Package ‘salesforcer’

October 14, 2022

Title An Implementation of ‘Salesforce’ APIs Using Tidy Principles

Version 1.0.1

Date 2022-02-28

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 7.1.2
NeedsCompilation: no

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R topics documented:

- collapse_list_with_dupe_names
- metadata_type_validator
- parameterized_search_control
- rforcecom.bulkAction
- rforcecom.bulkQuery
- rforcecom.create
- rforcecom.delete
- rforcecom.getObjectDescription
- rforcecom.getServerTimestamp
- rforcecom.login
- rforcecom.query
- rforcecom.retrieve
- rforcecom.search
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collapse_list_with_dupe_names

*Collapse Elements in List with Same Name*

**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)
```

---

**metadata_type_validator**

*Metadata Data Type Validator*

**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’
metadata_type_validator

**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

ccontent 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

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

ApexPage

ccontent 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
fullName  a character (inherited from Metadata)

ApexTrigger

content  a character formed using base64encode (inherited from MetadataWithContent)

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

AppActionOverride

actionName  a character (inherited from ActionOverride)

AppBrand

footerColor  a character

AppMenuItem

name  a character

type  a character

AppComponentList

alignment  a character

AppMenu

fullName  a character (inherited from Metadata)

AppName

name  a character

type  a character
AppPreferences

customizeMyTabs a character either 'true' or 'false'
keyboardShortcuts a character either 'true' or 'false'
listViewHover a character either 'true' or 'false'
listViewReskin a character either 'true' or 'false'
multiMonitor a character either 'true' or 'false'
pinTabs a character either 'true' or 'false'
TabHover a character either 'true' or 'false'
TabLimits a character either 'true' or 'false'
UserSessions a character either 'true' or 'false'

AppProfileActionOverride

originalName a character (inherited from ProfileActionOverride)
content a character (inherited from ProfileActionOverride)
formFactor a FormFactor (inherited from ProfileActionOverride)
objectTypeName a character (inherited from ProfileActionOverride)
recordType a character (inherited from ProfileActionOverride)
type a ActionOverrideType (inherited from ProfileActionOverride)
originalProfile a character

ApprovalAction

action a WorkflowActionReference

ApprovalEntryCriteria

filters a character

criteriaItems a FilterItem

ApprovalPageField

field a character

ApprovalProcess

fullVersion a character (inherited from Metadata)
active a character either 'true' or 'false'
allowRecall a character either 'true' or 'false'
allowedSubmitters a ApprovalSubmitter
pageFields 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

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

AssignmentRules

fullName a character (inherited from Metadata)
assignmentRule a AssignmentRule

AssistantRecommendationType

fullName a character (inherited from Metadata)
description a character
masterLabel a character
platformActionlist a PlatformActionList
sobjectType a character
title a character

Attachment

content a character formed using base64encode
name a character

AuraDefinitionBundle

fullName a character (inherited from Metadata)
SVGContent a character formed using base64encode
apiVersion a numeric
controllerContent a character formed using base64encode
description a character
designContent 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
consumerSecret a character
customMetadataTypeRecord a character
defaultScopes a character
tokenUrl 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'
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

certificate a character formed using base64encode (inherited from MetadataWithContent)
ciaSigned a character either 'true' or 'false'
encryptedWithPlatformEncryption a character either 'true' or 'false'
expirationDate a character formatted as 'yyyy-mm-ddThh:mm:ssZ'
keySize an integer
masterLabel a character
primaryKeyExportable 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**
metadata_type_validator

.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
.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

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

templateLayout 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

templateSetting a CommunityThemeSetting

CommunityThemeSetting

customThemeLayoutType a character

templateLayout 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
mobileAppConfig a ConnectedAppMobileDetailConfig
mobileStartUrl a character
oauthConfig a ConnectedAppOauthConfig
plugin a character
samlConfig a ConnectedAppSamlConfig
startUrl a character

ConnectedAppAttribute

formula a character
key a character

ConnectedAppCanvasConfig

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

samlInitiationMethod a 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  

**singleLogoutUrl**  a character

**ConnectedAppSamlConfig**

**acsUrl**  a character  
**certificate**  a character  
**encryptionCertificate**  a character  
**encryptionType**  a SamlEncryptionType - which is a character taking one of the following values:
  • AES_128  
  • AES_256  
  • Triple_Des  
**entityUrl**  a character  
**issuer**  a character  
**samlIdpSLOBindingEnum**  a SamlIdpSLOBinding - 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**
metadata_type_validator

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

ccontent 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
endpointUrl a character
isActive a character either 'true' or 'false'

CustomApplication

fullName a character (inherited from Metadata)
actionOverides 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

