is 'CSV'.

concurrency_mode character; either "Parallel" or "Serial" that specifies whether batches should be completed sequentially or in parallel. Use "Serial" only if lock contentions persist with in "Parallel" mode. Note: this argument is only used in the Bulk 1.0 API and will be ignored in calls using the Bulk 2.0 API.

column_delimiter character; indicating the column delimiter used for CSV job data. The default value is COMMA. Valid values are: "BACKQUOTE", "CARET", "COMMA", "PIPE", "SEMICOLON", and "TAB", but this package only accepts and uses "COMMA". Also, note that this argument is only used in the Bulk 2.0 API and will be ignored in calls using the Bulk 1.0 API.

control list; a list of parameters for controlling the behavior of the API call being used. For more information of what parameters are available look at the documentation for sf_control.

... arguments passed to sf_control

line_ending character; indicating the The line ending used for CSV job data, marking the end of a data row. The default is NULL and determined by the operating system using "CRLF" for Windows machines and "LF" for Unix machines. NOTE: As of readr v1.3.1 all CSV files end with the line feed character ("\n") regardless of the operating system. So it is usually best to not specify this argument.

verbose logical; an indicator of whether to print additional detail for each API call, which is useful for debugging. More specifically, when set to TRUE the URL, header, and body will be printed for each request, along with additional diagnostic information where available.

Value

A tbl_df parameters defining the created job, including id
References

https://developer.salesforce.com/docs/atlas.en-us.api_asynch.meta/api_asynch/

Examples

```r
## Not run:
# insert into Account
job_info <- sf_create_job_bulk(operation='insert', object_name='Account')

# delete from Account
job_info <- sf_create_job_bulk(operation='delete', object_name='Account')

# update into Account
job_info <- sf_create_job_bulk(operation='update', object_name='Account')

# upsert into Account
job_info <- sf_create_job_bulk(operation='upsert',
                                externalIdFieldName='My_External_Id__c',
                                object_name='Account')

# insert attachments
job_info <- sf_create_job_bulk(operation='insert', object_name='Attachment')

# query leads
job_info <- sf_create_job_bulk(operation='query', object_name='Lead')

## End(Not run)
```

---

### sf_create_metadata  
Create Object or Field Metadata in Salesforce

**Description**

[Experimental]

This function takes a list of Metadata components and sends them to Salesforce for creation

**Usage**

```r
sf_create_metadata(
    metadata_type,
    metadata,
    control = list(...),
    ...
)
```
Arguments

metadata_type character; string on what type of metadata to create.
metadata list; metadata components to be created formatted as XML before being sent via API.
control list; a list of parameters for controlling the behavior of the API call being used. For more information of what parameters are available look at the documentation for sf_control.
... arguments passed to sf_control
all_or_none logical; allows a call to roll back all changes unless all records are processed successfully.
verbose logical; an indicator of whether to print additional detail for each API call, which is useful for debugging. More specifically, when set to TRUE the URL, header, and body will be printed for each request, along with additional diagnostic information where available.

Value

A tbl_df containing the creation result for each submitted metadata component

See Also

Salesforce Documentation

Examples

## Not run:
# read the metadata of the existing Account object
# we will use this object as a template to create a custom version
metadata_info <- sf_read_metadata(metadata_type='CustomObject',
  object_names=c('Account'))
custom_metadata <- metadata_info[[1]]
# remove default actionOverrides, this cannot be set during creation
custom_metadata[which(names(custom_metadata) %in% c("actionOverrrides"))] <- NULL
# remove fields since its a custom object and the standard ones no longer exist
custom_metadata[which(names(custom_metadata) %in% c("fields"))] <- NULL
# remove views so that we get the Standard List Views
custom_metadata[which(names(custom_metadata) %in% c("listViews"))] <- NULL
# remove links so that we get the Standard Web Links
custom_metadata[which(names(custom_metadata) %in% c("webLinks"))] <- NULL
# now make some adjustments to customize the object
this_label <- 'Custom_Account43'
custom_metadata$fullName <- paste0(this_label, '_c')
custom_metadata$pluralLabel <- this_label
custom_metadata$pluralLabel <- paste0(this_label, 's')
custom_metadata$nameField <- list(displayFormat='AN-{0000}',
  label='Account Number',
  type='AutoNumber')
custom_metadata$fields <- list(fullName="Phone__c",
  label="Phone",

# set the deployment status, this must be set before creation
custom_metadata$deploymentStatus <- 'Deployed'

# make a description to identify this easily in the UI setup tab
custom_metadata$description <- 'created by the Metadata API'

new_custom_object <- sf_create_metadata(metadata_type = 'CustomObject',
                                    metadata = custom_metadata,
                                    verbose = TRUE)

# adding custom fields to our object
# input formatted as a list
custom_fields <- list(list(fullName='Custom_Account43__c.CustomField66__c',
                           label='CustomField66',
                           length=100,
                           type='Text'),
                   list(fullName='Custom_Account43__c.CustomField77__c',
                           label='CustomField77',
                           length=100,
                           type='Text'))

# formatted as a data.frame
custom_fields <- data.frame(fullName=c('Custom_Account43__c.CustomField88__c',
                                        'Custom_Account43__c.CustomField99__c'),
                            label=c('Test Field1', 'Test Field2'),
                            length=c(44,45),
                            type=c('Text', 'Text'))

new_custom_fields <- sf_create_metadata(metadata_type = 'CustomField',
                                        metadata = custom_fields)

## End(Not run)

---

### sf_create_report

**Create a report**

#### Description

[Experimental]

Create a new report using a POST request. To create a report, you only have to specify a name and report type to create a new report; all other metadata properties are optional. It is recommended to use the metadata from existing reports pulled using `sf_describe_report` as a guide on how to specify the properties of a new report.

#### Usage

```r
sf_create_report(
  name = NULL,
  report_type = NULL,
  report_metadata = NULL,
  verbose = FALSE
)
```
Arguments

- **name** (character): a user-specified name for the report.
- **report_type** (character): a character representing the type of report to retrieve the metadata information on. A list of valid report types that can be created using this function will be available in the `reportTypes.type` column of results returned by `sf_list_report_types`. (e.g. `AccountList`, `AccountContactRole`, `OpportunityHistory`, etc.)
- **report_metadata** (list): a list representing the properties to create the report with. The names of the list must be one or more of the 3 accepted metadata properties: `reportMetadata`, `reportTypeMetadata`, `reportExtendedMetadata`.
- **verbose** (logical): an indicator of whether to print additional detail for each API call, which is useful for debugging. More specifically, when set to `TRUE` the URL, header, and body will be printed for each request, along with additional diagnostic information where available.

Value

A list representing the newly cloned report with up to 4 properties that describe the report:

- **attributes**: Report type along with the URL to retrieve common objects and joined metadata.
- **reportMetadata**: Unique identifiers for groupings and summaries.
- **reportTypeMetadata**: Fields in each section of a report type plus filter information for those fields.
- **reportExtendedMetadata**: Additional information about summaries and groupings.

Salesforce Documentation

- [Documentation](#)

See Also


Examples

```r
## Not run:
# creating a blank report using just the name and type
my_new_report <- sf_create_report("Top Accounts Report", "AccountList")

# creating a report with additional metadata by grabbing an existing report
# and modifying it slightly (only the name in this case)

# first, grab all possible reports in your Org
all_reports <- sf_query("SELECT Id, Name FROM Report")

# second, get the id of the report to copy
```
this_report_id <- all_reports$Id[1]

# third, pull down its metadata and update the name
report_describe_list <- sf_describe_report(this_report_id)
report_describe_list$reportMetadata$name <- "TEST API Report Creation"

# fourth, create the report by passing the metadata
my_new_report <- sf_create_report(report_metadata=report_describe_list)

## End(Not run)

---

**sf_dashboards_list**  
*List dashboards*

**Description**

[Experimental]  
Returns a list of recently used dashboards

**Usage**

```r
sf_dashboards_list(as_tbl = TRUE, verbose = FALSE)
```

**Arguments**

- `as_tbl`  
  logical; an indicator of whether to convert the parsed JSON into a tbl_df.

- `verbose`
  logical; an indicator of whether to print additional detail for each API call, which is useful for debugging. More specifically, when set to TRUE the URL, header, and body will be printed for each request, along with additional diagnostic information where available.

**Value**

list or tbl_df depending on the value of argument `as_tbl`

**See Also**

- [Salesforce Documentation](#)
- [Salesforce Example](#)
**sf_dashboard_components_describe**

*Describe dashboard components*

**Description**

[Experimental]

**Usage**

sf_dashboard_components_describe(dashboard_id, component_ids = c(character(0)))

**Arguments**

- **dashboard_id** character; the Salesforce Id assigned to a created dashboard. It will start with "01Z".
- **component_ids** character; a vector of Unique Salesforce Ids of a dashboard component.

**Value**

list

---

**sf_dashboard_copy**

*Copy a dashboard*

**Description**

[Experimental]

**Usage**

sf_dashboard_copy(dashboard_id, report_folder_id)

**Arguments**

- **dashboard_id** character; the Salesforce Id assigned to a created dashboard. It will start with "01Z".
- **report_folder_id** character; the Salesforce Id assigned to a created analytics folder (it will start with "00l").

**Value**

list
**sf_dashboard_delete**  
*Delete a dashboard*

**Description**

[Experimental]

**Usage**

```
sf_dashboard_delete(dashboard_id)
```

**Arguments**

- `dashboard_id` character; the Salesforce Id assigned to a created dashboard. It will start with "01Z".

**Value**

logical

---

**sf_dashboard_describe**  
*Describe a dashboard*

**Description**

[Experimental]

Returns metadata for the specified dashboard, including dashboard components, filters, layout, and the running user.

**Usage**

```
sf_dashboard_describe(dashboard_id, as_tbl = TRUE, verbose = FALSE)
```

**Arguments**

- `dashboard_id` character; the Salesforce Id assigned to a created dashboard. It will start with "01Z".
- `as_tbl` logical; an indicator of whether to convert the parsed JSON into a tbl_df.
- `verbose` logical; an indicator of whether to print additional detail for each API call, which is useful for debugging. More specifically, when set to TRUE the URL, header, and body will be printed for each request, along with additional diagnostic information where available.

**Value**

list or tbl_df depending on the value of argument `as_tbl`
sf_dashboard_filter_operators_list

List dashboard filter operators

Description

[Experimental]

Usage

sf_dashboard_filter_operators_list()

Value

list

sf_dashboard_filter_options_analysis

Get an analysis of the filter options for a dashboard

Description

[Experimental]

Usage

sf_dashboard_filter_options_analysis(
    dashboard_id,
    filter_columns = list(),
    options = list()
)

Arguments

dashboard_id character; the Salesforce Id assigned to a created dashboard. It will start with “01Z”.

filter_columns list; a list of fields from the source report which you check filter values against. Each object in the array has these properties:...

options list; a list of objects describing a dashboard filter. Each object has these properties:...
Value

list

---

**sf_dashboard_refresh**  *Refresh an existing dashboard*

Description

*Experimental*

Usage

```r
sf_dashboard_refresh(dashboard_id, dashboard_filters = c(character(0)))
```

Arguments

dashboard_id character; the Salesforce Id assigned to a created dashboard. It will start with "01Z".
dashboard_filters character; Dashboard results are always unfiltered, unless you have specified filter parameters in your request. Use this argument to include up to three optional filter Ids. You can obtain the list of defined filter Ids from the dashboard metadata using `sf_dashboard_describe`.

Value

list

---

**sf_dashboard_results**  *Get the results of an existing dashboard*

Description

*Experimental*

This function allows for pulling specific data from a dashboard. There is a convenience function (`sf_get_dashboard_data`) to get the dashboard data in a tabular format returned as a tbl_df.

Usage

```r
sf_dashboard_results(
  dashboard_id, 
  running_user = NULL, 
  dashboard_filters = c(character(0))
)
```
**Arguments**

- **dashboard_id** character; the Salesforce Id assigned to a created dashboard. It will start with "01Z".
- **running_user** character; the Salesforce Id that should be assigned as the runner of the job. This should be from a User record (i.e. the Id will start with "005"). Note that this will throw an error if the User is not allowed to change the running User, or if the selected running User is invalid.
- **dashboard_filters** character; Dashboard results are always unfiltered, unless you have specified filter parameters in your request. Use this argument to include up to three optional filter Ids. You can obtain the list of defined filter Ids from the dashboard metadata using `sf_dashboard_describe`.

**Value**

- tbl_df

---

**Description**

[Experimental]

Set a default filter value which gets applied to a dashboard when you open it. The default filter value you specify only applies to you (other people won’t see it when they open the dashboard). If you change the filter value while viewing the dashboard, then the filter value you set in the user interface overwrites the value you set via the API. To set sticky filters for a dashboard, `canUseStickyFilter` must equal true. Saves any dashboard filters set in the request so that they’re also set the next time you open the dashboard. NOTE: You can only set dashboard filters for yourself, not for other users.

**Usage**

```r
sf_dashboard_set_sticky_filter(
  dashboard_id,
  dashboard_filters = c(character(0))
)
```

**Arguments**

- **dashboard_id** character; the Salesforce Id assigned to a created dashboard. It will start with "01Z".
- **dashboard_filters** character; Dashboard results are always unfiltered, unless you have specified filter parameters in your request. Use this argument to include up to three optional filter Ids. You can obtain the list of defined filter Ids from the dashboard metadata using `sf_dashboard_describe`.
sf_dashboard_status Get the status of a dashboard

Description

[Experimental]

Usage

sf_dashboard_status(
    dashboard_id,
    running_user = NULL,
    dashboard_filters = c(character(0))
)

Arguments

dashboard_id character; the Salesforce Id assigned to a created dashboard. It will start with "01Z".

running_user character; the Salesforce Id that should be assigned as the runner of the job. This should be from a User record (i.e. the Id will start with "005"). Note that this will throw an error if the User is not allowed to change the running User, or if the selected running User is invalid.

dashboard_filters character; Dashboard results are always unfiltered, unless you have specified filter parameters in your request. Use this argument to include up to three optional filter Ids. You can obtain the list of defined filter Ids from the dashboard metadata using sf_dashboard_describe.

Value

list
**sf_delete**

Delete Records

Description

[Stable]

Deletes one or more records from your organization’s data.

Usage

```r
sf_delete(
  ids,
  object_name = NULL,
  api_type = c("REST", "SOAP", "Bulk 1.0", "Bulk 2.0"),
  guess_types = TRUE,
  control = list(...),
  ...,
  all_or_none = deprecated(),
  verbose = FALSE
)
```

**sf_dashboard_update**

Update a dashboard

Description

[Experimental]

Usage

```r
sf_dashboard_update(dashboard_id, body)
```

Arguments

- `dashboard_id`: character; the Salesforce Id assigned to a created dashboard. It will start with "01Z".
- `body`: list; a list of data to be formatted as JSON before being sent to an API endpoint. This is NOT validated and is only experimental in allowing users to utilize the API functionality before wrapper functions have been written in R to format and validate the request in a more user-friendly format.

Value

list
Arguments

- **ids**: vector, matrix, data.frame, or tbl_df; if not a vector, there must be a column called Id (case insensitive) that can be passed in the request.
- **object_name**: character; the name of the Salesforce object that the function is operating against (e.g. "Account", "Contact", "CustomObject__c").
- **api_type**: character; one of "REST", "SOAP", "Bulk 1.0", or "Bulk 2.0" indicating which API to use when making the request.
- **guess_types**: logical; indicating whether or not to use col_guess() to try and cast the data returned in the recordset. If TRUE then col_guess() is used, if FALSE then all fields will be returned as character. This is helpful when col_guess() will mangle field values in Salesforce that you’d like to preserve during translation into a tbl_df, like numeric looking values that must be preserved as strings ("48.0").
- **control**: list; a list of parameters for controlling the behavior of the API call being used. For more information of what parameters are available look at the documentation for sf_control.
- **all_or_none**: logical; allows a call to roll back all changes unless all records are processed successfully.
- **verbose**: logical; an indicator of whether to print additional detail for each API call, which is useful for debugging. More specifically, when set to TRUE the URL, header, and body will be printed for each request, along with additional diagnostic information where available.

Value

tbl_df of records with success indicator

Note

Because the SOAP and REST calls chunk data into batches of 200 records the AllOrNoneHeader will only apply to the success or failure of every batch of records and not all records submitted to the function.

Examples

```r
## Not run:
n <- 3
ew_contacts <- tibble(FirstName = rep("Test", n),
  LastName = paste0("Contact", 1:n))
new_records <- sf_create(new_contacts, object_name="Contact")
deleted_first <- sf_delete(new_records$id[1], object_name = "Contact")

# add the control to do an "All or None" deletion of the remaining records
deleted_rest <- sf_delete(new_records$id[2:3], object_name = "Contact",
  AllOrNoneHeader = list(allOrNone = TRUE))

## End(Not run)
```
Description

[Experimental]

This function is a wrapper around `sf_delete` that accepts a list of Ids and assumes that they are in the Attachment object and should be deleted. This function is solely provided as a convenience and to provide the last attachment function to parallel the CRUD functionality for all other records.

