

# Package: salesforcer (via r-universe)

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**Title** An Implementation of 'Salesforce' APIs Using Tidy Principles

**Version** 1.0.1

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

<[https://trailhead.salesforce.com/en/content/learn/modules/api\\_basics/api\\_basics\\_overview](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.

**License** MIT + file LICENSE

**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), httr (>= 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)

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**VignetteBuilder** knitr

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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**

```
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**

```
## 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**

```
metadata_type_validator(obj_type, obj_data)
```

**Arguments**

<b>obj_type</b>	a string from one of the object types described above
<b>obj_data</b>	a list of lists or a data.frame with the required inputs to create the 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
- HttpHeaders
- HttpGet
- HttpPatch
- HttpPost
- HttpPut

**position** an integer

**requestBody** a character

**userAlias** a character

**userVisibility** a ActionLinkUserVisibility - which is a character taking one of the following values:

- Creator
- Everyone
- EveryoneButCreator
- Manager
- CustomUser
- CustomExcludedUser

### **ActionOverride**

**actionName** a character

**comment** a character

**content** a character

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

- Small
- Medium
- Large

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

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

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

### ActivitiesSettings

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

**meetingRequestsLogo** a character

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

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

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

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

### AddressSettings

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

**countriesAndStates** a CountriesAndStates

### AdjustmentsSettings

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

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



**AgentConfigAssignments**

**profiles** a AgentConfigProfileAssignments

**users** a AgentConfigUserAssignments

**AgentConfigButtons**

**button** a character

**AgentConfigProfileAssignments**

**profile** a character

**AgentConfigSkills**

**skill** a character

**AgentConfigUserAssignments**

**user** a character

**AnalyticsCloudComponentLayoutItem**

**assetType** a character

**devName** a character

**error** a character

**filter** a character

**height** an integer

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

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

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

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

**width** a character

**AnalyticSnapshot**

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

**description** a character

**groupColumn** a character

**mappings** a AnalyticSnapshotMapping

**name** a character

**runningUser** a character

**sourceReport** a character

**targetObject** a character

**AnalyticSnapshotMapping**

**aggregateType** a ReportSummaryType - which is a character taking one of the following values:

- Sum
- Average
- Maximum
- Minimum
- None

**sourceField** a character

**sourceType** a ReportJobSourceTypes - which is a character taking one of the following values:

- tabular
- summary
- snapshot

**targetField** a character

### ApexClass

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

**apiVersion** a numeric

**packageVersions** a PackageVersion

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

- Inactive
- Active
- Deleted

### ApexComponent

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

**apiVersion** a numeric

**description** a character

**label** a character

**packageVersions** a PackageVersion

### ApexPage

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

**apiVersion** a numeric

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

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

**description** a character

**label** a character

**packageVersions** a PackageVersion

### ApexTestSuite

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

**testClassName** a character

### ApexTrigger

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

**apiVersion** a numeric

**packageVersions** a PackageVersion

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

- Inactive
- Active
- Deleted

### AppActionOverride

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

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

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

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

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

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

**pageOrSubjectType** a character

### AppBrand

**footerColor** a character

**headerColor** a character

**logo** a character

**logoVersion** an integer

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

### AppComponentList

**alignment** a character

**components** a character

### AppMenu

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

**appMenuItems** a AppMenuItem

### AppMenuItem

**name** a character

**type** a character

### AppPreferences

**enableCustomizeMyTabs** a character either 'true' or 'false'  
**enableKeyboardShortcuts** a character either 'true' or 'false'  
**enableListViewHover** a character either 'true' or 'false'  
**enableListViewReskin** a character either 'true' or 'false'  
**enableMultiMonitorComponents** a character either 'true' or 'false'  
**enablePinTabs** a character either 'true' or 'false'  
**enableTabHover** a character either 'true' or 'false'  
**enableTabLimits** a character either 'true' or 'false'  
**saveUserSessions** a character either 'true' or 'false'

### AppProfileActionOverride

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

### ApprovalAction

**action** a WorkflowActionReference

### ApprovalEntryCriteria

**booleanFilter** a character  
**criterialItems** a FilterItem  
**formula** a character

### ApprovalPageField

**field** a character

### ApprovalProcess

**fullName** a character (inherited from Metadata)  
**active** a character either 'true' or 'false'  
**allowRecall** a character either 'true' or 'false'  
**allowedSubmitters** a ApprovalSubmitter  
**approvalPageFields** a ApprovalPageField  
**approvalStep** a ApprovalStep

**description** a character  
**emailTemplate** a character  
**enableMobileDeviceAccess** a character either 'true' or 'false'  
**entryCriteria** a ApprovalEntryCriteria  
**finalApprovalActions** a ApprovalAction  
**finalApprovalRecordLock** a character either 'true' or 'false'  
**finalRejectionActions** a ApprovalAction  
**finalRejectionRecordLock** a character either 'true' or 'false'  
**initialSubmissionActions** a ApprovalAction  
**label** a character  
**nextAutomatedApprover** a NextAutomatedApprover  
**postTemplate** a character  
**recallActions** a ApprovalAction  
**recordEditability** a RecordEditabilityType - which is a character taking one of the following values:

- AdminOnly
- AdminOrCurrentApprover

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

### ApprovalStep

**allowDelegate** a character either 'true' or 'false'  
**approvalActions** a ApprovalAction  
**assignedApprover** a ApprovalStepApprover  
**description** a character  
**entryCriteria** a ApprovalEntryCriteria  
**ifCriteriaNotMet** a StepCriteriaNotMetType - which is a character taking one of the following values:

- ApproveRecord
- RejectRecord
- GotoNextStep

**label** a character

**name** a character

**rejectBehavior** a ApprovalStepRejectBehavior

**rejectionActions** a ApprovalAction

### ApprovalStepApprover

**approver** a Approver

**whenMultipleApprovers** a RoutingType - which is a character taking one of the following values:

- Unanimous
- FirstResponse

### **ApprovalStepRejectBehavior**

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

- RejectRequest
- BackToPrevious

### **ApprovalSubmitter**

**submitter** a character

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

- group
- role
- user
- roleSubordinates
- roleSubordinatesInternal
- owner
- creator
- partnerUser
- customerPortalUser
- portalRole
- portalRoleSubordinates
- allInternalUsers

### **Approver**

**name** a character

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

- adhoc
- user
- userHierarchyField
- relatedUserField
- queue

### **AppWorkspaceConfig**

**mappings** a WorkspaceMapping

### **ArticleTypeChannelDisplay**

**articleTypeTemplates** a ArticleTypeTemplate

### **ArticleTypeTemplate**

**channel** a Channel - which is a character taking one of the following values:

- AllChannels
- App
- Pkb
- Csp
- Prm

**page** a character

**template** a Template - which is a character taking one of the following values:

- Page
- Tab
- Toc

### **AssignmentRule**

**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

**subjectType** 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

**errorUrl** 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

**content** a character formed using [base64encode](#) (inherited from MetadataWithContent)  
**caSigned** 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  
**privateKeyExportable** a character either 'true' or 'false'

### ChannelLayout

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

**recordType** a character

### **ChannelLayoutItem**

**field** a character

### **ChartSummary**

**aggregate** a ReportSummaryType - which is a character taking one of the following values:

- Sum
- Average
- Maximum
- Minimum
- None

**axisBinding** a ChartAxis - which is a character taking one of the following values:

- x
- y
- y2
- r

**column** a character

### **ChatterAnswersReputationLevel**

**name** a character

**value** an integer

### **ChatterAnswersSettings**

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

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

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

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

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

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

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

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

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

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

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

**facebookAuthProvider** a character

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

### **ChatterExtension**

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

- Lightning

#### **ChatterMobileSettings**

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

#### **CleanDataService**

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

#### **CleanRule**

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

- Inactive
- Active

**targetSubjectType** 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  
**emailFooterDocument** a character  
**emailHeaderDocument** a character  
**emailNotificationUrl** a character  
**enableChatterAnswers** a character either 'true' or 'false'  
**enablePrivateQuestions** a character either 'true' or 'false'  
**expertsGroup** a character  
**portal** a character  
**reputationLevels** a ReputationLevels  
**showInPortal** a character either 'true' or 'false'  
**site** a character