**CustomApplicationComponent**

**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

**CustomApplicationTranslation**

**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
- `enableErrorPage OverridesForVisualforce` 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 a EncryptedFieldMaskChar - which is a character taking one of the following values:
  • asterisk
  • X
maskType a EncryptedFieldMaskType - which is a character taking one of the following values:
  • all
  • creditCard
• ssn
• lastFour
• sin
• nino

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:
metadata_type_validator

- 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
**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)
backgroundEndColor  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
• 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
• Wide
c
components a DashboardComponent

DashboardComponentSortInfo
c
sortColumn a character
c
sortOrder a character

DashboardFilter
c
dashboardFilterOptions a DashboardFilterOption
c
name a character

DashboardFilterColumn
c
column a character

DashboardFilterOption
c
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
c
values a character

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

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

**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**

**content** 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**

**componentFailures** a DeployMessage
**componentSuccesses** 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
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'
ableEmailToCase  a character either 'true' or 'false'
ableHtmlEmail  a character either 'true' or 'false'
ableOnDemandEmailToCase  a character either 'true' or 'false'
ableThreadIDInBody  a character either 'true' or 'false'
ableThreadIDInSubject  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
**embeddedServiceConfig** 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
**embeddedServiceConfig** a character
**embeddedServiceQuickActions** a EmbeddedServiceQuickAction
**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
**liveAgentContentView** a character
**liveChatButton** a character
**metadata_type_validator**

- **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
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_INVALID** - 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
- **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_IN_SAME_FIELD - 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_INV ALID_LEFTOPERAND - Errors with this extended error code have the following properties: ruleName

• CONDITION_INV ALID_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_INV ALID - 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_MISSING_DATATYPE - Errors with this extended error code have the following properties: elementName, dataType, operatorName, parameterName, ruleName

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

• 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_PROCESSMETADATANAMES_MISSING_NAME - Errors with this extended error code have the following properties: metadataValue
- CUSTOMEVENT_PROCESSMETADATANAMES_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_INVALIDCONNECTOR - Errors with this extended error code have the following properties: elementName
- ELEMENT_INVALIDREFERENCE - Errors with this extended error code have the following properties: elementName
- ELEMENT_MISSINGCONNECTOR - Errors with this extended error code have the following properties: elementName
- ELEMENT_MISSINGLABEL - Errors with this extended error code have the following properties: elementName
- ELEMENT_NAME_INVALID - Errors with this extended error code have the following properties:
- 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
- EXTERNALOBJECTS_NOT_SUPPORTED - Errors with this extended error code have the following properties: objectName
- EXTERNALOBJECTFIELDS_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_MISMATCHED_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
• PROCESSMETADATAVALUES_NOT_SUPPORTED_FOR_PROCESSTYPE - Errors with this extended error code have the following properties: processType, metadataValue
• PROCESSMETADATAVALE_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, elementName, elementType, operatorName
• RECORDFILTER_INVALID_ELEMENT - Errors with this extended error code have the following properties: fieldName, assignmentName, elementName, elementType
• 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, elementName, elementType, operatorName
• RECORDFILTER_MULTIPLE_QUERIES_SAME_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_IS_FALSE - Errors with this extended error code have the following properties: fieldName
• SCREENFIELD_DEFAULT_VALUE_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_FIELDDREFERENCE - 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, fieldName
- SCREENRULE_MISSINg_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, sobjectName
- 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_OBJECT_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_IN_REFERENCEDFLOW - 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
• 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: datatype, fieldName
• VARIABLE_SCALE_EXCEEDS_LIMIT - Errors with this extended error code have the following properties: elementName
• VARIABLE_SCALE_NEGATIVE_INTEGER - Errors with this extended error code have the following properties: elementName
• VARIABLE_SCALE_NULL - Errors with this extended error code have the following properties: elementName
• 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_MISSING_PROCESSMETADATAVALEUES** - 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_PROCESSMETADATAVALEUES_MORE_THAN_ONE_NAME** - Errors with this extended error code have the following properties: metadataValue

• **WORKFLOW_PROCESSMETADATAVALEUES_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
- **endpoint** 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

callerLimit 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