Usage

```r
sf_delete_attachment(
  ids,
  object_name = c("Attachment"),
  api_type = c("SOAP", "REST", "Bulk 1.0", "Bulk 2.0"),
  ..., 
  verbose = FALSE
)
```

Arguments

- `ids` vector, matrix, data.frame, or tbl_df; if not a vector, there must be a column called `Id` (case insensitive) that can be passed in the request.
- `object_name` character; the name of the Salesforce object that the function is operating against (e.g. "Account", "Contact", "CustomObject__c").
- `api_type` character; one of "REST", "SOAP", "Bulk 1.0", or "Bulk 2.0" indicating which API to use when making the request.
- `...` arguments passed to `sf_control` or further downstream to `sf_bulk_operation`
- `verbose` logical; an indicator of whether to print additional detail for each API call, which is useful for debugging. More specifically, when set to `TRUE` the URL, header, and body will be printed for each request, along with additional diagnostic information where available.

Value

- `tbl_df` with details of the deleted records

Note

Because the SOAP and REST calls chunk data into batches of 200 records the AllOrNoneHeader will only apply to the success or failure of every batch of records and not all records submitted to the function.
Delete Bulk API Job

Delete Bulk API Job

Usage

```r
sf_delete_job_bulk(job_id, api_type = c("Bulk 2.0"), verbose = FALSE)
```

Arguments

- `job_id` character; the Salesforce Id assigned to a submitted job as returned by `sf_create_job_bulk`. It will start with "750".
- `api_type` character; one of "REST", "SOAP", "Bulk 1.0", or "Bulk 2.0" indicating which API to use when making the request.
- `verbose` logical; an indicator of whether to print additional detail for each API call, which is useful for debugging. More specifically, when set to TRUE the URL, header, and body will be printed for each request, along with additional diagnostic information where available.
Examples

```r
## Not run:
job_info <- sf_create_job_bulk('insert', 'Account')
sf_abort_job_bulk(job_info$id)
sf_delete_job_bulk(job_info$id)

## End(Not run)
```

### sf_delete_metadata

**Delete Object or Field Metadata in Salesforce**

**Description**

[Experimental]

This function takes a request of named elements in Salesforce and deletes them.

**Usage**

```r
sf_delete_metadata(
  metadata_type, 
  object_names, 
  control = list(...), 
  ...,
  all_or_none = deprecated(),
  verbose = FALSE
)
```

**Arguments**

- `metadata_type` character; string on what type of metadata to create.
- `object_names` a character vector of names that we wish to read metadata for.
- `control` list; a list of parameters for controlling the behavior of the API call being used. For more information of what parameters are available look at the documentation for `sf_control`.
- `...` arguments passed to `sf_control`
- `all_or_none` logical; allows a call to roll back all changes unless all records are processed successfully.
- `verbose` logical; an indicator of whether to print additional detail for each API call, which is useful for debugging. More specifically, when set to TRUE the URL, header, and body will be printed for each request, along with additional diagnostic information where available.

**Value**

A `data.frame` containing the creation result for each submitted metadata component.
sf_delete_report

See Also

sf_list_metadata, Salesforce Documentation

Examples

## Not run:
metadata_info <- sf_delete_metadata(metadata_type = 'CustomObject',
                                  object_names = c('Custom_Account25__c'))

## End(Not run)

sf_delete_report Delete a report

Description

[Experimental]
Delete a report by sending a DELETE request to the Report resource. Deleted reports are moved to the Recycle Bin.

Usage

sf_delete_report(report_id, verbose = FALSE)

Arguments

report_id character; the Salesforce Id assigned to a created analytics report. It will start with "00O".
verbose logical; an indicator of whether to print additional detail for each API call, which is useful for debugging. More specifically, when set to TRUE the URL, header, and body will be printed for each request, along with additional diagnostic information where available.

Value

logical indicating whether the report was deleted. This function will return TRUE if successful in deleting the report.

Salesforce Documentation

• Documentation

See Also

Examples

```r
## Not run:
# first, grab all possible reports in your Org
all_reports <- sf_query("SELECT Id, Name FROM Report")

# second, get the id of the report to delete
this_report_id <- all_reports$Id[1]

# third, delete that report using its Id
success <- sf_delete_report(this_report_id)

## End(Not run)
```

---

### sf_delete_report_instance

*Delete a report instance*

**Description**

*Experimental*

If the given report instance has a status of *Success* or *Error*, delete the report instance.

**Usage**

```r
sf_delete_report_instance(report_id, report_instance_id, verbose = FALSE)
```

**Arguments**

- `report_id` character; the Salesforce Id assigned to a created analytics report. It will start with "00O".
- `report_instance_id` character; the Salesforce Id assigned to a created analytics report instance (an asynchronous run). It will start with "0LG".
- `verbose` logical; an indicator of whether to print additional detail for each API call, which is useful for debugging. More specifically, when set to `TRUE` the URL, header, and body will be printed for each request, along with additional diagnostic information where available.

**Value**

A logical indicating whether the report instance was deleted. This function will return `TRUE` if successful in deleting the report instance.

**Salesforce Documentation**

- [Documentation](#)
See Also

Other Report Instance functions: `sf_get_report_instance_results()`, `sf_list_report_instances()`

Examples

```r
## Not run:
# first, get the Id of a report in your Org
all_reports <- sf_query("SELECT Id, Name FROM Report")
this_report_id <- all_reports$Id[1]

# second, ensure that report has been executed at least once asynchronously
results <- sf_execute_report(this_report_id, async=TRUE)

# check if that report has succeeded, if so (or if it errored), then delete
instance_list <- sf_list_report_instances(this_report_id)
instance_status <- instance_list[[which(instance_list$id == results$id), "status"]]

## End(Not run)
```

---

**sf_describe_metadata**  
*Describe the Metadata in an Organization*

**Description**

[Experimental]

This function returns details about the organization metadata

**Usage**

```r
sf_describe_metadata(verbosex = FALSE)
```

**Arguments**

<table>
<thead>
<tr>
<th>Argument</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>verbose</td>
<td>logical; an indicator of whether to print additional detail for each API call, which is useful for debugging. More specifically, when set to TRUE the URL, header, and body will be printed for each request, along with additional diagnostic information where available.</td>
</tr>
</tbody>
</table>

**Value**

A `tbl_df`

**References**

[https://developer.salesforce.com/docs/atlas.en-us.api_meta.meta/api_meta/](https://developer.salesforce.com/docs/atlas.en-us.api_meta.meta/api_meta/)
Examples

```r
## Not run:
# describe metadata for the organization associated with the session
metadata_info <- sf_describe_metadata()
## End(Not run)
```

sf_describe_objects

### SObject Basic Information

Description

[Stable]

Describes the individual metadata for the specified object.

Usage

```r
sf_describe_objects(
  object_names,
  api_type = c("SOAP", "REST"),
  control = list(...),
  ...
)
```

Arguments

- `object_names` character; the name of one or more Salesforce objects that the function is operating against (e.g. "Account", "Contact", "CustomObject__c").
- `api_type` character; one of "REST", "SOAP", "Bulk 1.0", or "Bulk 2.0" indicating which API to use when making the request.
- `control` list; a list of parameters for controlling the behavior of the API call being used. For more information of what parameters are available look at the documentation for `sf_control`.
- `...` arguments passed to `sf_control`
- `verbose` logical; an indicator of whether to print additional detail for each API call, which is useful for debugging. More specifically, when set to TRUE the URL, header, and body will be printed for each request, along with additional diagnostic information where available.

Value

- `list`

See Also

- REST API Documentation, REST API Example
sf_describe_object_fields

Description

[Stable]
This function takes the name of an object in Salesforce and returns a description of the fields on that object by returning a tibble with one row per field.

Usage

sf_describe_object_fields(object_name)

Arguments

object_name character; the name of the Salesforce object that the function is operating against (e.g. "Account", "Contact", "CustomObject__c").

Value

A tbl_df containing one row per field for the requested object.

Note

The tibble only contains the fields that the user can view, as defined by the user's field-level security settings.

Examples

## Not run:
acct_fields <- sf_describe_object_fields('Account')

## End(Not run)
Description

[Experimental]
Retrieves report, report type, and related metadata for a tabular, summary, or matrix report.

Usage

sf_describe_report(report_id, verbose = FALSE)

Arguments

report_id character; the Salesforce Id assigned to a created analytics report. It will start with "00O".
verbose logical; an indicator of whether to print additional detail for each API call, which is useful for debugging. More specifically, when set to TRUE the URL, header, and body will be printed for each request, along with additional diagnostic information where available.

Details

- Report metadata gives information about the report as a whole. Tells you such things as, the report type, format, the fields that are summaries, row or column groupings, filters saved to the report, and so on.
- Report type metadata tells you about all the fields available in the report type, those you can filter, and by what filter criteria.
- Report extended metadata tells you about the fields that are summaries, groupings, and contain record details in the report.

Value

list containing up to 4 properties that describe the report:

attributes Report type along with the URL to retrieve common objects and joined metadata.
reportMetadata Unique identifiers for groupings and summaries.
reportTypeMetadata Fields in each section of a report type plus filter information for those fields.
reportExtendedMetadata Additional information about summaries and groupings.

Salesforce Documentation

- Documentation
- Example
sf_describe_report_type

Describe a report type

Description

[Experimental]

Return metadata about a report type.

Usage

sf_describe_report_type(report_type, verbose = FALSE)

Arguments

report_type character; a character representing the type of report to retrieve the metadata information on. A list of valid report types that can be described using this function will be available in the reportTypes.type column of results returned sf_list_report_types. (e.g. AccountList, AccountContactRole, OpportunityHistory, etc.)

verbose logical; an indicator of whether to print additional detail for each API call, which is useful for debugging. More specifically, when set to TRUE the URL, header, and body will be printed for each request, along with additional diagnostic information where available.
Value

list containing up to 4 properties that describe the report:

- **attributes** Report type along with the URL to retrieve common objects and joined metadata.
- **reportMetadata** Unique identifiers for groupings and summaries.
- **reportTypeMetadata** Fields in each section of a report type plus filter information for those fields.
- **reportExtendedMetadata** Additional information about summaries and groupings.

Salesforce Documentation

- Documentation

See Also


Examples

```r
## Not run:
reports <- sf_list_report_types()
unique_report_types <- reports %>% distinct(reportTypes.type)

# first unique report type
unique_report_types[1,1]

# describe that report type
described_report <- sf_describe_report_type(unique_report_types[1,1])

## End(Not run)
```

---

**sf_download_attachment**

*Download an Attachment*

**Description**

[Stable]

This function will allow you to download an attachment to disk based on the attachment body, file name, and path.
Usage

```r
sf_download_attachment(
  body,
  name = NULL,
  sf_id = NULL,
  object_name = c("Attachment", "Document"),
  path = "."
)
```

Arguments

- **body** character; a URL path to the body of the attachment in Salesforce, typically retrieved by `sf_query` on the Attachment object. Alternatively, you can specify the Salesforce Id of the Attachment.
- **name** character; the name of the file you would like to save the content to. Note that you should include the file extension in this name and if this argument is left `NULL`, then a query will be made to determine the name and file extension needed. This process may result in a slower download process, so attempt to provide the body and name arguments whenever possible for the best performance.
- **sf_id** character; a Salesforce generated Id that uniquely identifies a record.
- **object_name** character; the name of the Salesforce object that the function is operating against (e.g. "Account", "Contact", "CustomObject__c").
- **path** character; a directory path where to create file, defaults to the current directory.

Value

character; invisibly return the file path of the downloaded content

Salesforce Documentation

- Get Attachment Content from a Record

See Also

Other Attachment functions: `check_and_encode_files()`, `sf_create_attachment()`, `sf_delete_attachment()`, `sf_update_attachment()`

Examples

```r
## Not run:
# downloading all attachments for a Parent record
# if your attachment name doesn't include the extension, then you can use the
# ContentType column to append it to the Name, if needed
queried_attachments <- sf_query("SELECT Id, Body, Name, ContentType
FROM Attachment
WHERE ParentId = '0016A0000035mJ5'")
mapply(sf_download_attachment, queried_attachments$Body, queried_attachments$Name)
```
sf_empty_recycle_bin

Empty Recycle Bin

Description

[Experimental]
Delete records from the recycle bin immediately and permanently.

Usage

sf_empty_recycle_bin(ids, api_type = c("SOAP"), verbose = FALSE)

Arguments

ids vector, matrix, data.frame, or tbl_df; if not a vector, there must be a column called Id (case-insensitive) that can be passed in the request
api_type character; one of "REST", "SOAP", "Bulk 1.0", or "Bulk 2.0" indicating which API to use when making the request.
verbose logical; an indicator of whether to print additional detail for each API call, which is useful for debugging. More specifically, when set to TRUE the URL, header, and body will be printed for each request, along with additional diagnostic information where available.

Details

When emptying recycle bins, consider the following rules and guidelines:

- The logged in user can delete any record that he or she can query in their Recycle Bin, or the recycle bins of any subordinates. If the logged in user has Modify All Data permission, he or she can query and delete records from any Recycle Bin in the organization.
- Do not include the IDs of any records that will be cascade deleted, or an error will occur.
- Once records are deleted using this call, they cannot be undeleted using link{sf_undelete}
- After records are deleted from the Recycle Bin using this call, they can be queried using the queryall argument for some time. Typically this time is 24 hours, but may be shorter or longer.

Value

tbl_df of records with success indicator
References

https://developer.salesforce.com/docs/atlas.en-us.api.meta/api/sforce_api_calls_emptyrecyclebin.htm

Examples

```r
## Not run:
new_contact <- c(FirstName = "Test", LastName = "Contact")
new_records <- sf_create(new_contact, object_name = "Contact")
delete <- sf_delete(new_records$id[1],
                   AllOrNoneHeader = list(allOrNone = TRUE))
is_deleted <- sf_query(sprintf("SELECT Id, IsDeleted FROM Contact WHERE Id='\%s'",
                              new_records$id[1]),
                         queryall = TRUE)
hard_deleted <- sf_empty_recycle_bin(new_records$id[1])

# confirm that the record really is gone (can't be deleted)
undelete <- sf_undelete(new_records$id[1])
# if you use queryall you still will find the record for ~24hrs
is_deleted <- sf_query(sprintf("SELECT Id, IsDeleted FROM Contact WHERE Id='\%s'",
                              new_records$id[1]),
                         queryall = TRUE)

# As of v48.0 (Spring 2020) you can query the Ids of all records in the Recycle
# Bin, which makes it easier to clear the entire bin because you can grab the
# Ids of the records first
records_in_bin <- sf_query("SELECT Record FROM DeleteEvent")
records_emptied_from_bin <- sf_delete(records_in_bin$Record)

## End(Not run)
```

### sf_execute_report

**Execute a report**

#### Description

[Experimental]

Get summary data with or without details by running a report synchronously or asynchronously through the API. When you run a report, the API returns data for the same number of records that are available when the report is run in the Salesforce user interface. Include the filters argument in your request to get specific results on the fly by passing dynamic filters, groupings, and aggregates in the report metadata. Finally, you may want to use `sf_run_report`.