### **CommunityCustomThemeLayoutType**

**description** a character  
**label** a character

### **CommunityRoles**

**customerUserRole** a character  
**employeeUserRole** a character  
**partnerUserRole** a character

### **CommunityTemplateBundleInfo**

**description** a character  
**image** a character  
**order** an integer  
**title** a character

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

- Highlight
- PreviewImage

### **CommunityTemplateDefinition**

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

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

- c

**bundlesInfo** a CommunityTemplateBundleInfo

**category** a CommunityTemplateCategory - which is a character taking one of the following values:

- IT
- Marketing
- Sales
- Service

**defaultBrandingSet** a character

**defaultThemeDefinition** a character

**description** a character

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

**masterLabel** a character

**navigationLinkSet** a NavigationLinkSet

**pageSetting** a CommunityTemplatePageSetting

### **CommunityTemplatePageSetting**

**page** a character

**themeLayout** a character

### **CommunityThemeDefinition**

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

**customThemeLayoutType** a CommunityCustomThemeLayoutType

**description** a character

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

**masterLabel** a character

**themeSetting** a CommunityThemeSetting

### **CommunityThemeSetting**

**customThemeLayoutType** a character

**themeLayout** a character



**themeLayoutType** a CommunityThemeLayoutType - which is a character taking one of the following values:

- Login
- Home
- Inner

### **CompactLayout**

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

**fields** a character

**label** a character

### **CompanySettings**

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

**fiscalYear** a FiscalYearSettings

### **ComponentInstance**

**componentInstanceProperties** a ComponentInstanceProperty

**componentName** a character

**visibilityRule** a UiFormulaRule

### **ComponentInstanceProperty**

**name** a character

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

- decorator

**value** a character

### **ConnectedApp**

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

**attributes** a ConnectedAppAttribute

**canvasConfig** a ConnectedAppCanvasConfig

**contactEmail** a character

**contactPhone** a character

**description** a character

**iconUrl** a character

**infoUrl** a character

**ipRanges** a ConnectedAppIpRange

**label** a character

**logoUrl** a character

**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
- minitabket

**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**

**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**

**content** a character formed using [base64encode](#) (inherited from MetadataWithContent)  
**format** a ContentAssetFormat - which is a character taking one of the following values:

- Original
- ZippedVersions

**language** a character  
**masterLabel** a character  
**originNetwork** a character  
**relationships** a ContentAssetRelationships  
**versions** a ContentAssetVersions

#### **ContentAssetLink**

**access** a ContentAssetAccess - which is a character taking one of the following values:

- VIEWER
- COLLABORATOR
- INFERRED

**isManagingWorkspace** a character either 'true' or 'false'  
**name** a character

#### **ContentAssetRelationships**

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

#### **ContentAssetVersion**

**number** a character  
**pathOnClient** a character  
**zipEntry** a character

#### **ContentAssetVersions**

**version** a ContentAssetVersion

### **ContractSettings**

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

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

**autoExpirationDelay** a character

**autoExpirationRecipient** a character

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

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

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

### **CorsWhitelistOrigin**

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

**urlPattern** a character

### **CountriesAndStates**

**countries** a Country

### **Country**

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

**integrationValue** a character

**isoCode** a character

**label** a character

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

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

**states** a State

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

### **CspTrustedSite**

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

**description** a character

**endpointUrl** a character

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

### **CustomApplication**

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

**actionOverrides** a AppActionOverride

**brand** a AppBrand

**consoleConfig** a ServiceCloudConsoleConfig

**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

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

**forgotPasswordEmailTemplate** a character

**picassoSite** a character

**sObjectType** a character  
**sendWelcomeEmail** a character either 'true' or 'false'  
**site** a character  
**siteAsContainerEnabled** a character either 'true' or 'false'  
**tabs** a CustomExperienceTabSet  
**urlPathPrefix** a character  
**welcomeEmailTemplate** a character

#### **CustomExperienceBranding**

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

#### **CustomExperienceTabSet**

**customTab** a character  
**defaultTab** a character  
**standardTab** a character

#### **CustomFeedFilter**

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

#### **CustomField**

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

**businessOwnerUser** a character

**businessStatus** a character

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

**customDataType** a character

**defaultValue** a character

**deleteConstraint** a DeleteConstraint - which is a character taking one of the following values:

- Cascade
- Restrict
- SetNull

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

**description** a character

**displayFormat** a character

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

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

**externalDeveloperName** a character

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

**fieldManageability** a FieldManageability - which is a character taking one of the following values:

- DeveloperControlled
- SubscriberControlled
- Locked

**formula** a character

**formulaTreatBlanksAs** a TreatBlanksAs - which is a character taking one of the following values:

- BlankAsBlank
- BlankAsZero

**inlineHelpText** a character

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

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

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

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

**label** a character

**length** an integer

**lookupFilter** a LookupFilter

**maskChar** 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:

- 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

**components** a DashboardComponent

#### **DashboardComponentSortInfo**

**sortColumn** a character

**sortOrder** a character

#### **DashboardFilter**

**dashboardFilterOptions** a DashboardFilterOption

**name** a character

#### **DashboardFilterColumn**

**column** a character

#### **DashboardFilterOption**

**operator** a DashboardFilterOperation - which is a character taking one of the following values:

- equals
- notEqual
- lessThan
- greaterThan
- lessOrEqual
- greaterOrEqual
- contains
- notContain
- startsWith
- includes
- excludes
- between

**values** a character

#### **DashboardFlexTableComponentProperties**

**flexTableColumn** a DashboardComponentColumn

**flexTableSortInfo** a DashboardComponentSortInfo

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

#### **DashboardFolder**

**accessType** a FolderAccessTypes (inherited from Folder)

**folderShares** a FolderShare (inherited from Folder)

**name** a character (inherited from Folder)

**publicFolderAccess** a PublicFolderAccess (inherited from Folder)

**sharedTo** a SharedTo (inherited from Folder)

### **DashboardGridComponent**

**colSpan** an integer

**columnIndex** an integer

**dashboardComponent** a DashboardComponent

**rowIndex** an integer

**rowSpan** an integer

### **DashboardGridLayout**

**dashboardGridComponents** a DashboardGridComponent

**numberOfColumns** an integer

**rowHeight** an integer

### **DashboardMobileSettings**

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

### **DashboardTableColumn**

**aggregateType** a ReportSummaryType - which is a character taking one of the following values:

- Sum
- Average
- Maximum
- Minimum
- None

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

**column** a character

**decimalPlaces** an integer

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

**sortBy** a DashboardComponentFilter - which is a character taking one of the following values:

- RowLabelAscending
- RowLabelDescending
- RowValueAscending
- RowValueDescending

### **DataCategory**

**dataCategory** a DataCategory

**label** a character

**name** a character

### **DataCategoryGroup**

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

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

**dataCategory** a DataCategory

**description** a character

**label** a character

**objectUsage** a ObjectUsage

### DataPipeline

**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 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)

### **EmailServicesAddress**

**authorizedSenders** a character

**developerName** a character

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

**localPart** a character

**runAsUser** a character

### **EmailServicesFunction**

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

**apexClass** a character

**attachmentOption** a EmailServicesAttOptions - which is a character taking one of the following values:

- None
- TextOnly
- BinaryOnly
- All
- NoContent

**authenticationFailureAction** a EmailServicesErrorAction - which is a character taking one of the following values:

- UseSystemDefault
- Bounce



- Discard
- Requeue

**authorizationFailureAction** a EmailServicesErrorAction - which is a character taking one of the following values:

- UseSystemDefault
- Bounce
- Discard
- Requeue

**authorizedSenders** a character

**emailServicesAddresses** a EmailServicesAddress

**errorRoutingAddress** a character

**functionInactiveAction** a EmailServicesErrorAction - which is a character taking one of the following values:

- UseSystemDefault
- Bounce
- Discard
- Requeue

**functionName** a character

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

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

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

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

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

**overLimitAction** a EmailServicesErrorAction - which is a character taking one of the following values:

- UseSystemDefault
- Bounce
- Discard
- Requeue

## EmailTemplate

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

**apiVersion** a numeric

**attachedDocuments** a character

**attachments** a Attachment

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

**description** a character

**encodingKey** a Encoding - which is a character taking one of the following values:

- UTF-8

- ISO-8859-1
- Shift\_JIS
- ISO-2022-JP
- EUC-JP
- ks\_c\_5601-1987
- Big5
- GB2312
- Big5-HKSCS
- x-SJIS\_0213

**letterhead** a character

**name** a character

**packageVersions** a PackageVersion

**relatedEntityType** a character

**style** a EmailTemplateStyle - which is a character taking one of the following values:

- none
- freeForm
- formalLetter
- promotionRight
- promotionLeft
- newsletter
- products

**subject** a character

**textOnly** a character

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

- text
- html
- custom
- visualforce

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

- Aloha
- SFX
- SFX\_Sample

### **EmailToCaseRoutingAddress**

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

- EmailToCase
- Outlook

**authorizedSenders** a character

**caseOrigin** a character

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

#### **EmailToCaseSettings**

**enableE2CSourceTracking** a character either 'true' or 'false'  
**enableEmailToCase** a character either 'true' or 'false'  
**enableHtmlEmail** a character either 'true' or 'false'  
**enableOnDemandEmailToCase** a character either 'true' or 'false'  
**enableThreadIDInBody** a character either 'true' or 'false'  
**enableThreadIDInSubject** a character either 'true' or 'false'  
**notifyOwnerOnNewCaseEmail** a character either 'true' or 'false'  
**overEmailLimitAction** a EmailToCaseOnFailureActionType - which is a character taking one of the following values:

- Bounce
- Discard
- Requeue

**preQuoteSignature** a character either 'true' or 'false'  
**routingAddresses** a EmailToCaseRoutingAddress  
**unauthorizedSenderAction** a EmailToCaseOnFailureActionType - which is a character taking one of the following values:

- Bounce
- Discard
- Requeue

#### **EmbeddedServiceBranding**

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

**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  
**liveAgentContentUrl** a character  
**liveChatButton** a character