**metadata_type_validator**

- **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
- EXCELT

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:
**metadata_type_validator**

- **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
- activateSessionPermSet
- 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

FlowChoiceUserInputTranslation

promptText a character
validationRule a FlowInputValidationRule

FlowCondition

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

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
- 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**
**metadata_type_validator**

- **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 FlowScreenFieldTypel - 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

**History Retention Policy**

*archiveAfterMonths* an integer
*archiveRetentionYears* an integer
*description* a character

**Holiday**

*activityDate* a character formatted as ‘yyyy-mm-dd’
*businessHours* a character
**metadata_type_validator**

- **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**
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
ditor 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
• 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
• 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
metadata_type_validator

- 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
- **fullName**: a character (inherited from Metadata)
- **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
defaultListViewId  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
navigationMenuItem  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
eemailFooterText a character
eemailSenderAddress a character
eemailSenderName a character
enableCustomVFErrorPageOverrides 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
networkPage Overrides 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
metadata_type_validator

quaternaryColor a character
quaternaryComplementColor a character
secondaryColor a character
staticLogoImageUrl a character
tertiaryColor a character
tertiaryComplementColor 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)
autoActivateNewReminders 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
content 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
• 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'

everName a character

fieldName a character

masterLabel a character

pathAssistantSteps a PathAssistantStep

recordTypeName a character

PathAssistantSettings
**PathAssistantStep**

- **fullName** - a character (inherited from Metadata)
- **pathAssistantEnabled** - a character either ‘true’ or ‘false’

**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’
name a character

PermissionSetExternalDataSourceAccess

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

PermissionSetFieldPermissions

editable 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
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

objectIdName a character

Queue

fullName a character (inherited from Metadata)

doesSendEmailToMembers a character either 'true' or 'false'

eEmail a character

name a character

queueMembers a QueueMembers

queueRoutingConfig a character

queueSubject a QueueSubject
QueueMembers

publicGroups a PublicGroups
roleAndSubordinates a RoleAndSubordinates
roleAndSubordinatesInternal a RoleAndSubordinatesInternal
roles a Roles
users a Users

QueueSobject

sobjectType a character

QuickAction

fullName a character (inherited from Metadata)
canvas a character
description a character
fieldOverrides a FieldOverride
flowDefinition a character
height an integer
icon a character
isProtected a character either 'true' or 'false'
label a character
lightningComponent a character
optionsCreateFeedItem a character either 'true' or 'false'
page a character
quickActionLayout a QuickActionLayout
quickActionSendEmailOptions a QuickActionSendEmailOptions
standardLabel 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
ecludeButtons 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
- EEK
- 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
• MZM
• 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
• SDG
• 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 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)

ReportGrouping

aggregateType 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

dateColumn 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_PREV2FY
  • 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_CURNEX3Q
• 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_NEX7
• INTERVAL_NEX3T0
• 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
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:
• 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'
hsOnForcecomSites  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'
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
cContentType 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
• 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
metadata_type_validator

• 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

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

ccontent  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

erArmorMessage 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
metadata_type_validator

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
masterLabel  a character
templateAssetSourceName  a character
visualizationType  a character

WaveRecipe

content  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'
metadata_type_validator

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
sortByIndex an integer
target a character
tooltip a character
url a character

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

WaveXmdDimensionSalesforceAction
enabled a character either 'true' or 'false'
salesforceActionName a character
sortByIndex 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
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 LookupValueTypetype - 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**