#### Usage

```
f <- sf_execute_report(  
  report_id,  
  async = FALSE,  
  include_details = TRUE,  
)```

labels = TRUE,
guess_types = TRUE,
bind_using_character_cols = deprecated(),
as_tbl = TRUE,
report_metadata = NULL,
verbose = FALSE
)

Arguments

report_id character; the Salesforce Id assigned to a created analytics report. It will start with "000".

async logical; an indicator, by default set to TRUE, which executes the report asynchronously. If executed asynchronously, this function will return a list of attributes of the created report instance. The results can be pulled down by providing the report id and instance id to the function sf_get_report_instance_results. Refer to the details of the documentation on why executing a report asynchronously is preferred.

include_details logical; an indicator applying to a synchronous indicating whether the run should return summary data with details.

labels logical; an indicator of whether the returned data should be the label (i.e. formatted value) or the actual value. By default, the labels are returned because these are what appear in the Salesforce dashboard and more closely align with the column names. For example, "Account.Name" label may be "Account B" and the value 0016A0000035mJEQAY. The former (label) more accurately reflects the "Account.Name".

guess_types logical; indicating whether or not to use col_guess() to try and cast the data returned in the recordset. If TRUE then col_guess() is used, if FALSE then all fields will be returned as character. This is helpful when col_guess() will mangle field values in Salesforce that you’d like to preserve during translation into a tbl_df, like numeric looking values that must be preserved as strings ("48.0").

bind_using_character_cols logical; an indicator of whether to cast the data to all character columns to ensure that bind_rows does not fail because two paginated recordsets have differing datatypes for the same column. Set this to TRUE rarely, typically only when having this set to FALSE returns an error or you want all columns in the data to be character.

as_tbl logical; an indicator of whether to convert the parsed JSON into a tbl_df.

report_metadata list; a list with one element named "reportMetadata" having additional list elements underneath. All possible elements of reportMetadata are documented HERE, but you will most commonly only need to specify the following 3 elements to filter or query the results of an existing report:

reportFormat A character specifying the format of the report with possible values: "TABULAR", "SUMMARY", "MATRIX", or "MULTI_BLOCK".
**reportBooleanFilter** A character denoting how the individuals filters specified in `reportFilters` should be combined. For example, "(1OR4)AND2AND3".

**reportFilters** A list of `reportFilter` specifications. Each must be a list with 3 elements: 1) `column`, 2) `operator`, and 3) `value`. You can find out how certain field types can be filtered by reviewing the results of `sf_list_report_filter_operators`.

**verbose** logical; an indicator of whether to print additional detail for each API call, which is useful for debugging. More specifically, when set to `TRUE` the URL, header, and body will be printed for each request, along with additional diagnostic information where available.

**Details**

Run a report synchronously if you expect it to finish running quickly. Otherwise, we recommend that you run reports through the API asynchronously for these reasons:

- Long running reports have a lower risk of reaching the timeout limit when run asynchronously.
- The 2-minute overall Salesforce API timeout limit doesn’t apply to asynchronous runs.
- The Salesforce Reports and Dashboards REST API can handle a higher number of asynchronous run requests at a time.
- Since the results of an asynchronously run report are stored for a 24-hr rolling period, they’re available for recurring access.

Before you filter a report, it helpful to check the following properties in the metadata that tell you if a field can be filtered, the values and criteria you can filter by, and filters that already exist in the report:

- `filterable`
- `filterValues`
- `dataTypeFilterOperatorMap`
- `reportFilters`

**Value**

`tbl_df` by default, but a `list` when `as_tbl=FALSE`, which means that the content from the API is converted from JSON to a list with no other post-processing.

**Salesforce Documentation**

- Sync Documentation
- Sync Example
- Async Documentation
- Async Example
- Filtering Results
See Also


Examples

```r
## Not run:
# first, get the Id of a report in your Org
all_reports <- sf_query("SELECT Id, Name FROM Report")
this_report_id <- all_reports$Id[1]

# then execute a synchronous report that will wait for the results
results <- sf_execute_report(this_report_id)

# alternatively, you can execute an async report and then grab its results when done
# - The benefit of an async report is that the results will be stored for up to
#   24 hours for faster recall, if needed
results <- sf_execute_report(this_report_id, async=TRUE)

# check if completed and proceed if the status is "Success"
instance_list <- sf_list_report_instances(report_id)
instance_status <- instance_list[[which(instance_list$id == results$id), "status"]]
if(instance_status == "Success"){
  results <- sf_get_report_instance_results(report_id, results$id)
}

# Note: For more complex execution use the report_metadata argument.
# This can be done by building the list from scratch based on Salesforce
# documentation (not recommended) or pulling down the existing reportMetadata
# property of the report and modifying the list slightly (recommended).
# In addition, for relatively simple changes, you can leverage the convenience
# function sf_report_wrapper() which makes it easier to retrieve report results
report_details <- sf_describe_report(this_report_id)
report_metadata <- list(reportMetadata = report_details$reportMetadata)
report_metadata$reportMetadata$showGrandTotal <- FALSE
report_metadata$reportMetadata$showSubtotals <- FALSE
fields <- sf_execute_report(this_report_id,
                          report_metadata = report_metadata)
```

sf_find_duplicates  Find Duplicate Records

Description

[Experimental]
Performs rule-based searches for duplicate records.
Usage

sf_find_duplicates(
    search_criteria,
    object_name,
    include_record_details = FALSE,
    guess_types = TRUE,
    verbose = FALSE
)

Arguments

search_criteria
list: a list of fields and their values that would constitute a match. For example,
list(FirstName="Marc", Company="Salesforce")

object_name character; the name of the Salesforce object that the function is operating
against (e.g. "Account", "Contact", "CustomObject__c").

include_record_details
logical; get fields and values for records detected as duplicates by setting this
property to TRUE. Get only record IDs for records detected as duplicates by setting
this property to FALSE.

guess_types
logical; indicating whether or not to use col_guess() to try and cast the data
returned in the recordset. If TRUE then col_guess() is used, if FALSE then all
fields will be returned as character. This is helpful when col_guess() will
mangle field values in Salesforce that you’d like to preserve during translation
into a tbl_df, like numeric looking values that must be preserved as strings
("48.0").

verbose
logical; an indicator of whether to print additional detail for each API call,
which is useful for debugging. More specifically, when set to TRUE the URL,
header, and body will be printed for each request, along with additional diag-
nostic information where available.

Value

tbl_df of records found to be duplicates by the match rules

Note

You must have active duplicate rules for the supplied object before running this function. The
object_name argument refers to using that object’s duplicate rules on the search criteria to deter-
mine which records in other objects are duplicates.

Examples

## Not run:
# use the duplicate rules associated with the Lead object on the search
criteria (email) in order to find duplicates
found_dupes <- sf_find_duplicates(search_criteria =
    list(Email="bond_john@grandhotels.com"),
# now look for duplicates on email using the Contact object's rules
found_dupes <- sf_find_duplicates(search_criteria =
  list(Email="bond_john@grandhotels.com"),
  object_name = "Contact")

## End(Not run)

---

**sf_find_duplicates_by_id**

*Find Duplicate Records By Id*

---

**Description**

[Experimental]

Performs rule-based searches for duplicate records.

**Usage**

```r
sf_find_duplicates_by_id(
  sf_id,
  include_record_details = FALSE,
  guess_types = TRUE,
  verbose = FALSE
)
```

**Arguments**

- **sf_id** character; a Salesforce generated Id that uniquely identifies a record.
- **include_record_details** logical; get fields and values for records detected as duplicates by setting this property to TRUE. Get only record IDs for records detected as duplicates by setting this property to FALSE.
- **guess_types** logical; indicating whether or not to use `col_guess()` to try and cast the data returned in the recordset. If TRUE then `col_guess()` is used, if FALSE then all fields will be returned as character. This is helpful when `col_guess()` will mangle field values in Salesforce that you'd like to preserve during translation into a `tbl_df`, like numeric looking values that must be preserved as strings ("48.0").
- **verbose** logical; an indicator of whether to print additional detail for each API call, which is useful for debugging. More specifically, when set to TRUE the URL, header, and body will be printed for each request, along with additional diagnostic information where available.

**Value**

`tbl_df` of records found to be duplicates by the match rules
**sf_get_all_jobs_bulk**

**Description**

This function retrieves details about all Bulk jobs in the org.

**Usage**

```r
sf_get_all_jobs_bulk(
  parameterized_search_list = list(isPkChunkingEnabled = NULL, jobType = NULL),
  next_records_url = NULL,
  api_type = c("REST", "SOAP", "Bulk 1.0", "Bulk 2.0"),
  verbose = FALSE
)
```

**Arguments**

- `parameterized_search_list` list; a list of parameters to be added as part of the URL query string (i.e. after a question mark ("?")) so that the result only returns information about jobs that meet that specific criteria. For more information, read the note below and/or the Salesforce documentation here.

- `next_records_url` character (leave as NULL); a string used internally by the function to paginate through to more records until complete

- `api_type` character; one of "REST", "SOAP", "Bulk 1.0", or "Bulk 2.0" indicating which API to use when making the request.

- `verbose` logical; an indicator of whether to print additional detail for each API call, which is useful for debugging. More specifically, when set to TRUE the URL, header, and body will be printed for each request, along with additional diagnostic information where available.

**Note**

You must have active duplicate rules for the supplied object before running this function. This function uses the duplicate rules for the object that has the same type as the input record IDs. For example, if the record ID represents an Account, this function uses the duplicate rules associated with the Account object.

**Examples**

```r
## Not run:
# use the duplicate rules associated with the object that this record
# belongs to in order to find duplicates
found_dupes <- sf_find_duplicates_by_id(sf_id = "00Q6A00000aABCnZZZ")
## End(Not run)
```
sf_get_all_query_jobs_bulk

**Value**

A tbl_df of parameters defining the details of all bulk jobs

**Note**

parameterized_search_list elements that can be set to filter the results:

- **isPkChunkingEnabled**: A logical either TRUE or FALSE. TRUE only returns information about jobs where PK Chunking has been enabled.
- **jobType**: A character string to return jobs matching the specified type. Must be one of: "BigObjectIngest", "Classic", "V2QIngest". Classic corresponds to Bulk 1.0 API jobs and V2Ingest corresponds to the Bulk 2.0 API jobs.

**References**

https://developer.salesforce.com/docs/atlas.en-us.api_asynch.meta/api_asynch/get_all_jobs.htm

**Examples**

```r
## Not run:
job_info <- sf_create_job_bulk("insert", "Account")
all_jobs_info <- sf_get_all_jobs_bulk()
# just the Bulk API 1.0 jobs
all_jobs_info <- sf_get_all_jobs_bulk(parameterized_search_list=list(jobType='Classic'))
## End(Not run)
```

---

**sf_get_all_query_jobs_bulk**

*Get All Bulk API Query Jobs*

**Description**

This function retrieves details about all Bulk query jobs in the org.

**Usage**

```r
sf_get_all_query_jobs_bulk(
    parameterized_search_list = list(isPkChunkingEnabled = NULL, jobType = NULL,
                                      concurrencyMode = NULL),
    next_records_url = NULL,
    api_type = c("Bulk 2.0"),
    verbose = FALSE
)
```
Arguments

parameterized_search_list
list; a list of parameters to be added as part of the URL query string (i.e. after a question mark ("?")) so that the result only returns information about jobs that meet that specific criteria. For more information, read the note below and/or the Salesforce documentation here.

next_records_url
character (leave as NULL); a string used internally by the function to paginate through to more records until complete

api_type
character; one of "REST", "SOAP", "Bulk 1.0", or "Bulk 2.0" indicating which API to use when making the request.

verbose
logical; an indicator of whether to print additional detail for each API call, which is useful for debugging. More specifically, when set to TRUE the URL, header, and body will be printed for each request, along with additional diagnostic information where available.

Value
A tbl_df of parameters defining the details of all bulk jobs

Note
parameterized_search_list elements that can be set to filter the results:

• isPkChunkingEnabledA logical either TRUE or FALSE. TRUE only returns information about jobs where PK Chunking has been enabled.

• jobTypeA character string to return jobs matching the specified type. Must be one of: "BigObjectIngest", "Classic", "V2Query". Classic corresponds to Bulk 1.0 API jobs and V2Query corresponds to the Bulk 2.0 API jobs.

• concurrencyModeA character string to return jobs matching the specified concurrency mode. Must be one of: "serial" or "parallel", but only "serial" is currently supported.

References
https://developer.salesforce.com/docs/atlas.en-us.api_asynch.meta/api_asynch/get_all_jobs.htm

Examples
## Not run:
job_info <- sf_create_job_bulk('insert', 'Account')
all_query_jobs_info <- sf_get_all_query_jobs_bulk()
# just the Bulk API 2.0 query jobs
all_query_jobs_info <- sf_get_all_query_jobs_bulk(parameterized_search_list=list(jobType="V2Query"))
# just the Bulk API 1.0 query jobs
all_query_jobs_info <- sf_get_all_query_jobs_bulk(parameterized_search_list=list(jobType="Classic"))
## End(Not run)
sf_get_dashboard_data   Get dashboard data in a tabular format

Description
[Experimental]

Usage
sf_get_dashboard_data(
    dashboard_id,
    running_user = NULL,
    dashboard_filters = c(character(0))
)

Arguments
- **dashboard_id**: character; the Salesforce Id assigned to a created dashboard. It will start with "01Z".
- **running_user**: character; the Salesforce Id that should be assigned as the runner of the job. This should be from a User record (i.e. the Id will start with "005"). Note that this will throw an error if the User is not allowed to change the running User, or if the selected running User is invalid.
- **dashboard_filters**: character; Dashboard results are always unfiltered, unless you have specified filter parameters in your request. Use this argument to include up to three optional filter Ids. You can obtain the list of defined filter Ids from the dashboard metadata using `sf_dashboard_describe`.

Value
tbl_df

sf_get_deleted   Get Deleted Records from a Timeframe

Description
[Stable]
Retrieves the list of individual records that have been deleted within the given timespan for the specified object.

Usage
sf_get_deleted(object_name, start, end, verbose = FALSE)
Arguments

object_name character; the name of the Salesforce object that the function is operating against (e.g. "Account", "Contact", "CustomObject__c").

start date or datetime; starting datetime of the timespan for which to retrieve the data.

date or datetime; ending datetime of the timespan for which to retrieve the data.

verbose logical; an indicator of whether to print additional detail for each API call, which is useful for debugging. More specifically, when set to TRUE the URL, header, and body will be printed for each request, along with additional diagnostic information where available.

Note

This API ignores the seconds portion of the supplied datetime values.

Examples

## Not run:

# get all deleted Contact records from midnight until now
deleted_recs <- sf_get_deleted("Contact", Sys.Date(), Sys.time())

## End(Not run)

---

sf_get_job_bulk  Get Bulk API Job

Description

This function retrieves details about a Job in the Salesforce Bulk API

Usage

sf_get_job_bulk(
  job_id,
  api_type = c("Bulk 1.0", "Bulk 2.0"),
  query_operation = FALSE,
  verbose = FALSE
)

Arguments

job_id character; the Salesforce Id assigned to a submitted job as returned by sf_create_job_bulk. It will start with "750".

api_type character; one of "REST", "SOAP", "Bulk 1.0", or "Bulk 2.0" indicating which API to use when making the request.
query_operation
logical; an indicator of whether the job is a query job, which is needed when using the Bulk 2.0 API because the URI endpoints are different for the "ingest" vs. the "query" jobs.

verbose
logical; an indicator of whether to print additional detail for each API call, which is useful for debugging. More specifically, when set to TRUE the URL, header, and body will be printed for each request, along with additional diagnostic information where available.

Value
A tbl_df of parameters defining the details of the specified job id

References
https://developer.salesforce.com/docs/atlas.en-us.api_asynch.meta/api_asynch/

Examples
## Not run:
job_info <- sf_create_job_bulk('insert', 'Account')
refreshed_job_info <- sf_get_job_bulk(job_info$id)
sf_abort_job_bulk(refreshed_job_info$id)
## End(Not run)

sf_get_job_records_bulk
Returning the Details of a Bulk API Job

Description
This function returns detailed (row-level) information on a job which has already been submitted completed (successfully or not).

Usage
sf_get_job_records_bulk(
  job_id,
  api_type = c("Bulk 1.0", "Bulk 2.0"),
  record_types = c("successfulResults", "failedResults", "unprocessedRecords"),
  combine_record_types = TRUE,
  verbose = FALSE
)
Arguments

job_id character; the Salesforce Id assigned to a submitted job as returned by \texttt{sf\_create\_job\_bulk}. It will start with "750".

api_type character; one of "REST", "SOAP", "Bulk 1.0", or "Bulk 2.0" indicating which API to use when making the request.

record_types character; one or more types of records to retrieve from the results of running the specified job

combine_record_types logical; indicating for Bulk 2.0 jobs whether the successfulResults, failedResults, and unprocessedRecords should be stacked together by binding the rows

verbose logical; an indicator of whether to print additional detail for each API call, which is useful for debugging. More specifically, when set to \texttt{TRUE} the URL, header, and body will be printed for each request, along with additional diagnostic information where available.

Value

A \texttt{tbl\_df} or list of \texttt{tbl\_df}, formatted by Salesforce, with information containing the success or failure or certain rows in a submitted job

Note

With Bulk 2.0 the order of records in the response is not guaranteed to match the ordering of records in the original job data.

References

\url{https://developer.salesforce.com/docs/atlas.en-us.api_asynch.meta/api_asynch/}

Examples

```r
## Not run:
job_info <- sf_create_job_bulk('insert', 'Account')
input_data <- tibble(Name=c("Test Account 1", "Test Account 2"))
batches_result <- sf_create_batches_bulk(job_info$id, input_data)
# pause a few seconds for operation to finish. Wait longer if job is not complete.
Sys.sleep(3)
# check status using - sf_get_job_bulk(job_info$id)
job_record_details <- sf_get_job_records_bulk(job_id=job_info$id)