**liveChatDeployment** a character  
**masterLabel** a character  
**prechatBackgroundImg** a character  
**prechatEnabled** a character either 'true' or 'false'  
**prechatJson** a character  
**scenario** a EmbeddedServiceScenario - which is a character taking one of the following values:

- Sales
- Service
- Basic

**smallCompanyLogoImg** a character  
**waitingStateBackgroundImg** a character

**EmbeddedServiceQuickAction**

**embeddedServiceLiveAgent** a character  
**order** an integer  
**quickActionDefinition** a character

**EntitlementProcess**

**fullName** a character (inherited from Metadata)  
**ObjectType** 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
- APEXCALLOUT\_REQUIRED\_INPUT\_MISSING - Errors with this extended error code have the following properties: apexClassName, parameterName
- APEXCLASS\_MISSING\_INTERFACE - Errors with this extended error code have the following properties: apexClassName, parentScreenFieldName
- ASSIGNMENTITEM\_ELEMENT\_MISSING\_DATATYPE - Errors with this extended error code have the following properties: assignmentName, operatorName, elementName



- ASSIGNMENTITEM\_ELEMENT\_NOT\_SUPPORTED - Errors with this extended error code have the following properties: elementName, assignmentName, elementType
- ASSIGNMENTITEM\_FIELD\_INVALID\_DATATYPE - Errors with this extended error code have the following properties: fieldValue, dataType, incompatibleDataType
- ASSIGNMENTITEM\_FIELD\_INVALID\_DATATYPE\_WITH\_ELEMENT - Errors with this extended error code have the following properties: elementName, acceptedDataType, dataType, fieldValue
- ASSIGNMENTITEM\_INCOMPATIBLE\_DATATYPES - Errors with this extended error code have the following properties: assignmentName, operatorName, leftElementName, leftElementType, rightElementName, rightElementType
- ASSIGNMENTITEM\_INVALID\_COLLECTION - Errors with this extended error code have the following properties: assignmentName, operatorName, leftElementName, rightElementName
- ASSIGNMENTITEM\_INVALID\_DATATYPE\_IN\_ELEMENT - Errors with this extended error code have the following properties: elementName, dataType, incompatibleDataType
- ASSIGNMENTITEM\_INVALID\_REFERENCE - Errors with this extended error code have the following properties: parameterName, operatorName
- ASSIGNMENTITEM\_LEFT\_DATATYPE\_INVALID\_FOR\_OPERATOR - Errors with this extended error code have the following properties: assignmentName, operatorName, dataType, elementName
- ASSIGNMENTITEM\_MODIFIES\_NONVARIABLE - Errors with this extended error code have the following properties: assignmentName
- ASSIGNMENTITEM\_NONEXISTENT\_REFERENCE - Errors with this extended error code have the following properties: parameterName, operatorName
- ASSIGNMENTITEM\_REQUIRED - Errors with this extended error code have the following properties: assignmentName
- ASSIGNMENTITEM\_RIGHT\_DATATYPE\_INVALID\_FOR\_OPERATOR - Errors with this extended error code have the following properties: elementName
- AUTOLAUNCHED\_CHOICELOOKUP\_NOT\_SUPPORTED - Errors with this extended error code have the following properties: choiceLookupName
- AUTOLAUNCHED\_CHOICE\_NOT\_SUPPORTED - Errors with this extended error code have the following properties: choiceName
- AUTOLAUNCHED\_SCREEN\_NOT\_SUPPORTED - Errors with this extended error code have the following properties:
- AUTOLAUNCHED\_STEP\_NOT\_SUPPORTED - Errors with this extended error code have the following properties:
- AUTOLAUNCHED\_SUBFLOW\_INCOMPATIBLE\_FLOWTYPE - Errors with this extended error code have the following properties: subflowType
- AUTOLAUNCHED\_WAIT\_NOT\_SUPPORTED - Errors with this extended error code have the following properties:
- CHOICEFIELD\_DEFAULT\_CHOICE\_NOT\_FOUND - Errors with this extended error code have the following properties: screenFieldName
- CHOICEFIELD\_MISSING\_CHOICE - Errors with this extended error code have the following properties: questionName
- CHOICELOOKUP\_DATATYPE\_INCOMPATIBLE\_WITH\_CHOICEFIELD - Errors with this extended error code have the following properties: choiceName, parentScreenFieldName

- CHOICE\_DATATYPE\_INCOMPATIBLE\_WITH\_CHOICEFIELD - Errors with this extended error code have the following properties: choiceName, parentScreenFieldName
- CHOICE\_NOT\_SUPPORTED\_FOR\_SCREENFIELDTYPE - Errors with this extended error code have the following properties: elementName, screenFieldName
- CHOICE\_USED\_MULTIPLE\_TIMES\_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\_INVALID\_LEFTOPERAND - Errors with this extended error code have the following properties: ruleName
- CONDITION\_INVALID\_LEFT\_ELEMENT - Errors with this extended error code have the following properties: elementName, dataType, operatorName, parameterName, ruleName
- CONDITION\_LOGIC\_EXCEEDS\_LIMIT - Errors with this extended error code have the following properties: elementName, characterLimit
- CONDITION\_LOGIC\_INVALID - Errors with this extended error code have the following properties: elementName
- CONDITION\_LOGIC\_MISSING - Errors with this extended error code have the following properties: elementName
- CONDITION\_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\_PROCESSMETADATAVALUES\_MISSING\_NAME - Errors with this extended error code have the following properties: metadataValue
- CUSTOMEVENT\_PROCESSMETADATAVALUES\_MORE\_THAN\_ONE\_NAME - Errors with this extended error code have the following properties: metadataValue
- DATATYPE\_INVALID - Errors with this extended error code have the following properties: elementName, dataType
- DATATYPE\_MISSING - Errors with this extended error code have the following properties: elementName
- DECISION\_DEFAULT\_CONNECTOR\_MISSING\_LABEL - Errors with this extended error code have the following properties: flowDecision
- DECISION\_MISSING\_OUTCOME - Errors with this extended error code have the following properties: flowDecision
- ELEMENT\_CONNECTS\_TO\_SELF - Errors with this extended error code have the following properties: elementName
- ELEMENT\_COORDINATES\_INVALID - Errors with this extended error code have the following properties: coordinateLimit, coordinateName
- ELEMENT\_INVALID\_CONNECTOR - Errors with this extended error code have the following properties: elementName
- ELEMENT\_INVALID\_REFERENCE - Errors with this extended error code have the following properties: elementName
- ELEMENT\_MISSING\_CONNECTOR - Errors with this extended error code have the following properties: elementName
- ELEMENT\_MISSING\_LABEL - Errors with this extended error code have the following properties: characterLimit, elementName
- ELEMENT\_MISSING\_NAME - Errors with this extended error code have the following properties: characterLimit
- ELEMENT\_MISSING\_REFERENCE - Errors with this extended error code have the following properties: elementName
- ELEMENT\_MORE\_THAN\_ONE\_FIELD - 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
- EXTERNAL\_OBJECTS\_NOT\_SUPPORTED - Errors with this extended error code have the following properties: objectName
- EXTERNAL\_OBJECT\_FIELDS\_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\_REFERENCES\_SAME\_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\_ASSIGNNEXTVALUETO\_MISMATCHED\_DATATYPE - Errors with this extended error code have the following properties: elementName
- LOOP\_ASSIGNNEXTVALUETO\_MISMATCHED\_OBJECTTYPE - Errors with this extended error code have the following properties: elementName
- LOOP\_ASSIGNNEXTVALUETO\_MISSING - Errors with this extended error code have the following properties: elementName
- LOOP\_ASSIGNNEXTVALUETO\_MISSING\_VARIABLE - Errors with this extended error code have the following properties: elementName
- LOOP\_ASSIGNNEXTVALUETO\_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
- LOOP\_MISSING\_COLLECTION - Errors with this extended error code have the following properties:
- OBJECTTYPE\_INVALID - Errors with this extended error code have the following properties: objectType
- OBJECT\_CANNOT\_BE\_CREATED - Errors with this extended error code have the following properties: objectName
- OBJECT\_CANNOT\_BE\_DELETED - Errors with this extended error code have the following properties: objectName
- OBJECT\_CANNOT\_BE\_QUERIED - Errors with this extended error code have the following properties: objectName
- OBJECT\_CANNOT\_BE\_UPDATED - Errors with this extended error code have the following properties: objectName
- OBJECT\_ENCRYPTED\_FIELDS\_NOT\_SUPPORTED - Errors with this extended error code have the following properties: fieldName
- OBJECT\_NOT\_FOUND - Errors with this extended error code have the following properties: objectName
- OUTPUTPARAM\_ASSIGNTOREFERENCE\_NOTFOUND - Errors with this extended error code have the following properties: parameterName
- OUTPUTPARAM\_INCOMPATIBLE\_DATATYPE - Errors with this extended error code have the following properties: parameterName