```r
parameterized_search_control(
  objects = NULL,
  fields_scope = c("ALL", "NAME", "EMAIL", "PHONE", "SIDEBAR"),
  fields = NULL,
  overall_limit = 2000,
  default_limit = 200,
  spell_correction = 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](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
object

a character string defining the target salesforce object that the operation will be performed on

eexternal_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.

multiBatch

a boolean value defining whether or not submit data in batches to the API

batchSize

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.

interval_seconds

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

max_attempts

an integer defining the 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 tbl_df of the results of the bulk job

References

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

Examples

## 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

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.

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

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

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

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

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

Value
data.frame containing the id and success indicator of the record creation process

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

Description

[Soft-deprecated]

Usage

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: "999x000000xxxxZ""")

Value

NULL if successful otherwise the function errors out
rforcecom.getObjectDescription

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

Description

[Soft-deprecated]

Usage

rforcecom.getObjectDescription(session, objectName)

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.getServerTimestamp

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

Description

[Soft-deprecated]

Usage

rforcecom.getServerTimestamp(session)
### rforcecom.login

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

### Description

[Soft-deprecated]

### Usage

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

### Arguments

<table>
<thead>
<tr>
<th>Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>username</td>
<td>Your username for login to the Salesforce.com. In many cases, username is your E-mail address.</td>
</tr>
</tbody>
</table>
| 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 "Pass1234XYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXYZXY...
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.

Description

[Soft-deprecated]

Usage

rforcecom.retrieve(session, objectName, fields, limit = NULL, id = NULL, offset = NULL,
order = NULL,
inverse = NULL,
nullsLast = 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 salesforce 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")
The `rforcecom.update` function is the backwards compatible version of `RForcecom::rforcecom.update`.

**Description**

[Soft-deprecated]

**Usage**

```r
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

The `rforcecom.upsert` function is the backwards compatible version of `RForcecom::rforcecom.upsert`.

**Description**

[Soft-deprecated]

**Usage**

```r
rforcecom.upsert(session, objectName, externalIdField, externalId, fields)
```
sf_abort_job_bulk

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 salesforcec 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

```r
## 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

```r
default:
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

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]
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.

Value

```
list
```

---

```
sf_analytics_notification_delete

Delete an analytics notification
```

Description

[Experimental]

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

Description

Describe an analytics notification

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 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_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.
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/s/articleView?language=en_US&id=000314281.

Examples

## 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 .http-oauth-salesforcer)
sf_auth()

# log in to a Sandbox environment
# Via browser or refresh of .http-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)
sf_batch_details_bulk  Returning the Details of a Batch in a Bulk API Job

Description

This function returns detailed (row-by-row) information on an existing batch which has already been submitted to Bulk API Job

Usage

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")
soql <- "SELECT Id, Name FROM Account LIMIT 10"
batch_query_info <- sf_submit_query_bulk(job_id = job_info$id, soql = soql)
batch_details <- sf_batch_details_bulk(job_id=batch_query_info$jobId,
batch_id=batch_query_info$id)
sf_close_job_bulk(job_info$id)

## End(Not run)
```