## End(Not run)
```
sf_get_report_instance_results

Description

[Experimental]
Retrieves results for an instance of a report run asynchronously with or without filters. Depending on your asynchronous report run request, data can be at the summary level or include details.

Usage

sf_get_report_instance_results(
  report_id,  # character; the Salesforce Id assigned to a created analytics report. It will start with "00O".
  report_instance_id,  # character; the Salesforce Id assigned to a created analytics report instance (an asynchronous run). It will start with "0LG".
  labels = TRUE,  # logical; an indicator of whether the returned data should be the label (i.e. formatted value) or the actual value. By default, the labels are returned because these are what appear in the Salesforce dashboard and more closely align with the column names. For example, "Account.Name" label may be "Account B" and the value 0016A0000035mJEQAY. The former (label) more accurately reflects the "Account.Name".
  guess_types = TRUE,  # logical; indicating whether or not to use \texttt{col\_guess()} to try and cast the data returned in the recordset. If \texttt{TRUE} then \texttt{col\_guess()} is used, if \texttt{FALSE} then all fields will be returned as character. This is helpful when \texttt{col\_guess()} will mangle field values in Salesforce that you’d like to preserve during translation into a \texttt{tbl\_df}, like numeric looking values that must be preserved as strings ("48.0").
  bind_using_character_cols = deprecated(),  # logical; an indicator of whether to cast the data to all character columns to ensure that \texttt{bind\_rows} does not fail because two paginated recordsets have differing datatypes for the same column. Set this to \texttt{TRUE} rarely, typically only when having this set to \texttt{FALSE} returns an error or you want all columns in the data to be character.
  fact_map_key = "T!T",  # the Salesforce Id assigned to a created analytics report instance (an asynchronous run). It will start with "0LG".
  verbose = FALSE)

Arguments

- **report_id**: character; the Salesforce Id assigned to a created analytics report. It will start with "00O".
- **report_instance_id**: character; the Salesforce Id assigned to a created analytics report instance (an asynchronous run). It will start with "0LG".
- **labels**: logical; an indicator of whether the returned data should be the label (i.e. formatted value) or the actual value. By default, the labels are returned because these are what appear in the Salesforce dashboard and more closely align with the column names. For example, "Account.Name" label may be "Account B" and the value 0016A0000035mJEQAY. The former (label) more accurately reflects the "Account.Name".
- **guess_types**: logical; indicating whether or not to use \texttt{col\_guess()} to try and cast the data returned in the recordset. If \texttt{TRUE} then \texttt{col\_guess()} is used, if \texttt{FALSE} then all fields will be returned as character. This is helpful when \texttt{col\_guess()} will mangle field values in Salesforce that you’d like to preserve during translation into a \texttt{tbl\_df}, like numeric looking values that must be preserved as strings ("48.0").
- **bind_using_character_cols**: logical; an indicator of whether to cast the data to all character columns to ensure that \texttt{bind\_rows} does not fail because two paginated recordsets have differing datatypes for the same column. Set this to \texttt{TRUE} rarely, typically only when having this set to \texttt{FALSE} returns an error or you want all columns in the data to be character.
fact_map_key character; string providing an index into each section of a fact map, from
which you can access summary and detailed data. The pattern for the fact map
keys varies by report format so it is important to know what the reportFormat
property of the target report is. See the note below for more details.

verbose logical; an indicator of whether to print additional detail for each API call,
which is useful for debugging. More specifically, when set to TRUE the URL,
header, and body will be printed for each request, along with additional diag-
nostic information where available.

Value

tbl_dfl; the detail report data. More specifically, the detailed data from the "T!T" entry in the fact
map.

Salesforce Documentation

- Documentation
- Example
- Factmap Documentation

Note

Below are the fact map key patterns for three report types:

**TABULAR** T!T: The grand total of a report. Both record data values and the grand total are
represented by this key.

**SUMMARY** <First level row grouping_second level row grouping_third level row grouping>!T:
T refers to the row grand total.

**MATRIX** <First level row grouping_second level row grouping>!<First level column grouping_second
level column grouping>.

Each item in a row or column grouping is numbered starting with 0. Here are some examples of
fact map keys:

0!T The first item in the first-level grouping.
1!T The second item in the first-level grouping.
0_0!T The first item in the first-level grouping and the first item in the second-level grouping.
0_1!T The first item in the first-level grouping and the second item in the second-level grouping.

See Also

Other Report Instance functions: sf_delete_report_instance(), sf_list_report_instances()
## Examples

```r
## Not run:
# execute a report asynchronously in your Org
all_reports <- sf_query("SELECT Id, Name FROM Report")
this_report_id <- all_reports$Id[1]
results <- sf_execute_report(this_report_id, async=TRUE)

# check if that report has succeeded, ...
instance_list <- sf_list_report_instances(this_report_id)
instance_status <- instance_list[[which(instance_list$id == results$id), "status"]]

# ... if so, then grab the results
if(instance_status == "Success"){
  report_data <- sf_get_report_instance_results(report_id = this_report_id,
                                              report_instance_id = results$id)
}
## End(Not run)
```

---

### sf_get_updated

**Get Updated Records from a Timeframe**

#### Description

[Stable]

Retrieves the list of individual records that have been inserted or updated within the given timespan in the specified object.

#### Usage

```r
sf_get_updated(object_name, start, end, verbose = FALSE)
```

#### Arguments

- `object_name`: character; the name of the Salesforce object that the function is operating against (e.g. "Account", "Contact", "CustomObject__c").
- `start`: date or datetime; starting datetime of the timespan for which to retrieve the data.
- `end`: date or datetime; ending datetime of the timespan for which to retrieve the data.
- `verbose`: logical; an indicator of whether to print additional detail for each API call, which is useful for debugging. More specifically, when set to TRUE the URL, header, and body will be printed for each request, along with additional diagnostic information where available.

#### Note

This API ignores the seconds portion of the supplied datetime values.
Checking the Status of a Batch in a Bulk API Job

Description

This function checks on and returns status information on an existing batch which has already been submitted to Bulk API Job.

Usage

```
sf_job_batches_bulk(job_id, api_type = c("Bulk 1.0"), verbose = FALSE)
```

Arguments

- `job_id`: character; the Salesforce Id assigned to a submitted job as returned by `sf_create_job_bulk`. It will start with "750".
- `api_type`: character; one of "REST", "SOAP", "Bulk 1.0", or "Bulk 2.0" indicating which API to use when making the request.
- `verbose`: logical; an indicator of whether to print additional detail for each API call, which is useful for debugging. More specifically, when set to TRUE the URL, header, and body will be printed for each request, along with additional diagnostic information where available.

Value

A tbl_df of parameters defining the batch identified by the batch_id.

Note

This is a legacy function used only with Bulk 1.0.

References

https://developer.salesforce.com/docs/atlas.en-us.api_asynch.meta/api_asynch/
Examples

```r
## Not run:
job_info <- sf_create_job_bulk(operation = "query", object = "Account")
soql <- "SELECT Id, Name FROM Account LIMIT 10"
batch_query_info <- sf_submit_query_bulk(job_id = job_info$id, soql = soql)
submitted_batches <- sf_job_batches_bulk(job_id=batch_query_info$jobId)
job_close_ind <- sf_close_job_bulk(job_info$id)
sf_get_job_bulk(job_info$id)
## End(Not run)
```

---

text:

### sf_list_api_limits

**List the Limits for an API**

**Description**

[Stable]

Lists information about limits in your org.

**Usage**

```r
sf_list_api_limits()
```

**Value**

list

**Note**

This resource is available in REST API version 29.0 and later for API users with the View Setup and Configuration permission. The resource returns these limits:

- Daily API calls
- Daily asynchronous Apex method executions (batch Apex, future methods, queueable Apex, and scheduled Apex)
- Daily Bulk API calls
- Daily Streaming API events (API version 36.0 and earlier)
- Daily durable Streaming API events (API version 37.0 and later)
- Streaming API concurrent clients (API version 36.0 and earlier)
- Durable Streaming API concurrent clients (API version 37.0 and later)
- Daily generic streaming events (API version 36.0 and earlier)
- Daily durable generic streaming events (API version 37.0 and later)
- Daily number of mass emails that are sent to external email addresses by using Apex or APIs
- Daily number of single emails that are sent to external email addresses by using Apex or APIs
• Concurrent REST API requests for results of asynchronous report runs
• Concurrent synchronous report runs via REST API
• Hourly asynchronous report runs via REST API
• Hourly synchronous report runs via REST API
• Hourly dashboard refreshes via REST API
• Hourly REST API requests for dashboard results
• Hourly dashboard status requests via REST API
• Daily workflow emails
• Hourly workflow time triggers
• Hourly OData callouts
• Daily and active scratch org counts
• Data storage (MB)
• File storage (MB)

Examples

```r
## Not run:
sf_list_api_limits()

## End(Not run)
```

## sf_list_metadata

### List All Objects of a Certain Metadata Type in Salesforce

#### Description

[Experimental]
This function takes a query of metadata types and returns a summary of all objects in salesforce of the requested types.

#### Usage

```r
sf_list_metadata(queries, verbose = FALSE)
```

#### Arguments

- **queries**: a list of lists with each element consisting of 2 components: 1) the metadata type being requested and 2) the folder associated with the type that required for types that use folders, such as Dashboard, Document, EmailTemplate, or Report.
- **verbose**: logical; an indicator of whether to print additional detail for each API call, which is useful for debugging. More specifically, when set to `TRUE` the URL, header, and body will be printed for each request, along with additional diagnostic information where available.
Value

A tbl_dfs containing the queried metadata types

Note

Only 3 queries can be specified at one time, so the list length must not exceed 3.

References

https://developer.salesforce.com/docs/atlas.en-us.api_meta.meta/api_meta/

Examples

## Not run:
# pull back a list of all Custom Objects and Email Templates
my_queries <- list(list(type='CustomObject'),
                 list(folder='unfiled$public',
                     type='EmailTemplate'))
metadata_info <- sf_list_metadata(queries=my_queries)
## End(Not run)
sf_list_reports

Description

[Experimental]
Displays a list of full list of reports based on the Report object. If recent is up to 200 tabular, matrix, or summary reports that you recently viewed. To get additional details on reports by format, name, and other fields, use a SOQL query on the Report object.

Usage

```
sf_list_reports(recent = FALSE, as_tbl = TRUE, verbose = FALSE)
```

Arguments

- **recent**: logical; an indicator of whether to return the 200 most recently viewed reports or to invoke a query on the Report object to return all reports in the Org. By default, this argument is set to FALSE meaning that all of the reports, not just the most recently viewed reports are returned. Note that the default behavior of the reports list endpoint in the Reports and Dashboards REST API is only the most recently viewed up to 200 reports.
- **as_tbl**: logical; an indicator of whether to convert the parsed JSON into a tbl_df.
- **verbose**: logical; an indicator of whether to print additional detail for each API call, which is useful for debugging. More specifically, when set to TRUE the URL, header, and body will be printed for each request, along with additional diagnostic information where available.

Value

- tbl_df by default, or a list depending on the value of argument as_tbl

Salesforce Documentation

- [Documentation](#)
- [Example](#)

Note

This function will only return up to 200 of recently viewed reports when the recent argument is set to TRUE. For a complete details you must use sf_query on the report object.

See Also

Examples

```r
## Not run:
# to return all possible reports, which is queried from the Report object
reports <- sf_list_reports()

# return the results as a list
reports_as_list <- sf_list_reports(as_tbl=FALSE)

# return up to 200 recently viewed reports
all_reports <- sf_list_reports(recent=TRUE)

## End(Not run)
```

---

**sf_list_report_fields**  
Get a list of report fields

---

**Description**

[Experimental]

The Report Fields resource returns report fields available for specified reports. Use the resource to determine the best fields for use in dashboard filters by seeing which fields different source reports have in common. Available in API version 40.0 and later.

**Usage**

```
sf_list_report_fields(
  report_id,
  intersect_with = c(character(0)),
  verbose = FALSE
)
```

**Arguments**

- **report_id** character; the Salesforce Id assigned to a created analytics report. It will start with "00O".
- **intersect_with** character; a vector of unique report IDs. This is helpful in determining the best fields for use in dashboard filters by seeing which fields different source reports have in common. If this argument is left empty, then the function returns a list of all possible report fields. Otherwise, returns a list of fields that specified reports share.
- **verbose** logical; an indicator of whether to print additional detail for each API call, which is useful for debugging. More specifically, when set to TRUE the URL, header, and body will be printed for each request, along with additional diagnostic information where available.
Value

list representing the 4 different field report properties:

- **displayGroups**  Fields available when adding a filter.
- **equivalentFields** Fields available for each specified report. Each object in this array is a list of common fields categorized by report type.
- **equivalentFieldIndices** Map of each field’s API name to the index of the field in the equivalentFields array.
- **mergedGroups** Merged fields.

Salesforce Documentation

- [Documentation](#)

See Also


Examples

```r
## Not run:
# first, grab all possible reports in your Org
all_reports <- sf_query("SELECT Id, Name FROM Report")

# second, get the id of the report to check fields on
this_report_id <- all_reports$Id[1]

# third, pull that report and intersect its fields with up to three other reports
fields <- sf_list_report_fields(this_report_id, intersect_with=tail(all_reports["Id"],3))

## End(Not run)
```

---

**sf_list_report_filter_operators**

*List report filter operators*

Description

[Experimental]

Use the Filter Operators API to get information about which filter operators are available for reports and dashboards. The Filter Operators API is available in API version 40.0 and later.

Usage

sf_list_report_filter_operators(as_tbl = TRUE, verbose = FALSE)
Arguments

as_tbl  logical; an indicator of whether to convert the parsed JSON into a tbl_df.
verbose logical; an indicator of whether to print additional detail for each API call, which is useful for debugging. More specifically, when set to TRUE the URL, header, and body will be printed for each request, along with additional diagnostic information where available.

Value

tbl_df by default, or a list depending on the value of argument as_tbl

Salesforce Documentation

- Documentation
- Example

See Also


Examples

```r
## Not run:
report_filters <- sf_list_report_filter_operators()
unique_supported_fields <- report_filters %>% distinct(supported_field_type)

# operators to filter a picklist field
picklist_field_operators <- report_filters %>% filter(supported_field_type == "picklist")

## End(Not run)
```

```r
sf_list_report_instances

List report instances
```

Description

[Experimental]

Returns a list of instances for a report that you requested to be run asynchronously. Each item in the list is treated as a separate instance of the report run with metadata in that snapshot of time.

Usage

`sf_list_report_instances(report_id, as_tbl = TRUE, verbose = FALSE)`
**sf_list_report_types**

**List report types**

**Description**

[Experimental]

Return a list of report types.

**Arguments**

- **report_id** character; the Salesforce Id assigned to a created analytics report. It will start with "00O".
- **as_tbl** logical; an indicator of whether to convert the parsed JSON into a tbl.df.
- **verbose** logical; an indicator of whether to print additional detail for each API call, which is useful for debugging. More specifically, when set to TRUE the URL, header, and body will be printed for each request, along with additional diagnostic information where available.

**Value**

tbl_df by default, or a list depending on the value of argument as_tbl

**Salesforce Documentation**

- [Documentation](#)
- [Example](#)

**See Also**

Other Report Instance functions: `sf_delete_report_instance()`, `sf_get_report_instance_results()`

**Examples**

```r
## Not run:
# first, get the Id of a report in your Org
all_reports <- sf_query("SELECT Id, Name FROM Report")
this_report_id <- all_reports$Id[1]

# second, execute an async report
results <- sf_execute_report(this_report_id, async=TRUE)

# third, pull a list of async requests ("instances") usually meant for checking
# if a recently requested report has succeeded and the results can be retrieved
instance_list <- sf_list_report_instances(this_report_id)
instance_status <- instance_list[[which(instance_list$id == results$id), "status"]]
```

**References**

- [Salesforce API](https://developer.salesforce.com/docs/atlas.en-us.api.meta/api/)
Usage

sf_list_report_types(as_tbl = TRUE, verbose = FALSE)

Arguments

as_tbl logical; an indicator of whether to convert the parsed JSON into a tbl_df.
verbose logical; an indicator of whether to print additional detail for each API call, which is useful for debugging. More specifically, when set to TRUE the URL, header, and body will be printed for each request, along with additional diagnostic information where available.

Value

tbl_df by default, or a list depending on the value of argument as_tbl

Salesforce Documentation

• Documentation

See Also

Other Report functions: sf_copy_report(), sf_create_report(), sf_delete_report(), sf_describe_report_type(), sf_de

Examples

## Not run:
report_types <- sf_list_report_types()
unique_report_types <- report_types %>% select(reportTypes.type)

# return the results as a list
reports_as_list <- sf_list_report_types(as_tbl=FALSE)

## End(Not run)

---

**sf_list_resources**

List the Resources for an API

Description

[Stable]

Lists available resources for the specified API version, including resource name and URI.

Usage

sf_list_resources()
**sf_list_rest_api_versions**

**Value**

list

**Examples**

```r
## Not run:
sf_list_resources()

## End(Not run)
```

---

**sf_list_rest_api_versions**

*List REST API Versions*

**Description**

[Stable]

Lists summary information about each Salesforce version currently available, including the version, label, and a link to each version's root.

**Usage**

`sf_list_rest_api_versions()`

**Value**

list

**Examples**

```r
## Not run:
sf_list_rest_api_versions()

## End(Not run)
```

---

**sf_merge**

*Merge Records*

**Description**

[Experimental]

This function combines records of the same object type into one of the records, known as the master record. The other records, known as the victim records, will be deleted. If a victim record has related records the master record will be the new parent of the related records.
Usage