- OUTPUTPARAM\_MISMATCHED\_OBJECTTYPE - Errors with this extended error code have the following properties: parameterName
- OUTPUTPARAM\_MISMATCHED\_WITH\_COLLECTION\_VARIABLE - Errors with this extended error code have the following properties: parameterName
- OUTPUTPARAM\_MISSING\_ASSIGNTOREFERENCE - Errors with this extended error code have the following properties: parameterName
- OUTPUTPARAM\_MISMATCHED\_WITH\_NONCOLLECTION\_VARIABLE - Errors with this extended error code have the following properties: parameterName
- PARAM\_DATATYPE\_NOT\_SUPPORTED - Errors with this extended error code have the following properties: parameterName
- PROCESSMETADATAVALUES\_NOT\_SUPPORTED\_FOR\_PROCESSTYPE - Errors with this extended error code have the following properties: processType, metadataValue
- PROCESSMETADATAVALUE\_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\_DEFAULTVALUE\_NOT\_SUPPORTED - Errors with this extended error code have the following properties: elementName
- SCREENFIELD\_EXTENSION\_COMPONENT\_NOT\_GLOBAL - Errors with this extended error code have the following properties: elementName
- SCREENFIELD\_EXTENSION\_DUPLICATE\_INPUT\_PARAM - Errors with this extended error code have the following properties: elementName, extensionName, parameterName
- SCREENFIELD\_EXTENSION\_DUPLICATE\_OUTPUT\_PARAM - Errors with this extended error code have the following properties: elementName, extensionName, parameterName
- SCREENFIELD\_EXTENSION\_IMPLEMENTATION\_INVALID - Errors with this extended error code have the following properties: elementName, extensionName
- SCREENFIELD\_EXTENSION\_INPUT\_ATTRIBUTE\_INVALID - Errors with this extended error code have the following properties: elementName, extensionName, parameterName
- SCREENFIELD\_EXTENSION\_NAME\_INVALID - Errors with this extended error code have the following properties: elementName, extensionName
- SCREENFIELD\_EXTENSION\_NAME\_MISSING - Errors with this extended error code have the following properties: elementName, fieldType
- SCREENFIELD\_EXTENSION\_NAME\_NOT\_SUPPORTED - Errors with this extended error code have the following properties: elementName, fieldType
- SCREENFIELD\_EXTENSION\_OUTPUT\_ATTRIBUTE\_INVALID - Errors with this extended error code have the following properties: elementName, extensionName, parameterName
- SCREENFIELD\_EXTENSION\_REQUIRED\_INPUT\_MISSING - Errors with this extended error code have the following properties: elementName, extensionName, parameterName
- SCREENFIELD\_INPUTS\_NOT\_SUPPORTED - Errors with this extended error code have the following properties: elementName, fieldType
- SCREENFIELD\_INVALID\_DATATYPE - Errors with this extended error code have the following properties: dataType, fieldType
- SCREENFIELD\_MULTISELECTCHOICE\_SEMICOLON\_NOT\_SUPPORTED - Errors with this extended error code have the following properties: choiceName
- SCREENFIELD\_OUTPUTS\_NOT\_SUPPORTED - Errors with this extended error code have the following properties: elementName, fieldType
- SCREENFIELD\_TYPE\_NOT\_SUPPORTED - Errors with this extended error code have the following properties: elementName, fieldType
- SCREENFIELD\_USERINPUT\_NOT\_SUPPORTED\_FOR\_CHOICETYPE - Errors with this extended error code have the following properties: choiceName
- SCREENFIELD\_VALIDATIONRULE\_NOT\_SUPPORTED - Errors with this extended error code have the following properties: elementName
- SCREENRULE\_ACTION\_INVALID\_ATTRIBUTE - Errors with this extended error code have the following properties: screenRuleName, attributeName
- SCREENRULE\_ACTION\_INVALID\_ATTRIBUTE\_FOR\_API\_VERSION - Errors with this extended error code have the following properties: screenRuleName, attributeName

- SCREENRULE\_ACTION\_INVALID\_VALUE - Errors with this extended error code have the following properties: screenRuleName, acceptedValues, actionValue
- SCREENRULE\_ACTION\_MISSING\_ATTRIBUTE - Errors with this extended error code have the following properties: screenRuleName
- SCREENRULE\_ACTION\_MISSING\_FIELDREFERENCE - Errors with this extended error code have the following properties: screenRuleName
- SCREENRULE\_ACTION\_MISSING\_VALUE - Errors with this extended error code have the following properties: screenRuleName
- SCREENRULE\_ATTRIBUTE\_NOT\_SUPPORTED\_FOR\_SCREENFIELD - Errors with this extended error code have the following properties: screenRuleName, attributeName, fieldName
- SCREENRULE\_FIELD\_NOT\_FOUND\_ON\_SCREEN - Errors with this extended error code have the following properties: screenRuleName, fieldValue
- SCREENRULE\_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
- SUBJECT\_ELEMENT\_INCOMPATIBLE\_DATATYPE - Errors with this extended error code have the following properties: fieldName, fieldValue
- SUBJECT\_ELEMENT\_MISMATCHED\_OBJECTTYPE - Errors with this extended error code have the following properties: objectType, objectName
- SORT\_ENCRYPTED\_FIELDS\_NOT\_SUPPORTED - Errors with this extended error code have the following properties: fieldName, objectType
- SORT\_FIELD\_MISSING - Errors with this extended error code have the following properties: sortOrder



- SORT\_FIELD\_NOT\_SUPPORTED - Errors with this extended error code have the following properties: fieldName, objectName
- SORT\_GEOLOCATION\_FIELDS\_NOT\_SUPPORTED - Errors with this extended error code have the following properties: fieldName, objectName
- SORT\_LIMIT\_INVALID - Errors with this extended error code have the following properties: maxLimit
- SORT\_ORDER\_MISSING - Errors with this extended error code have the following properties: fieldName
- SPECIFIC\_FIELD\_VALUE\_MAKES\_OTHER\_FIELD\_REQUIRED - Errors with this extended error code have the following properties: fieldName, fieldType, requiredField
- START\_ELEMENT\_MISSING - Errors with this extended error code have the following properties:
- SUBFLOW\_DESKTOP\_DESIGNER\_FLOWS\_NOT\_SUPPORTED - Errors with this extended error code have the following properties: flowName
- SUBFLOW\_INPUT\_ELEMENT\_INCOMPATIBLE\_DATATYPES - Errors with this extended error code have the following properties: subflowName, inputAssignmentNames
- SUBFLOW\_INPUT\_INVALID\_VALUE - Errors with this extended error code have the following properties: subflowName, inputAssignmentNames
- SUBFLOW\_INPUT\_MISMATCHED\_COLLECTIONTYPES - Errors with this extended error code have the following properties: subflowName, inputParameterNames
- SUBFLOW\_INPUT\_MISMATCHED\_OBJECTS - Errors with this extended error code have the following properties: subflowName, inputParameterNames
- SUBFLOW\_INPUT\_MISSING\_NAME - Errors with this extended error code have the following properties: subflowName
- SUBFLOW\_INPUT\_MULTIPLE\_ASSIGNMENTS\_TO\_ONE\_VARIABLE - Errors with this extended error code have the following properties: inputVariableName
- SUBFLOW\_INPUT\_REFERENCES\_FIELD\_ON\_SUBJECT\_VARIABLE - Errors with this extended error code have the following properties: inputVariableName
- SUBFLOW\_INPUT\_VALUE\_INCOMPATIBLE\_DATATYPES - Errors with this extended error code have the following properties: subflowName, inputAssignmentNames
- SUBFLOW\_INPUT\_VARIABLE\_NOT\_FOUND\_IN\_MASTERFLOW - Errors with this extended error code have the following properties: subflowName, inputAssignmentNames
- SUBFLOW\_INPUT\_VARIABLE\_NOT\_FOUND\_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
- SUBFLOW\_OUTPUT\_VARIABLE\_NOT\_FOUND\_IN\_REFERENCEDFLOW - Errors with this extended error code have the following properties: subflowName, flowVersion, outputParameterNames
- SUBFLOW\_OUTPUT\_VARIABLE\_NO\_OUTPUT\_ACCESS - Errors with this extended error code have the following properties: subflowName, variableName
- SUBFLOW\_REFERENCES\_MASTERFLOW - Errors with this extended error code have the following properties:
- SURVEY\_CHOICE\_NOT\_REFERENCED\_BY\_A\_QUESTION - Errors with this extended error code have the following properties: choiceName
- SURVEY\_CHOICE\_REFERENCED\_BY\_MULTIPLE\_QUESTIONS - Errors with this extended error code have the following properties: choiceName
- SURVEY\_INACTIVE\_SUBFLOWS - Errors with this extended error code have the following properties: subflowName
- SURVEY\_MISSING\_QUESTION\_OR\_SUBFLOW - Errors with this extended error code have the following properties: surveyName
- SURVEY\_MISSING\_REQUIRED\_VARIABLES - Errors with this extended error code have the following properties: surveyName
- SURVEY\_NESTED\_SUBFLOWS - Errors with this extended error code have the following properties: subflowName
- SURVEY\_NONSURVEY\_SUBFLOWS - Errors with this extended error code have the following properties: subflowName
- SURVEY\_SCREENFIELD\_TYPE\_NOT\_SUPPORTED\_FOR\_QUESTION - Errors with this extended error code have the following properties: elementName