### sf_batch_status_bulk — 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

```r
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.
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
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='query', object='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 = "TransferNotesAndAttachments"),
list(execute = TRUE, type = "TransferOpenActivities"),
list(execute = TRUE, type = "TransferOrders"),
list(execute = FALSE, type = "TransferOtherOpenOpportunities"),
list(execute = FALSE, type = "TransferOwnedClosedOpportunities"),
list(execute = FALSE, type = "TransferOwnedOpenCases"),
list(execute = FALSE, type = "TransferOwnedOpenOpportunities")),
QueryOptions = list(batchSize = 500),
UserTerritoryDeleteHeader = list(transferToUserId = NA),
BatchRetryHeader = list(`Sforce-Disable-Batch-Retry` = FALSE),
LineEndingHeader = list(`Sforce-Line-Ending` = NA),
PKChunkingHeader = list(`Sforce-Enable-PKChunking` = FALSE),
api_type = NULL,
operation = NULL)
)

**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 sf_query(., api_type = "Bulk 1.0") or sf_query_bulk. For more information, read the Salesforce documentation here.

api_type character; one of "REST", "SOAP", "Bulk 1.0", or "Bulk 2.0" 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

## 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,
        runAsCurrentUser=TRUE))

## End(Not run)

sf_convert_lead

Convert Leads

Description

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

Usage

sf_convert_lead(
    input_data,
    guess_types = TRUE,
    api_type = c("SOAP"),
    control = list(...),
    ...
    verbose = FALSE
)
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.

- **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_dashboard**  
*Copy a dashboard*

**Description**

[Experimental]

**Usage**

```r
sf_copy_dashboard(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_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**

```r
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 "000".
- `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)
```
Description

[Stable]

Adds one or more new records to your organization’s data.

Usage

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

```r
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
)
```
**sf_create_attachment**

**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,            # character; the Salesforce Id assigned to a submitted job as returned by sf_create_job_bulk.
    input_data,        # data frame of Attachment info
    batch_size = NULL, # character, the Salesforce Id assigned to a submitted job as returned by sf_create_job_bulk.
    api_type = c("Bulk 1.0", "Bulk 2.0"),
    verbose = FALSE   # logical
)
```

**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` data frame of Attachment info.
- `batch_size` integer or NULL (default), if not provided, the whole data frame will be submitted in one batch. (Default NULL)
- `api_type` character vector containing one of two options: "Bulk 1.0" or "Bulk 2.0" (default c("Bulk 1.0", "Bulk 2.0"))
- `verbose` logical; if TRUE, the details of the created batches are printed (default FALSE)
**sf_create_job_bulk**

Create Bulk API Job

### Description

This function initializes a Job in the Salesforce Bulk API

**input_data**

name 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)
```
Usage

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; a 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.
**sf_create_job_bulk**

- **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`.

- **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

sf_create_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

See Also

Salesforce Documentation
Examples

```r
## 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("actionOverrides"))] <- 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$fullName <- paste0(this_label, '__c')
custom_metadata$label <- this_label
custom_metadata$pluralLabel <- paste0(this_label, 's')
custom_metadata$nameField <- list(displayFormat='AN-{0000}',
    label='Account Number',
    type='AutoNumber')
custom_metadata$fields <- list(fullName="Phone__c",
    label="Phone",
    type="Phone")
# set the deployment status, this must be set before creation
custom_metadata$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)
```
## 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 `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.
**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,
)```

---

**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)
```
control = list(...),
..., all_or_none = deprecated(), 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.

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

## Not run:

n <- 3
new_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)

---

**sf_delete_attachment**  
Delete Attachments

**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.

See Also
Other Attachment functions: check_and_encode_files(), sf_create_attachment(), sf_download_attachment(), sf_update_attachment()

Examples
## 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)

# now delete the attachment
# note that the function below is just running the following!
# sf_delete(ids = create_result$id)
sf_delete_attachment(ids = create_result$id)

## End(Not run)

---

**sf_delete_dashboard**  
*Delete a dashboard*

Description

[Experimental]

Usage

sf_delete_dashboard(dashboard_id)

Arguments

dashboard_id  character; the Salesforce Id assigned to a created dashboard. It will start with "01Z".

Value

logical
**sf_delete_job_bulk**

*Delete Bulk API Job*

**Description**

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

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

See Also

`sf_list_metadata`, Salesforce Documentation

Examples

```r
## 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**

```r
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)
```
### 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

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_dashboard

**Describe a dashboard**

**Description**

[Experimental]

Returns metadata for the specified dashboard, including dashboard components, filters, layout, and the running user.