```r
sf_merge(
  master_id,
  victim_ids,
  object_name,
  master_fields = character(0),
  api_type = c("SOAP"),
  control = list(...),
  ...,
  verbose = FALSE
)
```

Arguments

- `master_id` character; a Salesforce generated Id that identifies the master record, which is the record to which the victim records will be merged into.
- `victim_ids` character; one or two Salesforce Ids of records to be merged into the master record. Up to three records can be merged in a single request, including the master record. This limit is the same as the limit enforced by the Salesforce user interface. To merge more than 3 records, successively merge records by running `sf_merge` repeatedly.
- `object_name` character; the name of the Salesforce object that the function is operating against (e.g. "Account", "Contact", "CustomObject__c").
- `master_fields` named vector; a vector of field names and values to supersede the master record values. Otherwise, the field values on the master record will prevail.
- `api_type` character; one of "REST", "SOAP", "Bulk 1.0", or "Bulk 2.0" indicating which API to use when making the request.
- `control` list; a list of parameters for controlling the behavior of the API call being used. For more information of what parameters are available look at the documentation for `sf_control`.
- `...` arguments passed to `sf_control`
- `verbose` logical; an indicator of whether to print additional detail for each API call, which is useful for debugging. More specifically, when set to TRUE the URL, header, and body will be printed for each request, along with additional diagnostic information where available.

Value

tbl_df of records with success indicator

Examples

```r
## Not run:
n <- 3
new_contacts <- tibble(FirstName = rep("Test", n),
  LastName = paste0("Contact", 1:n),
  Description = paste0("Description", 1:n))
```
new_recs1 <- sf_create(new_contacts, object_name = "Contact")

# merge the second and third into the first record, but set the
# description field equal to the description of the second. All other fields
# will from the first record or, if blank, from the other records
merge_res <- sf_merge(master_id = new_recs1$id[1],
                      victim_ids = new_recs1$id[2:3],
                      object_name = "Contact",
                      master_fields = tibble("Description" = new_contacts$Description[2]))

# check the second and third records now have the same Master Record Id as the first
merge_check <- sf_query(sprintf("SELECT Id, MasterRecordId, Description
FROM Contact WHERE Id IN ('%s', '%s')",
                           paste0(new_recs1$id, collapse=",'","')),
                           queryall = TRUE)

## End(Not run)

---

**sf_query**

**Perform SOQL Query**

**Description**

*Stable*

Executes a query against the specified object and returns data that matches the specified criteria.

**Usage**

```r
sf_query(
  soql,
  object_name = NULL,
  queryall = FALSE,
  guess_types = TRUE,
  api_type = c("REST", "SOAP", "Bulk 1.0", "Bulk 2.0"),
  control = list(...),
  ..., 
  page_size = deprecated(),
  next_records_url = NULL,
  bind_using_character_cols = deprecated(),
  object_name_append = FALSE,
  object_name_as_col = FALSE,
  verbose = FALSE
)
```

**Arguments**

- `soql` character; a string defining a SOQL query (e.g. "SELECT Id, Name FROM Account").
object_name character; the name of the Salesforce object that the function is operating against (e.g. "Account", "Contact", "CustomObject__c").

queryall logical; indicating if the query recordset should include records that have been deleted because of a merge or delete. Setting this argument to TRUE will also return information about archived Task and Event records. It is available in API versions 29.0 and later.

guess_types logical; indicating whether or not to use col_guess() to try and cast the data returned in the recordset. If TRUE then col_guess() is used, if FALSE then all fields will be returned as character. This is helpful when col_guess() will mangle field values in Salesforce that you’d like to preserve during translation into a tbl_df, like numeric looking values that must be preserved as strings ("48.0").

api_type character; one of "REST", "SOAP", "Bulk 1.0", or "Bulk 2.0" indicating which API to use when making the request.

control list; a list of parameters for controlling the behavior of the API call being used. For more information of what parameters are available look at the documentation for sf_control.

... arguments passed to sf_control or further downstream to sf_query_bulk.

page_size numeric; a number between 200 and 2000 indicating the number of records per page that are returned. Speed benchmarks should be done to better understand the speed implications of choosing high or low values of this argument.

next_records_url character (leave as NULL); a string used internally by the function to paginate through to more records until complete

bind_using_character_cols logical; an indicator of whether to cast the data to all character columns to ensure that bind_rows does not fail because two paginated recordsets have differing datatypes for the same column. Set this to TRUE rarely, typically only when having this set to FALSE returns an error or you want all columns in the data to be character.

object_name_append logical; whether to include the object type (e.g. Account or Contact) as part of the column names (e.g. Account.Name).

object_name_as_col logical; whether to include the object type (e.g. Account or Contact) as a new column.

verbose logical; an indicator of whether to print additional detail for each API call, which is useful for debugging. More specifically, when set to TRUE the URL, header, and body will be printed for each request, along with additional diagnostic information where available.

Value

tbl_df of records
**Note**

Bulk API query doesn’t support the following SOQL:

- COUNT
- ROLLUP
- SUM
- GROUP BY CUBE
- OFFSET
- Nested SOQL queries
- Relationship fields

Additionally, Bulk API can’t access or query compound address or compound geolocation fields.

**References**


**Examples**

```r
## Not run:
sf_query("SELECT Id, Account.Name, Email FROM Contact LIMIT 10")

## End(Not run)
```

---

**Description**

This function is a convenience wrapper for submitting and retrieving query API jobs from the Bulk 1.0 API.

**Usage**

```r
sf_query_bulk_v1(
  soql,
  object_name = NULL,
  queryall = FALSE,
  guess_types = TRUE,
  bind_using_character_cols = deprecated(),
  interval_seconds = 3,
  max_attempts = 200,
  control = list(...),
  ...
)
```

```r
api_type = "Bulk 1.0",
verbose = FALSE
)```
Arguments

soql character; a string defining a SOQL query (e.g. "SELECT Id, Name FROM Account").

object_name character; the name of the Salesforce object that the function is operating against (e.g. "Account", "Contact", "CustomObject__c").

queryall logical; indicating if the query recordset should include records that have been deleted because of a merge or delete. Setting this argument to TRUE will also return information about archived Task and Event records. It is available in API versions 29.0 and later.

guess_types logical; indicating whether or not to use col_guess() to try and cast the data returned in the recordset. If TRUE then col_guess() is used, if FALSE then all fields will be returned as character. This is helpful when col_guess() will mangle field values in Salesforce that you’d like to preserve during translation into a tbl_df, like numeric looking values that must be preserved as strings ("48.0").

bind_using_character-cols logical; an indicator of whether to cast the data to all character columns to ensure that bind_rows does not fail because two paginated recordsets have differing datatypes for the same column. Set this to TRUE rarely, typically only when having this set to FALSE returns an error or you want all columns in the data to be character.

interval_seconds integer; defines the seconds between attempts to check for job completion.

max_attempts integer; defines then max number attempts to check for job completion before stopping.

control list; a list of parameters for controlling the behavior of the API call being used. For more information of what parameters are available look at the documentation for sf_control.

... other arguments passed on to sf_control or sf_create_job_bulk to specify the content_type, concurrency_mode, and/or column_delimiter.

api_type character; one of "REST", "SOAP", "Bulk 1.0", or "Bulk 2.0" indicating which API to use when making the request.

verbose logical; an indicator of whether to print additional detail for each API call, which is useful for debugging. More specifically, when set to TRUE the URL, header, and body will be printed for each request, along with additional diagnostic information where available.

Value

A tbl_df of the recordset returned by the query

References

Bulk 1.0 documentation
## Examples

```r
## Not run:
# select all Ids from Account object (up to 1000)
ids <- sf_query_bulk_v1(soql = 'SELECT Id FROM Account LIMIT 1000',
                        object_name = 'Account')

# alternatively you can specify as
ids <- sf_query(soql = 'SELECT Id FROM Account LIMIT 1000',
                object_name = 'Account',
                api_type="Bulk 1.0")

## End(Not run)
```

### sf_query_bulk_v2

**Run Bulk 2.0 query**

#### Description

This function is a convenience wrapper for submitting and retrieving query API jobs from the Bulk 2.0 API.

#### Usage

```r
sf_query_bulk_v2(
  soql,
  object_name = NULL,
  queryall = FALSE,
  guess_types = TRUE,
  bind_using_character_cols = deprecated(),
  interval_seconds = 3,
  max_attempts = 200,
  control = list(...),
  ...
)
```

#### Arguments

- `soql` character; a string defining a SOQL query (e.g. "SELECT Id, Name FROM Account").
- `object_name` character; the name of the Salesforce object that the function is operating against (e.g. "Account", "Contact", "CustomObject__c").
- `queryall` logical; indicating if the query recordset should include records that have been deleted because of a merge or delete. Setting this argument to TRUE will also return information about archived Task and Event records. It is available in API versions 29.0 and later.
**guess_types** logical; indicating whether or not to use `col_guess()` to try and cast the data returned in the recordset. If TRUE then `col_guess()` is used, if FALSE then all fields will be returned as character. This is helpful when `col_guess()` will mangle field values in Salesforce that you’d like to preserve during translation into a `tbl_df`, like numeric looking values that must be preserved as strings ("48.0").

**bind_using_character_cols** logical; an indicator of whether to cast the data to all character columns to ensure that `bind_rows` does not fail because two paginated recordsets have differing datatypes for the same column. Set this to TRUE rarely, typically only when having this set to FALSE returns an error or you want all columns in the data to be character.

**interval_seconds** integer; defines the seconds between attempts to check for job completion.

**max_attempts** integer; defines the max number attempts to check for job completion before stopping.

**control** list; a list of parameters for controlling the behavior of the API call being used. For more information of what parameters are available look at the documentation for `sf_control`.

... other arguments passed on to `sf_control` or `sf_create_job_bulk` to specify the `content_type`, `concurrency_mode`, and/or `column_delimiter`.

**api_type** character; one of "REST", "SOAP", "Bulk 1.0", or "Bulk 2.0" indicating which API to use when making the request.

**verbose** logical; an indicator of whether to print additional detail for each API call, which is useful for debugging. More specifically, when set to TRUE the URL, header, and body will be printed for each request, along with additional diagnostic information where available.

---

**Value**

A `tbl_df` of the recordset returned by the query

**References**

Bulk 2.0 documentation

**Examples**

```r
## Not run:
# select all Ids from Account object (up to 1000)
ids <- sf_query_bulk_v2(soql = 'SELECT Id FROM Account LIMIT 1000',
                        object_name = 'Account')

# alternatively you can specify as
ids <- sf_query(soql = 'SELECT Id FROM Account LIMIT 1000',
                object_name = 'Account',
                api_type="Bulk 2.0")

## End(Not run)
```
sf_query_report

Get Report Data without Saving Changes to or Creating a Report

Description

[Experimental]

Run a report without creating a new report or changing the existing one by making a POST request to the query resource. This allows you to get report data without filling up your Org with unnecessary reports.

Usage

sf_query_report(report_id, report_metadata = NULL, verbose = FALSE)

Arguments

report_id character; the Salesforce Id assigned to a created analytics report. It will start with "00O".

report_metadata list; a list with one element named "reportMetadata" having additional list elements underneath. All possible elements of reportMetadata are documented HERE, but you will most commonly only need to specify the following 3 elements to filter or query the results of an existing report:

reportFormat A character specifying the format of the report with possible values: "TABULAR", "SUMMARY", "MATRIX", or "MULTI_BLOCK".

reportBooleanFilter A character denoting how the individuals filters specified in reportFilters should be combined. For example, "(1OR4)AND2AND3".

reportFilters A list of reportFilter specifications. Each must be a list with 3 elements: 1) column, 2) operator, and 3) value. You can find out how certain field types can be filtered by reviewing the results of sf_list_report_filter_operators.

verbose logical; an indicator of whether to print additional detail for each API call, which is useful for debugging. More specifically, when set to TRUE the URL, header, and body will be printed for each request, along with additional diagnostic information where available.

Details

Note that you can query a report’s data simply by providing its Id. However, the data will only be the detailed data from the tabular format with no totals or other metadata. If you would like more control, for example, filtering the results or grouping them in specific ways, then you will need to specify a list to the report_metadata argument. The report_metadata argument requires specific knowledge on the structure the reportMetadata property of a report. For more information, please review the Salesforce documentation in detail HERE. Additional references are provided in the “See Also” section.
sf_query_result_bulk

Value

tbl_df

Salesforce Documentation

• Documentation
• Example

See Also

Other Report functions: sf_copy_report(), sf_create_report(), sf_delete_report(), sf_describe_report_type()
sf_describe_report(), sf_execute_report(), sf_list_report_fields(), sf_list_report_filter_operators(),
sf_list_report_types(), sf_list_reports(), sf_run_report(), sf_update_report()
**sf_query_result_bulk**

**guess_types**  
logical; indicating whether or not to use `col_guess()` to try and cast the data returned in the recordset. If TRUE then `col_guess()` is used, if FALSE then all fields will be returned as character. This is helpful when `col_guess()` will mangle field values in Salesforce that you’d like to preserve during translation into a `tbl_df`, like numeric looking values that must be preserved as strings ("48.0").

**bind_using_character_cols**  
logical; an indicator of whether to cast the data to all character columns to ensure that `bind_rows` does not fail because two paginated recordsets have differing datatypes for the same column. Set this to TRUE rarely, typically only when having this set to FALSE returns an error or you want all columns in the data to be character.

**batch_size**  
integer; the number of individual records to be included in a single batch uploaded to the Bulk APIs (1.0 or 2.0).

**api_type**  
character; one of "REST", "SOAP", "Bulk 1.0", or "Bulk 2.0" indicating which API to use when making the request.

**verbose**  
logical; an indicator of whether to print additional detail for each API call, which is useful for debugging. More specifically, when set to TRUE the URL, header, and body will be printed for each request, along with additional diagnostic information where available.

**Value**

`tbl_df`, formatted by Salesforce, containing query results

**References**

Bulk 1.0 documentation and Bulk 2.0 documentation

**Examples**

```r
## Not run:
my_query <- "SELECT Id, Name FROM Account LIMIT 100"
job_info <- sf_create_job_bulk(operation = 'query', object = 'Account')
query_info <- sf_submit_query_bulk(job_id = job_info$id, soql = my_query)
result <- sf_batch_details_bulk(job_id = query_info$jobId,
                                batch_id = query_info$id)
recordset <- sf_query_result_bulk(job_id = query_info$jobId,
                                   batch_id = query_info$id,
                                   result_id = result$result)
sf_close_job_bulk(job_info$id)

## End(Not run)
```
Description

This function returns the row-level recordset of a Bulk 1.0 query which has already been submitted to Bulk API Job and has Completed state.

Usage

```r
sf_query_result_bulk_v1(
  job_id,
  batch_id = NULL,
  result_id = NULL,
  guess_types = TRUE,
  bind_using_character_cols = deprecated(),
  api_type = c("Bulk 1.0"),
  verbose = FALSE
)
```

Arguments

- **job_id** character; the Salesforce Id assigned to a submitted job as returned by `sf_create_job_bulk`. It will start with "750".
- **batch_id** character; the Salesforce Id assigned to a submitted batch as returned by `sf_create_batches_bulk`. It will start with "751".
- **result_id** character; a string returned from `sf_batch_details_bulk` when a query has completed and specifies how to get the recordset.
- **guess_types** logical; indicating whether or not to use `col_guess()` to try and cast the data returned in the recordset. If TRUE then `col_guess()` is used, if FALSE then all fields will be returned as character. This is helpful when `col_guess()` will mangle field values in Salesforce that you’d like to preserve during translation into a tbl_df, like numeric looking values that must be preserved as strings ("48.0").
- **bind_using_character_cols** logical; an indicator of whether to cast the data to all character columns to ensure that `bind_rows` does not fail because two paginated recordsets have differing datatypes for the same column. Set this to TRUE rarely, typically only when having this set to FALSE returns an error or you want all columns in the data to be character.
- **api_type** character; one of "REST", "SOAP", "Bulk 1.0", or "Bulk 2.0" indicating which API to use when making the request.
- **verbose** logical; an indicator of whether to print additional detail for each API call, which is useful for debugging. More specifically, when set to TRUE the URL, header, and body will be printed for each request, along with additional diagnostic information where available.
Value

tbl_df, formatted by Salesforce, containing query results

References

Bulk 1.0 documentation

Examples

```r
## Not run:
my_query <- "SELECT Id, Name FROM Account LIMIT 1000"
job_info <- sf_create_job_bulk(operation = 'query', object = 'Account', api_type="Bulk 1.0")
query_info <- sf_submit_query_bulk(job_id = job_info$id, soql = my_query, api_type="Bulk 1.0")
result <- sf_batch_details_bulk(job_id = query_info$jobId,
                               batch_id = query_info$id)
recordset <- sf_query_result_bulk_v2(job_id = query_info$jobId,
                               batch_id = query_info$id,
                               result_id = result$result)
sf_close_job_bulk(job_info$id, api_type="Bulk 1.0")
## End(Not run)
```

---

`sf_query_result_bulk_v2`

*Retrieve the results of a Bulk 2.0 query*

Description

This function returns the row-level recordset of a Bulk 2.0 query which has already been submitted as a Bulk 2.0 API job and has a JobComplete state.