- SURVEY\_START\_ELEMENT\_INVALID - Errors with this extended error code have the following properties:
- SURVEY\_VARIABLE\_ACCESS\_INVALID - Errors with this extended error code have the following properties: surveyName
- UNEXPECTED\_ERROR - Errors with this extended error code have the following properties:
- VALUE\_CHAR\_LIMIT\_EXCEEDED - Errors with this extended error code have the following properties: elementName, characterLimit
- VARIABLE\_FIELD\_NOT\_SUPPORTED\_FOR\_DATATYPE - Errors with this extended error code have the following properties: fieldName, datatype
- VARIABLE\_FIELD\_NOT\_SUPPORTED\_FOR\_DATATYPE\_AND\_COLLECTION - Errors with this extended error code have the following properties: fieldName, datatype
- VARIABLE\_FIELD\_REQUIRED\_FOR\_DATATYPE - Errors with this extended error code have the following properties: 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\_INPUT\_REQUIRES\_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\_PROCESSMETADATAVALUES** - Errors with this extended error code have the following properties: flowName
- **WORKFLOW\_OBJECTTYPE\_NOT\_FOUND** - Errors with this extended error code have the following properties: objectType
- **WORKFLOW\_OBJECTTYPE\_NOT\_SUPPORTED** - Errors with this extended error code have the following properties: objectType
- **WORKFLOW\_OBJECTVARIABLE\_AND\_OLDOBJECTVARIABLE\_REFERENCE\_SAME\_SUBJECT\_VARIABLE** - Errors with this extended error code have the following properties: objectVariableName, oldObjectVariableName
- **WORKFLOW\_OBJECTVARIABLE\_DOESNT\_SUPPORT\_INPUT** - Errors with this extended error code have the following properties: objectType, objectVariableName
- **WORKFLOW\_OLDOBJECTVARIABLE\_DOESNT\_SUPPORT\_INPUT** - Errors with this extended error code have the following properties: objectType, oldObjectVariableName
- **WORKFLOW\_PROCESSMETADATAVALUES\_MORE\_THAN\_ONE\_NAME** - Errors with this extended error code have the following properties: metadataValue
- **WORKFLOW\_PROCESS\_METADATAVALUES\_MISSING\_NAME** - Errors with this extended error code have the following properties: metadataValue
- **WORKFLOW\_RECURSIVECOUNTVARIABLE\_DOESNT\_SUPPORT\_INPUT** - Errors with this extended error code have the following properties: elementName
- **WORKFLOW\_TRIGGERTYPE\_INVALID\_VALUE** - Errors with this extended error code have the following properties:

### **ExternalDataSource**

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

**authProvider** a character

**certificate** a character

**customConfiguration** a character

**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

**relatedObjectType** a character

### **FeedItemSettings**

**characterLimit** an integer

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

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

- Default
- HideBlankLines

**feedItemType** a FeedItemType - which is a character taking one of the following values:

- TrackedChange
- UserStatus
- TextPost
- AdvancedTextPost
- LinkPost
- ContentPost
- PollPost
- RypplePost
- ProfileSkillPost
- DashboardComponentSnapshot
- ApprovalPost
- CaseCommentPost
- ReplyPost
- EmailMessageEvent
- CallLogPost
- ChangeStatusPost
- AttachArticleEvent
- MilestoneEvent
- ActivityEvent
- ChatTranscriptPost
- CollaborationGroupCreated
- CollaborationGroupUnarchived
- SocialPost
- QuestionPost
- FacebookPost
- BasicTemplateFeedItem
- CreateRecordEvent
- CanvasPost
- AnnouncementPost

### **FeedLayout**

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

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

**feedFilterPosition** a FeedLayoutFilterPosition - which is a character taking one of the following values:

- CenterDropDown
- LeftFixed
- LeftFloat

**feedFilters** a FeedLayoutFilter

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

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

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

**leftComponents** a FeedLayoutComponent

**rightComponents** a FeedLayoutComponent

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

### **FeedLayoutComponent**

**componentType** a FeedLayoutComponentType - which is a character taking one of the following values:

- HelpAndToolLinks
- CustomButtons
- Following
- Followers
- CustomLinks
- Milestones
- Topics
- CaseUnifiedFiles
- Visualforce

**height** an integer

**page** a character

### **FeedLayoutFilter**

**feedFilterName** a character

**feedFilterType** a FeedLayoutFilterType - which is a character taking one of the following values:

- AllUpdates
- FeedItemType
- Custom

**feedItemType** a FeedItemType - which is a character taking one of the following values:

- TrackedChange
- UserStatus
- TextPost
- AdvancedTextPost
- LinkPost
- ContentPost
- PollPost
- RypplePost
- ProfileSkillPost
- DashboardComponentSnapshot
- ApprovalPost
- CaseCommentPost
- ReplyPost
- EmailMessageEvent



- CallLogPost
- ChangeStatusPost
- AttachArticleEvent
- MilestoneEvent
- ActivityEvent
- ChatTranscriptPost
- CollaborationGroupCreated
- CollaborationGroupUnarchived
- SocialPost
- QuestionPost
- FacebookPost
- BasicTemplateFeedItem
- CreateRecordEvent
- CanvasPost
- AnnouncementPost

### **FieldMapping**

**SObjectType** a character

**developerName** a character

**fieldMappingRows** a FieldMappingRow

**masterLabel** a character

### **FieldMappingField**

**dataServiceField** a character

**dataServiceObjectName** a character

**priority** an integer

### **FieldMappingRow**

**SObjectType** a character

**fieldMappingFields** a FieldMappingField

**fieldName** a character

**mappingOperation** a MappingOperation - which is a character taking one of the following values:

- Autofill
- Overwrite

### **FieldOverride**

**field** a character

**formula** a character

**literalValue** a character

### **FieldServiceSettings**

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

#### FieldSet

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

#### FieldSetItem

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

#### FieldSetTranslation

**label** a character  
**name** a character

#### FieldValue

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

#### FileProperties

**createdById** a character  
**createdByName** a character  
**createdDate** a character formatted as 'yyyy-mm-ddThh:mm:ssZ'  
**fileName** a character  
**fullName** a character  
**id** a character  
**lastModifiedById** a character  
**lastModifiedByName** a character  
**lastModifiedDate** a character formatted as 'yyyy-mm-ddThh:mm:ssZ'  
**manageableState** a ManageableState - which is a character taking one of the following values:

- released
- deleted
- deprecated
- installed
- beta
- unmanaged

**namespacePrefix** a character

**type** a character

### **FileTypeDispositionAssignmentBean**

**behavior** a FileDownloadBehavior - which is a character taking one of the following values:

- DOWNLOAD
- EXECUTE\_IN\_BROWSER
- HYBRID

**fileType** a FileType - which is a character taking one of the following values:

- UNKNOWN
- PDF
- POWER\_POINT
- POWER\_POINT\_X
- POWER\_POINT\_M
- POWER\_POINT\_T
- WORD
- WORD\_X
- WORD\_M
- WORD\_T
- PPS
- PPSX
- EXCEL
- EXCEL\_X
- EXCEL\_M
- EXCEL\_T
- GOOGLE\_DOCUMENT
- GOOGLE\_PRESENTATION
- GOOGLE\_SPREADSHEET
- GOOGLE\_DRAWING
- GOOGLE\_FORM
- GOOGLE\_SCRIPT
- LINK
- SLIDE
- AAC
- ACGI

- AI
- AVI
- BMP
- BOXNOTE
- CSV
- EPS
- EXE
- FLASH
- GIF
- GZIP
- HTM
- HTML
- HTX
- JPEG
- JPE
- PJP
- PJPEG
- JFIF
- JPG
- JS
- MHTM
- MHTML
- MP3
- M4A
- M4V
- MP4
- MPEG
- MPG
- MOV
- MSG
- ODP
- ODS
- ODT
- OGV
- PNG
- PSD
- RTF
- QUIPDOC
- QUIPSHEET
- SHTM
- SHTML
- SNOTE

- STYPI
- SVG
- SVGZ
- TEXT
- THTML
- VISIO
- WMV
- WRF
- XML
- ZIP
- XZIP
- WMA
- XSN
- TRTF
- TXML
- WEBVIEW
- RFC822
- ASF
- DWG
- JAR
- XJS
- OPX
- XPSD
- TIF
- TIFF
- WAV
- CSS
- THUMB720BY480
- THUMB240BY180
- THUMB120BY90
- ALLTHUMBS
- PAGED\_FLASH
- PACK
- C
- CPP
- WORDT
- INI
- JAVA
- LOG
- POWER\_POINTT
- SQL
- XHTML

- 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

**subjectType** a character

**template** a FlexiPageTemplateInstance

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

- AppPage
- ObjectPage
- RecordPage
- HomePage
- MailAppAppPage
- CommAppPage
- CommForgotPasswordPage
- CommLoginPage
- CommObjectPage
- CommQuickActionCreatePage
- CommRecordPage
- CommRelatedListPage
- CommSearchResultPage
- CommGlobalSearchResultPage
- CommSelfRegisterPage
- CommThemeLayoutPage
- UtilityBar
- RecordPreview