**Usage**

```r
sf_describe_dashboard(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`

**See Also**

- Salesforce Documentation
- Salesforce Example
sf\_describe\_dashboard\_components

*Describe dashboard components*

**Description**

[Experimental]

**Usage**

sf\_describe\_dashboard\_components(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\_describe\_metadata  
*Describe the Metadata in an Organization*

**Description**

[Experimental]

This function returns details about the organization metadata

**Usage**

sf\_describe\_metadata(verbos e = FALSE)

**Arguments**

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
References

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(...),
  ...,
  verbose = FALSE
)
```

**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`.
- `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

Examples

```r
## Not run:
acct_fields <- sf_describe_object_fields("Account")
## End(Not run)
```

---

**sf_describe_object_fields**

*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**

```r
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**

```r
## Not run:
acct_fields <- sf_describe_object_fields("Account")
## End(Not run)
```
**sf_describe_report**  
*Describe a report*

**Description**

[Experimental]

Retrieves report, report type, and related metadata for a tabular, summary, or matrix report.

**Usage**

```r
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**

A 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](#)
See Also


Examples

```r
## Not run:
# pull a list of up to 200 recent reports
# (for a full list you must use sf_query on the Report object)
reports <- sf_list_reports()

# id for the first report
reports[[1, "id"]]

# describe that report type
described_report <- sf_describe_report_type(unique_report_types[[1, "id"]])

## End(Not run)
```

sf_describe_report_type

*Describe a report type*

**Description**

Experimental

Return metadata about a report type.

**Usage**

```r
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 the 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

```
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
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

sf_execute_report(
    report_id,
    async = FALSE,
    include_details = TRUE,
sf_execute_report

```r
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 "00O".
- **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)
```

## End(Not run)
Usage

```python
sf_filter_dashboard_operators_list()
```

Value

```
list
```

---

### sf_filter_dashboard_options_analysis

*Get an analysis of the filter options for a dashboard*

**Description**

[Experimental]

**Usage**

```python
sf_filter_dashboard_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_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 diagnostic 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 determine which records in other objects are duplicates.

Examples

```r
## 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"),
   object_name = "Lead")

# 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

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

## 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_jobs_bulk  Get All Bulk API Jobs

Description

This function retrieves details about all Bulk jobs in the org.

Usage

sf_get_all_jobs_bulk(
  parameterized_search_list = list(isPkChunkingEnabled = NULL, jobType = 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:
  - **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:

- `isPkChunkingEnabled` a logical either TRUE or FALSE. TRUE only returns information about jobs where PK Chunking has been enabled.
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.
sf_get_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

sf_get_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_describe_dashboard.

Value

tbl_df
**sf_get_dashboard_status**

*Get the status of a dashboard*

**Description**

[Experimental]

**Usage**

```r
sf_get_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_describe_dashboard`.

**Value**

list

---

**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

```r
## 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
)
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 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)
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.
- **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 TRUE the URL, header, and body will be printed for each request, along with additional diagnostic information where available.

Value

A tbl_df or list of 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

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

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 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 = deprecated(),  # 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 = "T!T",  # character
  verbose = FALSE  # logical
)

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 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.

Value

`tbl_df`; 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.
Examples

```r
## Not run:
# get all updated Contact records from midnight until now
updated_recs <- sf_get_updated("Contact", Sys.Date(), Sys.time())

## End(Not run)
```

### sf_job_batches_bulk

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

```r
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

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)
```

---

**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
 sf_list_dashboards

- 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_dashboards  List dashboards**

**Description**

[Experimental]

Returns a list of recently used dashboards

**Usage**

```r
sf_list_dashboards(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_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

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

```r
## 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_objects**  
*List Organization Objects and their Metadata*

**Description**

[Stable]
Lists the available objects and their metadata for your organization’s data.