Usage

```r
sf_query_result_bulk_v2(
  job_id,
  guess_types = TRUE,
  bind_using_character_cols = deprecated(),
  batch_size = 50000,
  locator = NULL,
  api_type = c("Bulk 2.0"),
  verbose = FALSE
)
```

Arguments

- `job_id` character; the Salesforce Id assigned to a submitted job as returned by `sf_create_job_bulk`. It will start with "750".
**guess_types**

logical; indicating whether or not to use `col_guess()` to try and cast the data returned in the recordset. If TRUE then `col_guess()` is used, if FALSE then all fields will be returned as character. This is helpful when `col_guess()` will mangle field values in Salesforce that you’d like to preserve during translation into a tbl_df, like numeric looking values that must be preserved as strings ("48.0").

**bind_using_character_cols**

logical; an indicator of whether to cast the data to all character columns to ensure that `bind_rows` does not fail because two paginated recordsets have differing datatypes for the same column. Set this to TRUE rarely, typically only when having this set to FALSE returns an error or you want all columns in the data to be character.

**batch_size**

integer; the number of individual records to be included in a single batch uploaded to the Bulk APIs (1.0 or 2.0).

**locator**

character; a string returned found in the API response header of a prior iteration of `sf_query_result_bulk_v2` that is included in the query string of the next call to paginate through all records returned by the query.

**api_type**

character; one of "REST", "SOAP", "Bulk 1.0", or "Bulk 2.0" indicating which API to use when making the request.

**verbose**

logical; an indicator of whether to print additional detail for each API call, which is useful for debugging. More specifically, when set to TRUE the URL, header, and body will be printed for each request, along with additional diagnostic information where available.

**Value**

tbl_df, formatted by Salesforce, containing query results

**References**

Bulk 2.0 documentation

**Examples**

```r
## Not run:
my_query <- "SELECT Id, Name FROM Account LIMIT 1000"
job_info <- sf_create_job_bulk(operation = "query", object = "Account", api_type="Bulk 2.0")
query_info <- sf_submit_query_bulk(job_id = job_info$id, soql = my_query, api_type="Bulk 2.0")
result <- sf_batch_details_bulk(job_id = query_info$jobId, batch_id = query_info$id)
recordset <- sf_query_result_bulk(job_id = query_info$jobId, batch_id = query_info$id, result_id = result$result)
sf_close_job_bulk(job_info$id, api_type="Bulk 2.0")
## End(Not run)
```
Description

[Experimental]

This function takes a request of named elements in Salesforce and returns their metadata.

Usage

```r
sf_read_metadata(metadata_type, object_names, verbose = FALSE)
```

Arguments

- `metadata_type` character; string on what type of metadata to create.
- `object_names` a character vector of names that we wish to read metadata for.
- `verbose` logical; an indicator of whether to print additional detail for each API call, which is useful for debugging. More specifically, when set to TRUE the URL, header, and body will be printed for each request, along with additional diagnostic information where available.

Value

A list containing a response for each requested object.

References

https://developer.salesforce.com/docs/atlas.en-us.api_meta.meta/api_meta/

Examples

```r
## Not run:
metadata_info <- sf_read_metadata(metadata_type='CustomObject',
                                  object_names=c('Account'))

## End(Not run)
```
sf_rename_metadata  Rename Metadata Elements in Salesforce

Description

[Experimental]
This function takes an old and new name for a metadata element in Salesforce and applies the new name.

Usage

sf_rename_metadata(metadata_type, old_fullname, new_fullname, verbose = FALSE)

Arguments

metadata_type character; string on what type of metadata to create.
old_fullname character; string corresponding to the fullName of the element you would like to rename
new_fullname character; string corresponding to the new fullName you would like to apply the targeted element
verbose logical; an indicator of whether to print additional detail for each API call, which is useful for debugging. More specifically, when set to TRUE the URL, header, and body will be printed for each request, along with additional diagnostic information where available.

Value

A data.frame containing the creation result for each submitted metadata component

References

https://developer.salesforce.com/docs/atlas.en-us.api_meta.meta/api_meta/

Examples

## Not run:
renamed_custom_object <- sf_rename_metadata(metadata_type = 'CustomObject',
                                          old_fullname = 'Custom_Account32__c',
                                          new_fullname = 'Custom_Account99__c')

## End(Not run)
sf_report_folders_list

*List report folders*

**Description**

*Experimental*

**Usage**

```
sf_report_folders_list()
```

**Value**

list

---

sf_report_folder_children

*Get the subfolders (children) of a report folder*

**Description**

*Experimental*

**Usage**

```
sf_report_folder_children(report_folder_id, page_size = 10, page = NULL)
```

**Arguments**

- **report_folder_id**
  character; the Salesforce Id assigned to a created analytics folder (it will start with "00l").

- **page_size**
  integer; integer that indicates how many results each page returns. Default is 10.

- **page**
  integer; integer that indicates which page of results to return.
sf_report_folder_create

Create report folder

Description

[Experimental]

Usage

sf_report_folder_create(body)

Arguments

body list; a list of data to be formatted as JSON before being sent to an API endpoint. This is NOT validated and is only experimental in allowing users to utilize the API functionality before wrapper functions have been written in R to format and validate the request in a more user-friendly format.

Value

list

sf_report_folder_delete

Delete a report folder

Description

[Experimental]

Usage

sf_report_folder_delete(report_folder_id)

Arguments

report_folder_id character; the Salesforce Id assigned to a created analytics folder (it will start with "00l").

Value

logical
**sf_report_folder_describe**

*Describe a report folder*

**Description**

[Experimental]

**Usage**

```r
sf_report_folder_describe(report_folder_id)
```

**Arguments**

- `report_folder_id` (character); the Salesforce Id assigned to a created analytics folder (it will start with "00l").

**Value**

- list

---

**sf_report_folder_shares_add**

*Add shares to a report folder*

**Description**

[Experimental]

Creates new shares and appends them to the existing share list for the folder.

**Usage**

```r
sf_report_folder_shares_add(report_folder_id, body)
```

**Arguments**

- `report_folder_id` (character): the Salesforce Id assigned to a created analytics folder (it will start with "00l").

- `body` (list): a list of data to be formatted as JSON before being sent to an API end-point. This is NOT validated and is only experimental in allowing users to utilize the API functionality before wrapper functions have been written in R to format and validate the request in a more user-friendly format.
sf_report_folder_shares_list

List the shares in a report folder

Description

[Experimental]

Usage

sf_report_folder_shares_list(report_folder_id)

Arguments

report_folder_id

character; the Salesforce Id assigned to a created analytics folder (it will start
with "00l").

Value

list

sf_report_folder_shares_update

Update the shares for a report folder

Description

[Experimental]

Creates new shares to replace the existing shares in the share list for the folder.

Usage

sf_report_folder_shares_update(report_folder_id, body)

Arguments

report_folder_id

character; the Salesforce Id assigned to a created analytics folder (it will start
with "00l").

body

list; a list of data to be formatted as JSON before being sent to an API end-
point. This is NOT validated and is only experimental in allowing users to utilize
the API functionality before wrapper functions have been written in R to format
and validate the request in a more user-friendly format.
**sf_report_folder_share_delete**

*Delete a report folder share*

**Description**

*[Experimental]*

**Usage**

```
sf_report_folder_share_delete(report_folder_id, share_id)
```

**Arguments**

- `report_folder_id` character; the Salesforce Id assigned to a created analytics folder (it will start with "00l").
- `share_id` character; the Salesforce Id assigned to a created analytics folder share (it will start with "004").

**Value**

logical

---

**sf_report_folder_share_describe**

*Describe a report folder share*

**Description**

*[Experimental]*

**Usage**

```
sf_report_folder_share_describe(report_folder_id, share_id)
```

**Arguments**

- `report_folder_id` character; the Salesforce Id assigned to a created analytics folder (it will start with "00l").
- `share_id` character; the Salesforce Id assigned to a created analytics folder share (it will start with "004").
sf_report_folder_share_recipients

*Get report folder share recipients*

**Description**

[Experimental]

**Usage**

```r
sf_report_folder_share_recipients(
  report_folder_id,
  share_type = c("User", "Group", "Role"),
  search_term = "",
  limit = 100
)
```

**Arguments**

- `report_folder_id` character; the Salesforce Id assigned to a created analytics folder (it will start with "00l").
- `share_type` character; Return data for the recipients of the specified type, such as "User", "Group", or "Role".
- `search_term` character; Search to match share recipients’ names. Default is "" (no restriction).
- `limit` integer; Limit to the number of search results. Default is 100.

**Value**

`list`
sf_report_folder_share_update

Update a report folder share

Description

[Experimental]

Usage

sf_report_folder_share_update(report_folder_id, share_id, body)

Arguments

report_folder_id
character; the Salesforce Id assigned to a created analytics folder (it will start with "00l").

share_id
character; the Salesforce Id assigned to a created analytics folder share (it will start with "004").

body
list; a list of data to be formatted as JSON before being sent to an API endpoint. This is NOT validated and is only experimental in allowing users to utilize the API functionality before wrapper functions have been written in R to format and validate the request in a more user-friendly format.

Value

list

sf_report_folder_update

Update a report folder

Description

[Experimental]

Usage

sf_report_folder_update(report_folder_id, body)
Arguments

```r
report_folder_id
character; the Salesforce Id assigned to a created analytics folder (it will start
with "00l").
```

```r
body
list; a list of data to be formatted as JSON before being sent to an API end-
point. This is NOT validated and is only experimental in allowing users to utilize
the API functionality before wrapper functions have been written in R to format
and validate the request in a more user-friendly format.
```

Value

```r
list
```

---

### sf_reset_password

**Reset User Password**

**Description**

[Experimental]

Changes a user’s password to a temporary, system-generated value.

**Usage**

```r
sf_reset_password(user_id, control = list(...), ..., verbose = FALSE)
```

**Arguments**

```r
user_id
character; the unique Salesforce Id assigned to the User

control
list; a list of parameters for controlling the behavior of the API call being used.
For more information of what parameters are available look at the documenta-
tion for sf_control.

...
arguments passed to sf_control

verbose
logical; an indicator of whether to print additional detail for each API call,
which is useful for debugging. More specifically, when set to TRUE the URL,
header, and body will be printed for each request, along with additional diag-
nostic information where available.
```

**Value**

```r
list
```
Examples

## Not run:

```r
# reset a user's password and ensure that an email is triggered to them
sf_reset_password(user_id = "0056A000000ZZZaaBBB",
                   EmailHeader = list(triggerAutoResponseEmail = FALSE,
                                triggerOtherEmail = FALSE,
                                triggerUserEmail = TRUE))
```

## End(Not run)

---

### sf_retrieve

**Retrieve Records By Id**

#### Description

[Stable]

Retrieves one or more new records to your organization’s data.

#### Usage

```r
sf_retrieve(
  ids,                # vector, matrix, data.frame, or tbl_df; if not a vector, there must be a column called Id (case insensitive) that can be passed in the request.
  fields,             # character; one or more strings indicating the fields to be returned on the records
  object_name,        # character; the name of the Salesforce object that the function is operating against (e.g. "Account" , "Contact", "CustomObject__c")
  api_type = c("REST", "SOAP", "Bulk 1.0", "Bulk 2.0"), # character; one of "REST", "SOAP", "Bulk 1.0", or "Bulk 2.0" indicating which API to use when making the request.
  guess_types = TRUE, # logical; indicating whether or not to use col_guess() to try and cast the data returned in the recordset. If TRUE then col_guess() is used, if FALSE then all fields will be returned as character. This is helpful when col_guess() will mangle field values in Salesforce that you'd like to preserve during translation into a tbl_df, like numeric looking values that must be preserved as strings ("48.0").

  control = list(...),
  ...,
  verbose = FALSE)
```

#### Arguments

- `ids`: vector, matrix, data.frame, or tbl_df; if not a vector, there must be a column called Id (case insensitive) that can be passed in the request.
- `fields`: character; one or more strings indicating the fields to be returned on the records.
- `object_name`: character; the name of the Salesforce object that the function is operating against (e.g. "Account", "Contact", "CustomObject__c").
- `api_type`: character; one of "REST", "SOAP", "Bulk 1.0", or "Bulk 2.0" indicating which API to use when making the request.
- `guess_types`: logical; indicating whether or not to use col_guess() to try and cast the data returned in the recordset. If TRUE then col_guess() is used, if FALSE then all fields will be returned as character. This is helpful when col_guess() will mangle field values in Salesforce that you’d like to preserve during translation into a tbl_df, like numeric looking values that must be preserved as strings ("48.0").
control list: a list of parameters for controlling the behavior of the API call being used. For more information of what parameters are available look at the documentation for `sf_control`.

... arguments passed to `sf_control`

verbose logical; an indicator of whether to print additional detail for each API call, which is useful for debugging. More specifically, when set to TRUE the URL, header, and body will be printed for each request, along with additional diagnostic information where available.

Value
tibble

Examples

```r
## Not run:
n <- 3
new_contacts <- tibble(FirstName = rep("Test", n),
                       LastName = paste0("Contact", 1:n))
new_contacts_result <- sf_create(new_contacts, object_name="Contact")
retrieved_records <- sf_retrieve(ids=new_contacts_result$id,
                                 fields=c("LastName"),
                                 object_name="Contact")

## End(Not run)
```

---

**sf_retrieve_metadata**  
*Make A Request to Retrieve the Metadata*

**Description**

[Experimental]

This function makes a request to retrieve metadata as a package XML files that can be modified and later deployed into an environment.

**Usage**

```r
sf_retrieve_metadata(
  retrieve_request, 
  filename = "package.zip", 
  check_interval = 3, 
  max_tries = 20, 
  verbose = FALSE 
)
```
Arguments

retrieve_request  
a list of parameters defining what XML file representations should be returned
filename  
a file path to save the zip file in the event that it is downloaded. The name must have a .zip extension. The default behavior will be to save in the current working directory as "package.zip"
check_interval  
numeric; specifying the seconds to wait between retrieve status requests to check if complete
max_tries  
numeric; specifying the maximum number of times to check whether the retrieve package.zip is complete before the function times out
verbose  
logical; an indicator of whether to print additional detail for each API call, which is useful for debugging. More specifically, when set to TRUE the URL, header, and body will be printed for each request, along with additional diagnostic information where available.

Value

A list of details from the created retrieve request

Note

See the Salesforce documentation for the proper arguments to create a retrieveRequest. Here is a link to that documentation: https://developer.salesforce.com/docs/atlas.en-us.api_meta.meta/api_meta/meta_retrieve_request.htm

References

https://developer.salesforce.com/docs/atlas.en-us.api_meta.meta/api_meta/meta_retrieve.htm

Examples

```r
## Not run:
retrieve_request <- list(unpackaged=list(types=list(members='*',
                                                name='CustomObject')))  
retrieve_info <- sf_retrieve_metadata(retrieve_request)

## End(Not run)
```

Description

[Stable]

This function is a convenience wrapper for submitting bulk API jobs
Usage

```r
sf_run_bulk_operation(
  input_data, object_name,
  operation = c("insert", "delete", "upsert", "update", "hardDelete"),
  external_id_fieldname = NULL,
  guess_types = TRUE,
  api_type = c("Bulk 1.0", "Bulk 2.0"),
  batch_size = NULL,
  interval_seconds = 3,
  max_attempts = 200,
  wait_for_results = TRUE,
  record_types = c("successfulResults", "failedResults", "unprocessedRecords"),
  combine_record_types = TRUE,
  control = list(...),
  ...,
  verbose = FALSE
)
```

```r
sf_bulk_operation(
  input_data, object_name,
  operation = c("insert", "delete", "upsert", "update", "hardDelete"),
  external_id_fieldname = NULL,
  guess_types = TRUE,
  api_type = c("Bulk 1.0", "Bulk 2.0"),
  batch_size = NULL,
  interval_seconds = 3,
  max_attempts = 200,
  wait_for_results = TRUE,
  record_types = c("successfulResults", "failedResults", "unprocessedRecords"),
  combine_record_types = TRUE,
  control = list(...),
  ...,
  verbose = FALSE
)
```

Arguments

- **input_data**: named vector, matrix, data.frame, or tbl_df; data can be coerced into CSV file for submitting as batch request
- **object_name**: character; the name of the Salesforce object that the function is operating against (e.g. "Account", "Contact", "CustomObject__c").
- **operation**: character; string defining the type of operation being performed
- **external_id_fieldname**: character; string identifying a custom field on the object that has been set as an "External ID" field. This field is used to reference objects during upserts to determine if the record already exists in Salesforce or not.
**sf_run_bulk_operation**

- **guess_types** logical; indicating whether or not to use `col_guess()` to try and cast the data returned in the recordset. If TRUE then `col_guess()` is used, if FALSE then all fields will be returned as character. This is helpful when `col_guess()` will mangle field values in Salesforce that you’d like to preserve during translation into a `tbl_df`, like numeric looking values that must be preserved as strings ("48.0").