### **FlexiPageRegion**

**appendable** a RegionFlagStatus - which is a character taking one of the following values:

- disabled
- enabled

**componentInstances** a ComponentInstance

**mode** a FlexiPageRegionMode - which is a character taking one of the following values:

- Append
- Prepend
- Replace

**name** a character

**prependable** a RegionFlagStatus - which is a character taking one of the following values:

- disabled
- enabled

**replaceable** a RegionFlagStatus - which is a character taking one of the following values:

- disabled
- enabled

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

- Region
- Facet

### **FlexiPageTemplateInstance**

**name** a character

**properties** a ComponentInstanceProperty

### **Flow**

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

**actionCalls** a FlowActionCall

**apexPluginCalls** a FlowApexPluginCall

**assignments** a FlowAssignment

**choices** a FlowChoice

**constants** a FlowConstant

**decisions** a FlowDecision

**description** a character

**dynamicChoiceSets** a FlowDynamicChoiceSet

**formulas** a FlowFormula

**interviewLabel** a character

**label** a character

**loops** a FlowLoop

**processMetadataValues** a FlowMetadataValue

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

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

**recordCreates** a FlowRecordCreate



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

### **FlowActionCall**

**label** a character (inherited from FlowNode)  
**locationX** an integer (inherited from FlowNode)  
**locationY** an integer (inherited from FlowNode)  
**actionName** a character  
**actionType** a InvocableActionType - which is a character taking one of the following values:

- apex
- chatterPost
- contentWorkspaceEnableFolders
- emailAlert
- emailSimple
- flow
- metricRefresh
- quickAction
- submit
- thanks
- thunderResponse
- createServiceReport
- deployOrchestration
- createResponseEventAction
- generateWorkOrders
- deactivateSessionPermSet
- 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

### **FlowChoiceUserInput**

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

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

**promptText** a character

**validationRule** a FlowInputValidationRule

### **FlowChoiceUserInputTranslation**

**promptText** a character

**validationRule** a FlowInputValidationRuleTranslation

### **FlowCondition**

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

**leftValueReference** a character

**operator** a FlowComparisonOperator - which is a character taking one of the following values:

- EqualTo
- NotEqualTo
- GreaterThan
- LessThan
- GreaterThanOrEqualTo
- LessThanOrEqualTo
- StartsWith
- EndsWith
- Contains
- IsNull
- WasSet
- WasSelected
- WasVisited

**rightValue** a FlowElementReferenceOrValue

### **FlowConnector**

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

**targetReference** a character

**FlowConstant**

**description** a character (inherited from FlowElement)

**name** a character (inherited from FlowElement)

**dataType** a FlowDataType - which is a character taking one of the following values:

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

**value** a FlowElementReferenceOrValue

**FlowDecision**

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

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

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

**defaultConnector** a FlowConnector

**defaultConnectorLabel** a character

**rules** a FlowRule

**FlowDefinition**

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

**activeVersionNumber** an integer

**description** a character

**masterLabel** a character

**FlowDefinitionTranslation**

**flows** a FlowTranslation

**fullName** a character

**label** a character

**FlowDynamicChoiceSet**

**description** a character (inherited from FlowElement)

**name** a character (inherited from FlowElement)

**dataType** a FlowDataType - which is a character taking one of the following values:

- Currency

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

**displayField** a character

**filters** a FlowRecordFilter

**limit** an integer

**object** a character

**outputAssignments** a FlowOutputFieldAssignment

**picklistField** a character

**picklistObject** a character

**sortField** a character

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

- Asc
- Desc

**valueField** a character

### FlowElement

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

**description** a character

**name** a character

### FlowElementReferenceOrValue

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

**dateTimeValue** a character formatted as 'yyyy-mm-ddThh:mm:ssZ'

**dateValue** a character formatted as 'yyyy-mm-dd'

**elementReference** a character

**numberValue** a numeric

**stringValue** a character

### FlowFormula

**description** a character (inherited from FlowElement)

**name** a character (inherited from FlowElement)

**dataType** a FlowDataType - which is a character taking one of the following values:

- Currency

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

**expression** a character

**scale** an integer

### **FlowInputFieldAssignment**

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

**field** a character

**value** a FlowElementReferenceOrValue

### **FlowInputValidationRule**

**errorMessage** a character

**formulaExpression** a character

### **FlowInputValidationRuleTranslation**

**errorMessage** a character

### **FlowLoop**

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

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

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

**assignNextValueToReference** a character

**collectionReference** a character

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

- Asc
- Desc

**nextValueConnector** a FlowConnector

**noMoreValuesConnector** a FlowConnector

### **FlowMetadataValue**

**name** a character

**value** a FlowElementReferenceOrValue

### **FlowNode**

**description** a character (inherited from FlowElement)

**name** a character (inherited from FlowElement)

**label** a character

**locationX** an integer

**locationY** an integer

### **FlowOutputFieldAssignment**

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

**assignToReference** a character

**field** a character

### **FlowRecordCreate**

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

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

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

**assignRecordIdToReference** a character

**connector** a FlowConnector

**faultConnector** a FlowConnector

**inputAssignments** a FlowInputFieldAssignment

**inputReference** a character

**object** a character

### **FlowRecordDelete**

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

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

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

**connector** a FlowConnector

**faultConnector** a FlowConnector

**filters** a FlowRecordFilter

**inputReference** a character

**object** a character

### **FlowRecordFilter**

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

**field** a character

**operator** a FlowRecordFilterOperator - which is a character taking one of the following values:

- EqualTo
- NotEqualTo



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

**value** a FlowElementReferenceOrValue

### **FlowRecordLookup**

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

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

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

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

**connector** a FlowConnector

**faultConnector** a FlowConnector

**filters** a FlowRecordFilter

**object** a character

**outputAssignments** a FlowOutputFieldAssignment

**outputReference** a character

**queriedFields** a character

**sortField** a character

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

- Asc
- Desc

### **FlowRecordUpdate**

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

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

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

**connector** a FlowConnector

**faultConnector** a FlowConnector

**filters** a FlowRecordFilter

**inputAssignments** a FlowInputFieldAssignment

**inputReference** a character

**object** a character

### **FlowRule**

**description** a character (inherited from FlowElement)

**name** a character (inherited from FlowElement)

**conditionLogic** a character

**conditions** a FlowCondition

**connector** a FlowConnector

**label** a character

### **FlowScreen**

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

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

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

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

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

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

**connector** a FlowConnector

**fields** a FlowScreenField

**helpText** a character

**pausedText** a character

**rules** a FlowScreenRule

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

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

### **FlowScreenField**

**description** a character (inherited from FlowElement)

**name** a character (inherited from FlowElement)

**choiceReferences** a character

**dataType** a FlowDataType - which is a character taking one of the following values:

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

**defaultSelectedChoiceReference** a character

**defaultValue** a FlowElementReferenceOrValue

**extensionName** a character

**fieldText** a character

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

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

**helpText** a character

**inputParameters** a FlowScreenFieldInputParameter

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

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

**outputParameters** a FlowScreenFieldOutputParameter

**scale** an integer

**validationRule** a FlowInputValidationRule

#### **FlowScreenFieldInputParameter**

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

**name** a character

**value** a FlowElementReferenceOrValue

#### **FlowScreenFieldOutputParameter**

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

**assignToReference** a character

**name** a character

#### **FlowScreenFieldTranslation**

**fieldText** a character

**helpText** a character

**name** a character

**validationRule** a FlowInputValidationRuleTranslation

#### **FlowScreenRule**

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

**conditionLogic** a character

**conditions** a FlowCondition

**label** a character

**ruleActions** a FlowScreenRuleAction

### **FlowScreenRuleAction**

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

**attribute** a character

**fieldReference** a character

**value** a FlowElementReferenceOrValue

### **FlowScreenTranslation**

**fields** a FlowScreenFieldTranslation

**helpText** a character

**name** a character

**pausedText** a character

### **FlowStage**

**description** a character (inherited from FlowElement)

**name** a character (inherited from FlowElement)

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

**label** a character

**stageOrder** an integer

### **FlowStep**

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

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

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

**connectors** a FlowConnector

### **FlowSubflow**

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

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

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

**connector** a FlowConnector

**flowName** a character

**inputAssignments** a FlowSubflowInputAssignment

**outputAssignments** a FlowSubflowOutputAssignment

### **FlowSubflowInputAssignment**

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

**name** a character

**value** a FlowElementReferenceOrValue

### **FlowSubflowOutputAssignment**

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

**assignToReference** a character

**name** a character

### **FlowTextTemplate**

**description** a character (inherited from FlowElement)

**name** a character (inherited from FlowElement)

**text** a character

### **FlowTranslation**

**choices** a FlowChoiceTranslation

**fullName** a character

**label** a character

**screens** a FlowScreenTranslation

### **FlowVariable**

**description** a character (inherited from FlowElement)

**name** a character (inherited from FlowElement)

**dataType** a FlowDataType - which is a character taking one of the following values:

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

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

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

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

**objectType** a character

**scale** an integer

**value** a FlowElementReferenceOrValue

### **FlowWait**

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

- Shared
- Public
- Hidden
- PublicInternal

**folderShares** a FolderShare

**name** a character

**publicFolderAccess** a PublicFolderAccess - which is a character taking one of the following values:

- ReadOnly
- ReadWrite

**sharedTo** a SharedTo

### **FolderShare**

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

- View
- EditAllContents
- Manage

**sharedTo** a character

**sharedToType** a FolderSharedToType - which is a character taking one of the following values:

- Group
- Role
- RoleAndSubordinates
- RoleAndSubordinatesInternal
- Manager
- ManagerAndSubordinatesInternal
- Organization
- Territory
- TerritoryAndSubordinates
- AllPrmUsers
- User
- PartnerUser
- AllCspUsers
- CustomerPortalUser
- PortalRole
- PortalRoleAndSubordinates
- ChannelProgramGroup