**Usage**

```r
sf_list_objects()
```

**Value**

list

**Examples**

```r
## Not run:
sf_list_objects()
## End(Not run)
```

---

**sf_list_reports**  
*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**

```r
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.
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

```r
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=head(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**

```r
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)
```

### 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**

```r
sf_list_report_instances(report_id, as_tbl = TRUE, verbose = FALSE)
```

**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"]]

## End(Not run)
```

**sf_list_report_types**  
*List report types*

### Description

[Experimental]  
Return a list of report types.

### Usage

```r
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

Examples

```r
## 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)
```

**Description**

*List the Resources for an API*

Lists available resources for the specified API version, including resource name and URI.

**Usage**

```r
sf_list_resources()
```

**Value**

list

**Examples**

```r
## Not run:
sf_list_resources()

## End(Not run)
```

**Description**

*List REST API Versions*

Lists summary information about each Salesforce version currently available, including the version, label, and a link to each version’s root.

**Usage**

```r
sf_list_rest_api_versions()
```
sf_merge

## 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 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.

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

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.
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
sf_query

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

**Examples**
```r
## Not run:
sf_query("SELECT Id, Account.Name, Email FROM Contact LIMIT 10")
## End(Not run)
```
**sf_query_bulk_v1**  
*Run Bulk 1.0 query*

**Description**

This function is a convenience wrapper for submitting and retrieving query API jobs from the Bulk 1.0 API.

**Usage**

```
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(...),
  ...
  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.
sf_query_bulk_v2

interval_seconds

integer; defines the seconds between attempts to check for job completion.

max_attempts

integer; defines the max number of 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 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.
sf_query_report

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

## 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)
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.

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

Retrieve the results of a completed bulk query

Description
This function returns the recordset of a bulk query which has already been submitted to the Bulk 1.0 or Bulk 2.0 API and has completed.

Usage
sf_query_result_bulk(
    job_id,
    batch_id = NULL,
    result_id = NULL,
    guess_types = TRUE,
    bind_using_character_cols = deprecated(),
    batch_size = 50000,
    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".

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.

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 1000"
job_info <- sf_create_job_bulk(operation = 'query', object = 'Account')
query_info <- sf_submit_query_bulk(job_id = job_info$id, soql = my_query)
result <- sf_batch_details_bulk(job_id = query_info$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)
```
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$id)
recordset <- sf_query_result_bulk(job_id = query_info$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

```
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.
**sf_read_metadata**

Read Object or Field Metadata from Salesforce

**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**

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$id, soql = my_query, api_type="Bulk 2.0")
result <- sf_batch_details_bulk(job_id = query_info$id, batch_id = query_info$id)
recordset <- sf_query_result_bulk(job_id = query_info$id, batch_id = query_info$id, result_id = result$result)
sf_close_job_bulk(job_info$id, api_type="Bulk 2.0")

## End(Not run)
```
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_refresh_dashboard**  
*Refresh an existing dashboard*

Description

[Experimental]

Usage

```r
sf_refresh_dashboard(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_describe_dashboard`.

Value

list
**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**

```r
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**

```r
## 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
describe_report_folder(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
describe_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 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_report_folder_shares_list**

*List the shares in a report folder*

**Value**

`list`

**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").

**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 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_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").
**Value**

`list`

---

**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

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.

Value

list

sf_reset_password  Reset User Password

Description

[Experimental]
Changes a user’s password to a temporary, system-generated value.

Usage

sf_reset_password(user_id, control = list(...), ..., verbose = FALSE)

Arguments

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

list
Examples

```r
## Not run:
# 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
)
```
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(...),
    ...
)
```

```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(...),
    ...
)
```

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.
**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").

**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 \texttt{sf\_control}.

... other arguments passed on to \texttt{sf\_control} or \texttt{sf\_create\_job\_bulk} to specify the content_type, concurrency_mode, and/or column_delimiter.