- **api_type** character; one of "REST", "SOAP", "Bulk 1.0", or "Bulk 2.0" indicating which API to use when making the request.

- **batch_size** integer; the number of individual records to be included in a single batch uploaded to the Bulk APIs (1.0 or 2.0).

- **interval_seconds** integer; defines the seconds between attempts to check for job completion.

- **max_attempts** integer; defines then max number attempts to check for job completion before stopping.

- **wait_for_results** logical; indicating whether to wait for the operation to complete so that the batch results of individual records can be obtained.

- **record_types** character; one or more types of records to retrieve from the results of running the specified job.

- **combine_record_types** logical; indicating for Bulk 2.0 jobs whether the successfulResults, failedResults, and unprocessedRecords should be stacked together by binding the rows.

- **control** list; a list of parameters for controlling the behavior of the API call being used. For more information of what parameters are available look at the documentation for `sf_control`.

- **verbose** logical; an indicator of whether to print additional detail for each API call, which is useful for debugging. More specifically, when set to TRUE the URL, header, and body will be printed for each request, along with additional diagnostic information where available.

**Value**

A `tbl_df` of the results of the bulk job

**Note**

With Bulk 2.0 the order of records in the response is not guaranteed to match the ordering of records in the original job data.

**See Also**

Salesforce Documentation
Examples

```r
## Not run:

n <- 20
new_contacts <- tibble(FirstName = rep("Test", n),
                      LastName = paste0("Contact", 1:n))
# insert new records into the Contact object
inserts <- sf_bulk_operation(input_data = new_contacts,
                              object_name = "Contact",
                              operation = "insert")

## End(Not run)
```

Description

[Stable]

This function is a convenience wrapper for submitting and retrieving query API jobs from the Bulk 1.0 and Bulk 2.0 APIs.

Usage

```r
sf_run_bulk_query(
  soql,
  object_name = NULL,
  queryall = FALSE,
  guess_types = TRUE,
  bind_using_character_cols = deprecated(),
  interval_seconds = 3,
  max_attempts = 200,
  control = list(...),
  ...
)
```

```r
sf_query_bulk(
  soql,
  object_name = NULL,
  queryall = FALSE,
  guess_types = TRUE,
  bind_using_character_cols = deprecated(),
  interval_seconds = 3,
  max_attempts = 200,
  control = list(...),
  ...
)
```
\begin{verbatim}
api_type = c("Bulk 2.0", "Bulk 1.0"),
verbose = FALSE
)

Arguments

soql character; a string defining a SOQL query (e.g. "SELECT Id, Name FROM Account").

object_name character; the name of the Salesforce object that the function is operating
against (e.g. "Account", "Contact", "CustomObject__c").

queryall logical; indicating if the query recordset should include records that have been
deleted because of a merge or delete. Setting this argument to TRUE will also
return information about archived Task and Event records. It is available in API
versions 29.0 and later.

guess_types logical; indicating whether or not to use \texttt{col_guess()} to try and cast the data
returned in the recordset. If TRUE then \texttt{col_guess()} is used, if FALSE then all
fields will be returned as character. This is helpful when \texttt{col_guess()} will
mangle field values in Salesforce that you’d like to preserve during translation
into a tbl_df, like numeric looking values that must be preserved as strings
("48.0").

bind_using_character_cols logical; an indicator of whether to cast the data to all character columns to
ensure that bind_rows does not fail because two paginated recordsets have dif-
fering datatypes for the same column. Set this to TRUE rarely, typically only
when having this set to FALSE returns an error or you want all columns in the
data to be character.

interval_seconds integer; defines the seconds between attempts to check for job completion.

max_attempts integer; defines then max number attempts to check for job completion before
stopping.

c.control list; a list of parameters for controlling the behavior of the API call being used.
For more information of what parameters are available look at the documentation for sf\_control.

... other arguments passed on to sf\_control or sf\_create\_job\_bulk to specify
the content_type, concurrency_mode, and/or column_delimiter.

api_type character; one of "REST", "SOAP", "Bulk 1.0", or "Bulk 2.0" indicating
which API to use when making the request.

verbose logical; an indicator of whether to print additional detail for each API call,
which is useful for debugging. More specifically, when set to TRUE the URL,
header, and body will be printed for each request, along with additional diag-
nostic information where available.

Value

A tbl\_df of the recordset returned by the query
\end{verbatim}
References

Bulk 1.0 documentation and Bulk 2.0 documentation

Examples

```r
## Not run:
# select all Ids from Account object (up to 1000)
ids <- sf_query_bulk(soql = 'SELECT Id FROM Account LIMIT 1000')

# note that, by default, bulk queries are executed using the Bulk 2.0 API, which
# does not required the object name, but the Bulk 1.0 API can be still be invoked
# for queries by setting api_type="Bulk 1.0".

# alternatively you can specify as:
ids <- sf_query(soql = 'SELECT Id FROM Account LIMIT 1000',
               api_type = "Bulk 2.0")

ids <- sf_query(soql = 'SELECT Id FROM Account LIMIT 1000',
                object_name = 'Account',
                api_type = "Bulk 1.0")

## End(Not run)
```

sf_run_report

Get a report’s data in tabular format

Description

[Experimental]
This function is a convenience wrapper for retrieving the data from a report. By default, it executes
an asynchronous report and waits for the detailed data summarized in a tabular format, before
pulling them down and returning as a tbl_df.

Usage

```r
sf_run_report(
  report_id,
  report_filters = NULL,
  report_boolean_logic = NULL,
  sort_by = character(0),
  decreasing = FALSE,
  top_n = NULL,
  async = TRUE,
  interval_seconds = 3,
  max_attempts = 200,
  wait_for_results = TRUE,
  guess_types = TRUE,
  bind_using_character_cols = deprecated(),
)```
sf_run_report

```
  fact_map_key = "T!T",
  verbose = FALSE
)
```

**Arguments**

- **report_id** character; the Salesforce Id assigned to a created analytics report. It will start with "00O".
- **report_filters** list; A list of reportFilter specifications. Each must be a list with 3 elements: 1) column, 2) operator, and 3) value. You can find out how certain field types can be filtered by reviewing the results of `sf_list_report_filter_operators`.
- **report_boolean_logic** character; a string of boolean logic to parse custom field filters if more than one is specified. For example, if three filters are specified, then they can be combined using the logic "(1 OR 2) AND 3".
- **sort_by** character; the name of the column(s) used to sort the results.
- **decreasing** logical; a indicator of whether the results should be ordered by increasing or decreasing values in `sort_by` column when selecting the top N records. Note, this argument will be ignored if not specifying Top N. You can sort the records using `arrange` after the results are returned.
- **top_n** integer; an integer which sets a row limit filter to a report. The results will be ordered as they appear in the report unless specified differently via the `sort_by` and `decreasing` arguments. Note, it is sometimes helpful to specify the `top_n` argument if a report contains many rows, but you are only interested in a subset of them. Alternatively, you can limit the count of returned rows via the `report_filters` argument.
- **async** logical; an indicator, by default set to `TRUE`, which executes the report asynchronously. If executed asynchronously, this function will return a list of attributes of the created report instance. The results can be pulled down by providing the report id and instance id to the function `sf_get_report_instance_results`. Refer to the details of the documentation on why executing a report asynchronously is preferred.
- **interval_seconds** integer; defines the seconds between attempts to check for job completion.
- **max_attempts** integer; defines then max number attempts to check for job completion before stopping.
- **wait_for_results** logical; indicating whether to wait for the report finish running so that data can be obtained. Otherwise, return the report instance details which can be used to retrieve the results when the async report has finished.
- **guess_types** logical; indicating whether or not to use `col_guess()` to try and cast the data returned in the recordset. If `TRUE` then `col_guess()` is used, if `FALSE` then all fields will be returned as character. This is helpful when `col_guess()` will mangle field values in Salesforce that you’d like to preserve during translation into a `tbl_df`, like numeric looking values that must be preserved as strings ("48.0").
bind_using_character_cols
  logical; an indicator of whether to cast the data to all character columns to ensure that bind_rows does not fail because two paginated recordsets have differing datatypes for the same column. Set this to TRUE rarely, typically only when having this set to FALSE returns an error or you want all columns in the data to be character.

fact_map_key
  character; string providing an index into each section of a fact map, from which you can access summary and detailed data. The pattern for the fact map keys varies by report format so it is important to know what the reportFormat property of the target report is. See the note below for more details.

verbose
  logical; an indicator of whether to print additional detail for each API call, which is useful for debugging. More specifically, when set to TRUE the URL, header, and body will be printed for each request, along with additional diagnostic information where available.

Details
This function is essentially a wrapper around sf_execute_report. Please review or use that function and/or sf_query_report if you want to have more control over how the report is run and what format should be returned. In this case we’ve forced the reportFormat="TABULAR" without total rows and given options to filter, and select the Top N as function arguments rather than forcing the user to create an entire list of reportMetadata.

Value
tbl_df

Salesforce Documentation
- Sync Documentation
- Sync Example
- Async Documentation
- Async Example
- Filtering Results

Note
Below are the fact map key patterns for three report types:

**TABULAR** T!T: The grand total of a report. Both record data values and the grand total are represented by this key.

**SUMMARY** <First level row grouping_second level row grouping_third level row grouping>!T: T refers to the row grand total.

**MATRIX** <First level row grouping_second level row grouping>!<First level column grouping_second level column grouping>.

Each item in a row or column grouping is numbered starting with 0. Here are some examples of fact map keys:
The first item in the first-level grouping.

The second item in the first-level grouping.

The first item in the first-level grouping and the first item in the second-level grouping.

The first item in the first-level grouping and the second item in the second-level grouping.

See Also


Examples

```r
## Not run:
# find a report in your org and run it
all_reports <- sf_query("SELECT Id, Name FROM Report")
this_report_id <- all_reports$Id[1]
results <- sf_run_report(this_report_id)

# apply your own filters to that same report
# set up some filters, if needed
# filter records that was created before this month
filter1 <- list(column = "CREATED_DATE",
                 operator = "lessThan",
                 value = "THIS_MONTH")

# filter records where the account billing address city is not empty
filter2 <- list(column = "ACCOUNT.ADDRESS1_CITY",
                 operator = "notEqual",
                 value = "")

# combine filter1 and filter2 using 'AND' so that records must meet both filters
results_using_AND <- sf_run_report(my_report_id,
                                   report_boolean_logic = "1 AND 2",
                                   report_filters = list(filter1, filter2))

# combine filter1 and filter2 using 'OR' which means that records must meet one
# of the filters but also throw in a row limit based on a specific sort order
results_using_OR <- sf_run_report(my_report_id,
                                   report_boolean_logic = "1 OR 2",
                                   report_filters = list(filter1, filter2),
                                   sort_by = "Contact.test_number__c",
                                   decreasing = TRUE,
                                   top_n = 5)

## End(Not run)
```
sf_search

Perform SOSL Search

Description

[Stable]

Searches for records in your organization’s data.

Usage

sf_search(
  search_string,
  is_sosl = FALSE,
  guess_types = TRUE,
  api_type = c("REST", "SOAP", "Bulk 1.0", "Bulk 2.0"),
  parameterized_search_options = list(...),
  verbose = FALSE,
  ...
)

Arguments

search_string character; string to search using parameterized search or SOSL. Note that is_sosl must be set to TRUE and the string valid in order to perform a search using SOSL.

is_sosl logical; indicating whether or not to try the string as SOSL.

guess_types logical; indicating whether or not to use col_guess() to try and cast the data returned in the recordset. If TRUE then col_guess() is used, if FALSE then all fields will be returned as character. This is helpful when col_guess() will mangle field values in Salesforce that you’d like to preserve during translation into a tbl_df, like numeric looking values that must be preserved as strings ("48.0").

api_type character; one of "REST", "SOAP", "Bulk 1.0", or "Bulk 2.0" indicating which API to use when making the request.

parameterized_search_options list; a list of parameters for controlling the search if not using SOSL. If using SOSL this argument is ignored.

verbose logical; an indicator of whether to print additional detail for each API call, which is useful for debugging. More specifically, when set to TRUE the URL, header, and body will be printed for each request, along with additional diagnostic information where available.

... arguments to be used to form the parameterized search options argument if it is not supplied directly.
Value
tibble

Note
The maximum number of returned rows in the SOSL query results is 2,000. Please refer to the limits [HERE](https://developer.salesforce.com/docs/atlas.en-us.soql_sosl.meta/soql_sosl/sforce_api_calls_sosl.htm) for more detail.

References


Examples

```r
## Not run:
# free text search
area_code_search_string <- "(336)"
search_result <- sf_search(area_code_search_string)

# free text search with parameters
search_result <- sf_search(area_code_search_string,
                           fields_scope = "PHONE",
                           objects = "Lead",
                           fields = c("id", "phone", "firstname", "lastname"))

# using SOSL
my_sosl_search <- paste("FIND {~(336) in phone fields returning",
                         "contact(id, phone, firstname, lastname),",
                         "lead(id, phone, firstname, lastname)"")
sosl_search_result <- sf_search(my_sosl_search, is_sosl=TRUE)

## End(Not run)

---

**sf_server_timestamp**  *Salesforce Server Timestamp*

### Description

[Stable]

Retrieves the current system timestamp from the API.

### Usage

```r
sf_server_timestamp()
```

### Value

`POSIXct` formatted timestamp
Examples

```r
## Not run:
sf_server_timestamp()

## End(Not run)
```

---

**sf_set_password**  
*Set User Password*

**Description**

[Experimental]

Sets the specified user’s password to the specified value.

**Usage**

```
sf_set_password(user_id, password, verbose = FALSE)
```

**Arguments**

- **user_id** character; the unique Salesforce Id assigned to the User
- **password** character; a new password that you would like to set for the supplied user that complies to your organizations password requirements
- **verbose** logical; an indicator of whether to print additional detail for each API call, which is useful for debugging. More specifically, when set to TRUE the URL, header, and body will be printed for each request, along with additional diagnostic information where available.

**Value**

- list

**Examples**

```r
## Not run:
sf_set_password(user_id = "0056A00000ZZZZaaBBB", password="password123")

## End(Not run)
```
**sf_submit_query_bulk**  
*Submit Bulk Query Batch to a Bulk API Job*

**Description**

This function takes a SOQL text string and submits the query to an already existing Bulk API Job of operation "query"

**Usage**

```r
sf_submit_query_bulk(job_id, soql, api_type = c("Bulk 1.0"), verbose = FALSE)
```

**Arguments**

- `job_id` character; the Salesforce Id assigned to a submitted job as returned by `sf_create_job_bulk`. It will start with "750".
- `soql` character; a string defining a SOQL query (e.g. "SELECT Id, Name FROM Account").
- `api_type` character; one of "REST", "SOAP", "Bulk 1.0", or "Bulk 2.0" indicating which API to use when making the request.
- `verbose` logical; an indicator of whether to print additional detail for each API call, which is useful for debugging. More specifically, when set to `TRUE` the URL, header, and body will be printed for each request, along with additional diagnostic information where available.

**Value**

A list parameters of the batch

**Note**

Bulk API query doesn’t support the following SOQL:

- COUNT
- ROLLUP
- SUM
- GROUP BY CUBE
- OFFSET
- Nested SOQL queries
- Relationship fields

Additionally, Bulk API can’t access or query compound address or compound geolocation fields.

**References**

Bulk 1.0 documentation
Examples

```r
## Not run:
my_query <- "SELECT Id, Name FROM Account LIMIT 1000"
job_info <- sf_create_job_bulk(operation = 'query', object = 'Account')
query_info <- sf_submit_query_bulk(job_id = job_info$id, soql = my_query)

## End(Not run)
```

---

**sf_undelete**  
Undelete Records

**Description**

**[Experimental]**  
Undeletes records from the Recycle Bin.

**Usage**

```r
sf_undelete(
  ids,
  api_type = c("SOAP"),
  control = list(...),
  ...
  verbose = FALSE
)
```

**Arguments**

- **ids**  
  vector, matrix, data.frame, or tbl_df; if not a vector, there must be a column called Id (case-insensitive) that can be passed in the request

- **api_type**  
  character; one of "REST", "SOAP", "Bulk 1.0", or "Bulk 2.0" indicating which API to use when making the request.

- **control**  
  list; a list of parameters for controlling the behavior of the API call being used. For more information of what parameters are available look at the documentation for `sf_control`.

- **...**  
  arguments passed to `sf_control`

- **verbose**  
  logical; an indicator of whether to print additional detail for each API call, which is useful for debugging. More specifically, when set to TRUE the URL, header, and body will be printed for each request, along with additional diagnostic information where available.

**Value**

`tbl_df` of records with success indicator
Note
Because the SOAP and REST calls chunk data into batches of 200 records the AllOrNoneHeader will only apply to the success or failure of every batch of records and not all records submitted to the function.