**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} 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(...),
  ...
)

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(...),
  ...
)
```
```r
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 `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`.
- **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
## Examples

```r
# Not run:
## 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(),
)```
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:
**sf_run_report**

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 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**

`sf_server_timestamp()`

**Value**

POSIXct formatted timestamp
sf_set_dashboard_sticky_filter

Set a sticky dashboard filter

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

sf_set_dashboard_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_describe_dashboard.

Value

list
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 = "0056A000000ZZZaaBBB", 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**

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").

call  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
def CONTACT = tibble(FirstName = rep("Test", n),
                         LastName = paste0("Contact", 1:n))
def CONTACT = sf_create(new_contacts, "Contact")
def CONTACT = tibble(FirstName = rep("TestTest", n),
                      LastName = paste0("Contact", 1:n),
                      Id = new_records$id)
def CONTACT = sf_update(input_data = updated_contacts, object_name = "Contact",
                        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**

```r
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)
```

---

**sf_update_dashboard**  
**Update a dashboard**

Description

[Experimental]

Usage

`sf_update_dashboard(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

sf_update_metadata 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 = "/\"VarAN-{0000}\"/\"Var/",
                           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)
```

**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.
sf_update_report

Usage

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".

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

## 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)

## End(Not run)

---

**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**

```r
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**

sf_upsert

Examples

```r
## 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(...),
  ...,
  all_or_none = deprecated(),
  verbose = FALSE
)
```

**Arguments**

<table>
<thead>
<tr>
<th>Argument</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>input_data</td>
<td>named vector, matrix, data.frame, or tbl_df; data can be coerced into a</td>
</tr>
<tr>
<td></td>
<td>data.frame. If performing an update, upsert, or delete operation, then one</td>
</tr>
<tr>
<td></td>
<td>column or field must be the Id of the record to modify or delete.</td>
</tr>
<tr>
<td>object_name</td>
<td>character; the name of the Salesforce object that the function is operating</td>
</tr>
<tr>
<td></td>
<td>against (e.g. &quot;Account&quot;, &quot;Contact&quot;, &quot;CustomObject__c&quot;).</td>
</tr>
<tr>
<td>external_id_fieldname</td>
<td>character; string identifying a custom field on the object that has been set</td>
</tr>
<tr>
<td></td>
<td>as an &quot;External ID&quot; field. This field is used to reference objects during</td>
</tr>
<tr>
<td></td>
<td>upserts to determine if the record already exists in Salesforce or not.</td>
</tr>
<tr>
<td>api_type</td>
<td>character; one of &quot;REST&quot;, &quot;SOAP&quot;, &quot;Bulk 1.0&quot;, or &quot;Bulk 2.0&quot; indicating</td>
</tr>
<tr>
<td></td>
<td>which API to use when making the request.</td>
</tr>
<tr>
<td>guess_types</td>
<td>logical; indicating whether or not to use col_guess() to try and cast the</td>
</tr>
<tr>
<td></td>
<td>data returned in the recordset. If TRUE then col_guess() is used, if FALSE</td>
</tr>
<tr>
<td></td>
<td>then all fields will be returned as character. This is helpful when col_guess()</td>
</tr>
<tr>
<td></td>
<td>will mangle field values in Salesforce that you’d like to preserve during</td>
</tr>
<tr>
<td></td>
<td>translation into a tbl_df, like numeric looking values that must be</td>
</tr>
<tr>
<td></td>
<td>preserved as strings (&quot;48.0&quot;).</td>
</tr>
</tbody>
</table>
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

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)
Usage

```r
sf_upsert_metadata(
    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(...),
    ...,          # arguments passed to sf_control
    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`: 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 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

```r
## 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
upsert_metadata <- list(custom_object, custom_object)
upsert_metadata[[1]]$fullName <- 'Custom_Account1__c'
upsert_metadata[[1]]$label <- 'New Label Custom_Account1'
upsert_metadata[[1]]$pluralLabel <- 'Custom_Account1s_new'
upsert_metadata[[2]]$fullName <- 'Custom_Account2__c'
upsert_metadata[[2]]$label <- 'New Label Custom_Account2'
upsert_metadata[[2]]$pluralLabel <- 'Custom_Account2s_new'
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
valid_metadata_list

Examples

```r
## Not run:
sf_user_info()

## End(Not run)
```

---

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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