References
https://developer.salesforce.com/docs/atlas.en-us.api.meta/api/sforce_api_calls_undelete.htm

Examples
```r
## Not run:
new_contact <- c(FirstName = "Test", LastName = "Contact")
new_records <- sf_create(new_contact, object_name = "Contact")
delete <- sf_delete(new_records$id[1],
                  AllOrNoneHeader = list(allOrNone = TRUE))
is_deleted <- sf_query(sprintf("SELECT Id, IsDeleted FROM Contact WHERE Id='%s'",
                               new_records$id[1]),
                        queryall = TRUE)
undelete <- sf_undelete(new_records$id[1])
is_not_deleted <- sf_query(sprintf("SELECT Id, IsDeleted FROM Contact WHERE Id='%s'",
                                   new_records$id[1]))
## End(Not run)
```

---

**sf_update**  
*Update Records*

**Description**

[Stable]

Updates one or more records to your organization's data.

**Usage**

```r
sf_update(
  input_data,
  object_name,
  api_type = c("SOAP", "REST", "Bulk 1.0", "Bulk 2.0"),
  guess_types = TRUE,
  control = list(...),
  all_or_none = deprecated(),
  verbose = FALSE
)
```
Arguments

- **input_data**: named vector, matrix, data.frame, or tbl_df; data can be coerced into a data.frame. If performing an update, upsert, or delete operation, then one column or field must be the Id of the record to modify or delete.

- **object_name**: character; the name of the Salesforce object that the function is operating against (e.g., "Account", "Contact", "CustomObject__c").

- **api_type**: character; one of "REST", "SOAP", "Bulk 1.0", or "Bulk 2.0" indicating which API to use when making the request.

- **guess_types**: logical; indicating whether or not to use col_guess() to try and cast the data returned in the recordset. If TRUE then col_guess() is used, if FALSE then all fields will be returned as character. This is helpful when col_guess() will mangle field values in Salesforce that you’d like to preserve during translation into a tbl_df, like numeric looking values that must be preserved as strings ("48.0").

- **control**: list; a list of parameters for controlling the behavior of the API call being used. For more information of what parameters are available look at the documentation for sf_control.

- **...**: arguments passed to sf_control or further downstream to sf_bulk_operation

- **all_or_none**: logical; allows a call to roll back all changes unless all records are processed successfully.

- **verbose**: logical; an indicator of whether to print additional detail for each API call, which is useful for debugging. More specifically, when set to TRUE the URL, header, and body will be printed for each request, along with additional diagnostic information where available.

Value

tbl_df of records with success indicator

Note

Because the SOAP and REST calls chunk data into batches of 200 records the AllOrNoneHeader will only apply to the success or failure of every batch of records and not all records submitted to the function.

Examples

```r
## Not run:
n <- 2
new_contacts <- tibble(FirstName = rep("Test", n),
                        LastName = paste0("Contact", 1:n))
new_records <- sf_create(new_contacts, "Contact")
updated_contacts <- tibble(FirstName = rep("TestTest", n),
                           LastName = paste0("Contact", 1:n),
                           Id = new_records$id)
# update and allow fields to be truncated if they are too long
update <- sf_update(input_data = updated_contacts, object_name = "Contact",
                     all_or_none = TRUE, verbose = TRUE)
```
sf_update_attachment

AllowFieldTruncationHeader=list(allowFieldTruncation=TRUE))

## End(Not run)

sf_update_attachment  Update Attachments

Description

[Experimental]
This function will allow you to update attachments (and other blob data, such as Documents) by providing the Id of the attachment record and the file paths (absolute or relative) to media that you would like to upload to Salesforce along with other supported metadata for this operation (Name, Body, IsPrivate, and OwnerId).

Usage

sf_update_attachment(
  attachment_input_data,
  object_name = c("Attachment"),
  api_type = c("SOAP", "REST", "Bulk 1.0", "Bulk 2.0"),
  control = list(...),
  ...,
  verbose = FALSE
)

Arguments

attachment_input_data
  named vector, matrix, data.frame, or tbl_df; data can be coerced into a data.frame. The input must contain a column entitled 'Body' with an absolute or relative file path (unless creating a Document using a Url) along with other required fields depending on the object. If performing an update operation, then one column or field of the input must be the Id of the record to modify.

object_name
  character; the name of the Salesforce object that the function is operating against (e.g. "Account", "Contact", "CustomObject__c").

api_type
  character; one of "REST", "SOAP", "Bulk 1.0", or "Bulk 2.0" indicating which API to use when making the request.

control
  list; a list of parameters for controlling the behavior of the API call being used. For more information of what parameters are available look at the documentation for sf_control.

...
  arguments passed to sf_control or further downstream to sf_bulk_operation

verbose
  logical; an indicator of whether to print additional detail for each API call, which is useful for debugging. More specifically, when set to TRUE the URL, header, and body will be printed for each request, along with additional diagnostic information where available.
Value

tbl_df with details of the created records

Salesforce Documentation

- Attachment Object (SOAP)
- Document Object (SOAP)
- Insert or Update Blob Data

Note

The length of any file name can’t exceed 512 bytes (per Bulk 1.0 API). The SOAP API create call restricts these files to a maximum size of 25 MB. For a file attached to a Solution, the limit is 1.5 MB. The maximum email attachment size is 3 MB. You can only create or update documents to a maximum size of 5 MB. The REST API allows you to insert or update blob data limited to 50 MB of text data or 37.5 MB of base64-encoded data.

See Also

Other Attachment functions: `check_and_encode_files()`, `sf_create_attachment()`, `sf_delete_attachment()`, `sf_download_attachment()`

Examples

```r
## Not run:
# upload a PDF to a particular record as an Attachment
file_path <- system.file("extdata",
    "data-wrangling-cheatsheet.pdf",
    package = "salesforcer")
parent_record_id <- "0036A000002C6MmQAK" # replace with your own ParentId!
attachment_details <- tibble(Body = file_path, ParentId = parent_record_id)
create_result <- sf_create_attachment(attachment_details)
# download, zip, and re-upload the PDF
pdf_path <- sf_download_attachment(sf_id = create_result$id[1])
zipped_path <- paste0(pdf_path, ".zip")
zip(zipped_path, pdf_path)
attachment_details <- tibble(Id = create_result$id, Body = zipped_path)
update_result <- sf_update_attachment(attachment_details)
## End(Not run)
```
Update Object or Field Metadata in Salesforce

Description

[Experimental]
This function takes a list of Metadata components and sends them to Salesforce to update an object that already exists.

Usage

```
sf_update_metadata(
    metadata_type,
    metadata,
    control = list(...),
    ...,  
    all_or_none = deprecated(),
    verbose = FALSE
)
```

Arguments

- `metadata_type` character; string on what type of metadata to create.
- `metadata` list; metadata components to be created formatted as XML before being sent via API.
- `control` list; a list of parameters for controlling the behavior of the API call being used. For more information of what parameters are available look at the documentation for `sf_control`.
- `...` arguments passed to `sf_control`
- `all_or_none` logical; allows a call to roll back all changes unless all records are processed successfully.
- `verbose` logical; an indicator of whether to print additional detail for each API call, which is useful for debugging. More specifically, when set to `TRUE` the URL, header, and body will be printed for each request, along with additional diagnostic information where available.

Value

A tbl_df containing the creation result for each submitted metadata component.

Note

The update key is based on the fullName parameter of the metadata, so updates are triggered when an existing Salesforce element matches the metadata type and fullName.
See Also

Salesforce Documentation

Examples

```r
## Not run:
# create an object that we can update
base_obj_name <- "Custom_Account1"
custom_object <- list()
custom_object$fullName <- paste0(base_obj_name, "_c")
custom_object$label <- paste0(gsub("_", " ", base_obj_name))
custom_object$pluralLabel <- paste0(base_obj_name, "s")
custom_object$nameField <- list(displayFormat = "\'
\{0000\}'
label = paste0(base_obj_name, ' Number'),
type = 'AutoNumber')
custom_object$deploymentStatus <- 'Deployed'
custom_object$sharingModel <- 'ReadWrite'
custom_object$enableActivities <- 'true'
custom_object$description <- paste0(base_obj_name, " created by the Metadata API")
custom_object_result <- sf_create_metadata(metadata_type = 'CustomObject',
  metadata = custom_object)

# now update the object that was created
update_metadata <- custom_object
update_metadata$fullName <- 'Custom_Account1__c'
update_metadata$label <- 'New Label Custom_Account1'
update_metadata$pluralLabel <- 'Custom_Account1s_new'
updated_custom_object_result <- sf_update_metadata(metadata_type = 'CustomObject',
  metadata = update_metadata)

## End(Not run)
```

---

**sf_update_report**

Update a report

**Description**

[Experimental]

Save changes to a report by sending a PATCH request to the Report resource. Note that saving a report deletes any running async report jobs because they might be obsolete based on the updates.

**Usage**

```r
sf_update_report(report_id, report_metadata, verbose = FALSE)
```

**Arguments**

- `report_id` character; the Salesforce Id assigned to a created analytics report. It will start with "00O".
**sf_update_report**

`report_metadata`  
list: a list representing the properties to create the report with. The names of the list must be one or more of the 3 accepted metadata properties: `reportMetadata`, `reportTypeMetadata`, `reportExtendedMetadata`.

`verbose`  
logical: an indicator of whether to print additional detail for each API call, which is useful for debugging. More specifically, when set to `TRUE` the URL, header, and body will be printed for each request, along with additional diagnostic information where available.

**Value**

list representing the newly cloned report with up to 4 properties that describe the report:

- **attributes**  
  Report type along with the URL to retrieve common objects and joined metadata.

- **reportMetadata**  
  Unique identifiers for groupings and summaries.

- **reportTypeMetadata**  
  Fields in each section of a report type plus filter information for those fields.

- **reportExtendedMetadata**  
  Additional information about summaries and groupings.

**Salesforce Documentation**

- **Example**

**See Also**


**Examples**

```r
# Not run:
# first, grab all possible reports in your Org
all_reports <- sf_query("SELECT Id, Name FROM Report")

# second, get the id of the report to update
this_report_id <- all_reports$Id[1]

my_updated_report <- sf_update_report(this_report_id,
  report_metadata =
    list(reportMetadata =
      list(name = "Updated Report Name!")))

# alternatively, pull down its metadata and update the name
report_details <- sf_describe_report(this_report_id)
report_details$reportMetadata$name <- paste0(report_details$reportMetadata$name,
  " - UPDATED")

# fourth, update the report by passing the metadata
my_updated_report <- sf_update_report(this_report_id,
  report_metadata = report_details)
```
sf_upload_complete_bulk

Signal Upload Complete to Bulk API Job

Description

This function signals that uploads are complete to a Job in the Salesforce Bulk API

Usage

sf_upload_complete_bulk(job_id, api_type = c("Bulk 2.0"), verbose = FALSE)

Arguments

job_id character; the Salesforce Id assigned to a submitted job as returned by sf_create_job_bulk. It will start with "750".
api_type character; one of "REST", "SOAP", "Bulk 1.0", or "Bulk 2.0" indicating which API to use when making the request.
verbose logical; an indicator of whether to print additional detail for each API call, which is useful for debugging. More specifically, when set to TRUE the URL, header, and body will be printed for each request, along with additional diagnostic information where available.

Value

A list of parameters defining the job after signaling a completed upload

Note

This function is typically not used directly. It is used in sf_create_batches_bulk() right after submitting the batches to signal to Salesforce that the batches should no longer be queued.

References

https://developer.salesforce.com/docs/atlas.en-us.api_asynch.meta/api_asynch/

Examples

## Not run:
upload_info <- sf_upload_complete_bulk(job_id=job_info$id)

## End(Not run)
**Description**

[Stable]

Upserts one or more new records to your organization’s data.

**Usage**

```r
sf_upsert(
  input_data,
  object_name,
  external_id_fieldname,
  api_type = c("SOAP", "REST", "Bulk 1.0", "Bulk 2.0"),
  guess_types = TRUE,
  control = list(...),
  ...
)
```

**Arguments**

- `input_data`: named vector, matrix, data.frame, or tbl_df; data can be coerced into a data.frame. If performing an update, upsert, or delete operation, then one column or field must be the Id of the record to modify or delete.
- `object_name`: character; the name of the Salesforce object that the function is operating against (e.g. "Account", "Contact", "CustomObject__c").
- `external_id_fieldname`: character; string identifying a custom field on the object that has been set as an "External ID" field. This field is used to reference objects during upserts to determine if the record already exists in Salesforce or not.
- `api_type`: character; one of "REST", "SOAP", "Bulk 1.0", or "Bulk 2.0" indicating which API to use when making the request.
- `guess_types`: logical; indicating whether or not to use `col_guess()` to try and cast the data returned in the recordset. If TRUE then `col_guess()` is used, if FALSE then all fields will be returned as character. This is helpful when `col_guess()` will mangle field values in Salesforce that you’d like to preserve during translation into a tbl_df, like numeric looking values that must be preserved as strings ("48.0").
- `control`: list; a list of parameters for controlling the behavior of the API call being used. For more information of what parameters are available look at the documentation for `sf_control`.
- `...`: arguments passed to `sf_control` or further downstream to `sf_bulk_operation`
sf_upsert_metadata

all_or_none

logical; allows a call to roll back all changes unless all records are processed successfully.

verbose

logical; an indicator of whether to print additional detail for each API call, which is useful for debugging. More specifically, when set to TRUE the URL, header, and body will be printed for each request, along with additional diagnostic information where available.

Value

tbl_df of records with success indicator

Examples

## Not run:
n <- 2
new_contacts <- tibble(FirstName = rep("Test", n),
                        LastName = paste0("Contact-Create-", 1:n),
                        My_External_Id__c=letters[1:n])
new_contacts_result <- sf_create(new_contacts, object_name="Contact")
upserted_contacts <- tibble(FirstName = rep("Test", n),
                            LastName = paste0("Contact-Upsert-", 1:n),
                            My_External_Id__c=letters[1:n])
new_record <- tibble(FirstName = "Test",
                      LastName = paste0("Contact-Upsert-", n+1),
                      My_External_Id__c=letters[n+1])
upserted_contacts <- bind_rows(upserted_contacts, new_record)
upserted_contacts_result1 <- sf_upsert(upserted_contacts,
                                        object_name="Contact",
                                        "My_External_Id__c")

## End(Not run)

sf_upsert_metadata

Upsert Object or Field Metadata in Salesforce

Description

[Experimental]

This function takes a list of Metadata components and sends them to Salesforce for creation or update if the object already exists

Usage

sf_upsert_metadata(
    metadata_type,  
    metadata,
control = list(...),
...,  
all_or_none = deprecated(),
verbose = FALSE
)

Arguments

metadata_type character; string on what type of metadata to create.
metadata list; metadata components to be created formatted as XML before being sent via API.
control list; a list of parameters for controlling the behavior of the API call being used. For more information of what parameters are available look at the documentation for sf_control.
...
all_or_none argument passed to sf_control
verbose logical; an indicator of whether to print additional detail for each API call, which is useful for debugging. More specifically, when set to TRUE the URL, header, and body will be printed for each request, along with additional diagnostic information where available.

Value

A tbl_df containing the creation result for each submitted metadata component

Note

The upsert key is based on the fullName parameter of the metadata, so updates are triggered when an existing Salesforce element matches the metadata type and fullName.

See Also

Salesforce Documentation

Examples

## Not run:
# create an object that we can confirm the update portion of the upsert
base_obj_name <- "Custom_Account1"
custom_object <- list()
custom_object$fullName <- paste0(base_obj_name, "__c")
custom_object$label <- paste0(gsub("_", " ", base_obj_name))
custom_object$pluralLabel <- paste0(base_obj_name, "s")
custom_object$nameField <- list(displayFormat = "AN-\{0000\}",
    label = paste0(base_obj_name, ' Number'),
    type = 'AutoNumber')
custom_object$deploymentStatus <- 'Deployed'
custom_object$sharingModel <- 'ReadWrite'
custom_object$enableActivities <- 'true'
custom_object$description <- paste0(base_obj_name, " created by the Metadata API")
custom_object_result <- sf_create_metadata(metadata_type = 'CustomObject',
  metadata = custom_object)

# now update the object that was created
upserted_custom_object_result <- sf_upsert_metadata(metadata_type = 'CustomObject',
  metadata = upsert_metadata)

## End(Not run)

### sf_user_info

**Return Current User Info**

**Description**

[Stable]

Retrieves personal information for the user associated with the current session.

**Usage**

```
sf_user_info(api_type = c("SOAP", "Chatter"), verbose = FALSE)
```

**Arguments**

- `api_type` character; one of "REST", "SOAP", "Bulk 1.0", or "Bulk 2.0" indicating which API to use when making the request.
- `verbose` logical; an indicator of whether to print additional detail for each API call, which is useful for debugging. More specifically, when set to TRUE the URL, header, and body will be printed for each request, along with additional diagnostic information where available.

**Value**

list

**Examples**

```
## Not run:
sf_user_info()

## End(Not run)
```
valid_metadata_list

---

**valid_metadata_list** | *List of Valid Data Types*

---

**Description**

A list of data types that are valid for the Metadata API service.

**Usage**

`valid_metadata_list()`

**Value**

codelist; contains name and valid inputs for data types
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