### **ForecastingCategoryMapping**

**forecastingItemCategoryApiName** a character

**weightedSourceCategories** a WeightedSourceCategory

### **ForecastingDisplayedFamilySettings**

**productFamily** a character

### **ForecastingSettings**

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

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

- CORPORATE
- PERSONAL

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

**forecastingCategoryMappings** a ForecastingCategoryMapping

**forecastingDisplayedFamilySettings** a ForecastingDisplayedFamilySettings

**forecastingTypeSettings** a ForecastingTypeSettings

### **ForecastingTypeSettings**

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

**adjustmentsSettings** a AdjustmentsSettings

**displayedCategoryApiNames** a character

**forecastRangeSettings** a ForecastRangeSettings

**forecastedCategoryApiNames** a character

**forecastingDateType** a ForecastingDateType - which is a character taking one of the following values:

- OpportunityCloseDate
- ProductDate
- ScheduleDate

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

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

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

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

**managerAdjustableCategoryApiNames** a character

**masterLabel** a character

**name** a character

**opportunityListFieldsLabelMappings** a OpportunityListFieldsLabelMapping

**opportunityListFieldsSelectedSettings** a OpportunityListFieldsSelectedSettings

**opportunityListFieldsUnselectedSettings** a OpportunityListFieldsUnselectedSettings

**opportunitySplitName** a character

**ownerAdjustableCategoryApiNames** a character

**quotasSettings** a QuotasSettings

**territory2ModelName** a character

### **ForecastRangeSettings**

**beginning** an integer

**displaying** an integer

**periodType** a PeriodTypes - which is a character taking one of the following values:

- Month



- Quarter
- Week
- Year

### **GlobalPicklistValue**

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

**color** a character

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

**description** a character

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

### **GlobalQuickActionTranslation**

**label** a character

**name** a character

### **GlobalValueSet**

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

**customValue** a CustomValue

**description** a character

**masterLabel** a character

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

### **GlobalValueSetTranslation**

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

**valueTranslation** a ValueTranslation

### **Group**

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

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

**name** a character

### **HistoryRetentionPolicy**

**archiveAfterMonths** an integer

**archiveRetentionYears** an integer

**description** a character

### **Holiday**

**activityDate** a character formatted as 'yyyy-mm-dd'

**businessHours** a character

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

#### HomePageComponent

**fullName** a character (inherited from Metadata)  
**body** a character  
**height** an integer  
**links** a character  
**page** a character  
**pageComponentType** a PageComponentType - which is a character taking one of the following values:
 

- links
- htmlArea
- imageOrNote
- visualforcePage

**showLabel** a character either 'true' or 'false'  
**showScrollbars** a character either 'true' or 'false'  
**width** a PageComponentWidth - which is a character taking one of the following values:
 

- narrow
- wide

#### HomePageLayout

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

#### IdeaReputationLevel

**name** a character

**value** an integer

### **IdeasSettings**

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

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

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

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

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

**halfLife** a numeric

**ideasProfilePage** a character

### **Index**

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

**fields** a IndexField

**label** a character

### **IndexField**

**name** a character

**sortDirection** a character

### **InsightType**

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

**defaultTrendType** a InsightTrendType - which is a character taking one of the following values:

- Positive
- Negative
- Informational
- Suggestion

**description** a character

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

**masterLabel** a character

**parentType** a InsightParentType - which is a character taking one of the following values:

- Opportunity
- Account

**title** a character

### **InstalledPackage**

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

**password** a character

**versionNumber** a character

### **IntegrationHubSettings**

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

**canonicalName** a character

**canonicalNameBindingChar** a character

**description** a character

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

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

**masterLabel** a character

**setupData** a character

**setupDefinition** a character

**setupNamespace** a character

**setupSimpleName** a character

**uUID** a character

**version** a character

**versionBuild** an integer

**versionMajor** an integer

**versionMinor** an integer

### **IntegrationHubSettingsType**

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

**canonicalName** a character

**canonicalNameBindingChar** a character

**description** a character

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

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

**masterLabel** a character

**setupNamespace** a character

**setupSimpleName** a character

**uUID** a character

**version** a character

**versionBuild** an integer

**versionMajor** an integer

**versionMinor** an integer

### **IpRange**

**description** a character

**end** a character

**start** a character

### **KeyboardShortcuts**

**customShortcuts** a CustomShortcut

**defaultShortcuts** a DefaultShortcut

### **Keyword**

**keyword** a character

### **KeywordList**

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

**description** a character

**keywords** a Keyword

**masterLabel** a character

### **KnowledgeAnswerSettings**

**assignTo** a character

**defaultArticleType** a character

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

### **KnowledgeCaseField**

**name** a character

### **KnowledgeCaseFieldsSettings**

**field** a KnowledgeCaseField

### **KnowledgeCaseSettings**

**articlePDFCreationProfile** a character

**articlePublicSharingCommunities** a KnowledgeCommunitiesSettings

**articlePublicSharingSites** a KnowledgeSitesSettings

**articlePublicSharingSitesChatterAnswers** a KnowledgeSitesSettings

**assignTo** a character

**customizationClass** a character

**defaultContributionArticleType** a character

**editor** a KnowledgeCaseEditor - which is a character taking one of the following values:

- simple
- standard

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

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

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

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

### **KnowledgeCommunitiesSettings**

**community** a character

### **KnowledgeLanguage**

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

**defaultAssignee** a character

**defaultAssigneeType** a KnowledgeLanguageLookupValueType - which is a character taking one of the following values:

- User
- Queue

**defaultReviewer** a character

**defaultReviewerType** a KnowledgeLanguageLookupValueType - which is a character taking one of the following values:

- User
- Queue

**name** a character

### **KnowledgeLanguageSettings**

**language** a KnowledgeLanguage

### **KnowledgeSettings**

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

**answers** a KnowledgeAnswerSettings

**cases** a KnowledgeCaseSettings

**defaultLanguage** a character

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

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

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

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

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

**languages** a KnowledgeLanguageSettings

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

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

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

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

**suggestedArticles** a KnowledgeSuggestedArticlesSettings

**KnowledgeSitesSettings**

**site** a character

**KnowledgeSuggestedArticlesSettings**

**caseFields** a KnowledgeCaseFieldsSettings

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

**workOrderFields** a KnowledgeWorkOrderFieldsSettings

**workOrderLineItemFields** a KnowledgeWorkOrderLineItemFieldsSettings

**KnowledgeWorkOrderField**

**name** a character

**KnowledgeWorkOrderFieldsSettings**

**field** a KnowledgeWorkOrderField

**KnowledgeWorkOrderLineItemField**

**name** a character

**KnowledgeWorkOrderLineItemFieldsSettings**

**field** a KnowledgeWorkOrderLineItemField

**Layout**

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

**customButtons** a character

**customConsoleComponents** a CustomConsoleComponents

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

**excludeButtons** a character

**feedLayout** a FeedLayout

**headers** a LayoutHeader - which is a character taking one of the following values:

- PersonalTagging
- PublicTagging

**layoutSections** a LayoutSection

**miniLayout** a MiniLayout

**multilineLayoutFields** a character

**platformActionList** a PlatformActionList

**quickActionList** a QuickActionList

**relatedContent** a RelatedContent

**relatedLists** a RelatedListItem  
**relatedObjects** a character  
**runAssignmentRulesDefault** a character either 'true' or 'false'  
**showEmailCheckbox** a character either 'true' or 'false'  
**showHighlightsPanel** a character either 'true' or 'false'  
**showInteractionLogPanel** a character either 'true' or 'false'  
**showKnowledgeComponent** a character either 'true' or 'false'  
**showRunAssignmentRulesCheckbox** a character either 'true' or 'false'  
**showSolutionSection** a character either 'true' or 'false'  
**showSubmitAndAttachButton** a character either 'true' or 'false'  
**summaryLayout** a SummaryLayout

### LayoutColumn

**layoutItems** a LayoutItem  
**reserved** a character

### LayoutItem

**analyticsCloudComponent** a AnalyticsCloudComponentLayoutItem  
**behavior** a UiBehavior - which is a character taking one of the following values:

- Edit
- Required
- Readonly

**canvas** a character  
**component** a character  
**customLink** a character  
**emptySpace** a character either 'true' or 'false'  
**field** a character  
**height** an integer  
**page** a character  
**reportChartComponent** a ReportChartComponentLayoutItem  
**scontrol** a character  
**showLabel** a character either 'true' or 'false'  
**showScrollbars** a character either 'true' or 'false'  
**width** a character

### LayoutSection

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



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

**label** a character

**layoutColumns** a LayoutColumn

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

- TwoColumnsTopToBottom
- TwoColumnsLeftToRight
- OneColumn
- CustomLinks

### **LayoutSectionTranslation**

**label** a character

**section** a character

### **LayoutTranslation**

**layout** a character

**layoutType** a character

**sections** a LayoutSectionTranslation

### **LeadConvertSettings**

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

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

**objectMapping** a ObjectMapping

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

- VisibleOptional
- VisibleRequired
- NotVisible

### **Letterhead**

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

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

**backgroundColor** a character

**bodyColor** a character

**bottomLine** a LetterheadLine

**description** a character

**footer** a LetterheadHeaderFooter

**header** a LetterheadHeaderFooter

**middleLine** a LetterheadLine

**name** a character

**topLine** a LetterheadLine

### **LetterheadHeaderFooter**

**backgroundColor** a character

**height** an integer

**horizontalAlignment** a LetterheadHorizontalAlignment - which is a character taking one of the following values:

- None
- Left
- Center
- Right

**logo** a character

**verticalAlignment** a LetterheadVerticalAlignment - which is a character taking one of the following values:

- None
- Top
- Middle
- Bottom

### **LetterheadLine**

**color** a character

**height** an integer

### **LicensedCustomPermissions**

**customPermission** a character

**licenseDefinition** a character

### **LicenseDefinition**

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

**aggregationGroup** a character

**description** a character

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

**label** a character

**licensedCustomPermissions** a LicensedCustomPermissions

**licensingAuthority** a character

**licensingAuthorityProvider** a character

**minPlatformVersion** an integer

**origin** a character

**revision** an integer

**trialLicenseDuration** an integer

**trialLicenseQuantity** an integer

### **LightningBolt**

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

**category** a LightningBoltCategory - which is a character taking one of the following values:

- IT
- Marketing
- Sales
- Service

**lightningBoltFeatures** a LightningBoltFeatures

**lightningBoltImages** a LightningBoltImages

**lightningBoltItems** a LightningBoltItems

**masterLabel** a character

**publisher** a character

**summary** a character

### **LightningBoltFeatures**

**description** a character

**order** an integer

**title** a character

### **LightningBoltImages**

**image** a character

**order** an integer

### **LightningBoltItems**

**name** a character

**type** a character

### **LightningComponentBundle**

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

**apiVersion** a numeric

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

### **LightningExperienceTheme**

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

**defaultBrandingSet** a character

**description** a character

**masterLabel** a character

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

#### **ListMetadataQuery**

**folder** a character

**type** a character

#### **ListPlacement**

**height** an integer

**location** a character

**units** a character

**width** an integer

#### **ListView**

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

**booleanFilter** a character

**columns** a character

**division** a character

**filterScope** a FilterScope - which is a character taking one of the following values:

- Everything
- Mine
- Queue
- Delegated
- MyTerritory
- MyTeamTerritory
- Team
- AssignedToMe

**filters** a ListViewFilter

**label** a character

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

- en\_US
- de
- es
- fr
- it
- ja
- sv
- ko
- zh\_TW
- zh\_CN

- pt\_BR
- nl\_NL
- da
- th
- fi
- ru
- es\_MX
- no
- hu
- pl
- cs
- tr
- in
- ro
- vi
- uk
- iw
- el
- bg
- en\_GB
- ar
- sk
- pt\_PT
- hr
- sl
- fr\_CA
- ka
- sr
- sh
- en\_AU
- en\_MY
- en\_IN
- en\_PH
- en\_CA
- ro\_MD
- bs
- mk
- lv
- lt
- et
- sq
- sh\_ME

- mt
- ga
- eu
- cy
- is
- ms
- tl
- lb
- rm
- hy
- hi
- ur
- bn
- de\_AT
- de\_CH
- ta
- ar\_DZ
- ar\_BH
- ar\_EG
- ar\_IQ
- ar\_JO
- ar\_KW
- ar\_LB
- ar\_LY
- ar\_MA
- ar\_OM
- ar\_QA
- ar\_SA
- ar\_SD
- ar\_SY
- ar\_TN
- ar\_AE
- ar\_YE
- zh\_SG
- zh\_HK
- en\_HK
- en\_IE
- en\_SG
- en\_ZA
- fr\_BE
- fr\_LU
- fr\_CH

- 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

- 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  
**endpoint** a character  
**generateAuthorizationHeader** a character either 'true' or 'false'  
**label** a character  
**oauthRefreshToken** a character  
**oauthScope** a character  
**oauthToken** a character  
**password** a character  
**principalType** a ExternalPrincipalType - which is a character taking one of the following values:

- Anonymous
- PerUser
- NamedUser

**protocol** a AuthenticationProtocol - which is a character taking one of the following values:

- NoAuthentication
- Oauth
- Password

**username** a character

**NameSettings**

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

**NavigationLinkSet**

**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

**emailFooterText** a character

**emailSenderAddress** a character

**emailSenderName** a character

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

**feedChannel** a character

**forgotPasswordTemplate** a character

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

**logoutUrl** a character

**maxFileSizeKb** an integer  
**navigationLinkSet** a NavigationLinkSet  
**networkMemberGroups** a NetworkMemberGroup  
**networkPageOverrides** a NetworkPageOverride  
**newSenderAddress** a character  
**picassoSite** a character  
**recommendationAudience** a RecommendationAudience  
**recommendationDefinition** a RecommendationDefinition  
**reputationLevels** a ReputationLevelDefinitions  
**reputationPointsRules** a ReputationPointsRules  
**selfRegProfile** a character  
**selfRegistration** a character either 'true' or 'false'  
**sendWelcomeEmail** a character either 'true' or 'false'  
**site** a character  
**status** a NetworkStatus - which is a character taking one of the following values:

- UnderConstruction
- Live
- DownForMaintenance

**tabs** a NetworkTabSet  
**urlPathPrefix** a character  
**welcomeTemplate** a character

**NetworkAccess**

**ipRanges** a IpRange

**NetworkBranding**

**content** a character formed using [base64encode](#) (inherited from MetadataWithContent)  
**loginFooterText** a character  
**loginLogo** a character  
**loginLogoName** a character  
**loginPrimaryColor** a character  
**loginQuaternaryColor** a character  
**loginRightFrameUrl** a character  
**network** a character  
**pageFooter** a character  
**pageHeader** a character  
**primaryColor** a character  
**primaryComplementColor** a character

**quaternaryColor** a character  
**quaternaryComplementColor** a character  
**secondaryColor** a character  
**staticLogoImageUrl** a character  
**tertiaryColor** a character  
**tertiaryComplementColor** a character  
**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'

**entityName** a character

**fieldName** a character

**masterLabel** a character

**pathAssistantSteps** a PathAssistantStep

**recordTypeName** a character

### **PathAssistantSettings**

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

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

#### **PathAssistantStep**

**fieldNames** a character

**info** a character

**picklistValueName** a character

#### **PermissionSet**

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

**applicationVisibilities** a PermissionSetApplicationVisibility

**classAccesses** a PermissionSetApexClassAccess

**customPermissions** a PermissionSetCustomPermissions

**description** a character

**externalDataSourceAccesses** a PermissionSetExternalDataSourceAccess

**fieldPermissions** a PermissionSetFieldPermissions

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

**label** a character

**license** a character

**objectPermissions** a PermissionSetObjectPermissions

**pageAccesses** a PermissionSetApexPageAccess

**recordTypeVisibilities** a PermissionSetRecordTypeVisibility

**tabSettings** a PermissionSetTabSetting

**userPermissions** a PermissionSetUserPermission

#### **PermissionSetApexClassAccess**

**apexClass** a character

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

#### **PermissionSetApexPageAccess**

**apexPage** a character

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

#### **PermissionSetApplicationVisibility**

**application** a character

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

#### **PermissionSetCustomPermissions**

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

**name** a character

**PermissionSetExternalDataSourceAccess**

**enabled** 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'

**won** 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

**headerDocument** a character

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

**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

**pageOrObjectType** 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

**tuesdayEnd** a character

**tuesdayStart** a character

**wednesdayEnd** a character

**wednesdayStart** 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

**objectName** a character

### **Queue**

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

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

**email** a character

**name** a character

**queueMembers** a QueueMembers

**queueRoutingConfig** a character

**queueSubject** a QueueSubject

**QueueMembers**

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

**QueueSubject**

**subjectType** 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

**excludeButtons** a character

**fields** a character

**relatedList** a character

**sortField** a character

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

- Asc
- Desc

**RemoteSiteSetting**

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

**description** a character

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

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

**url** a character

**Report**

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

**aggregates** a ReportAggregate

**block** a Report

**blockInfo** a ReportBlockInfo

**buckets** a ReportBucketField

**chart** a ReportChart

**colorRanges** a ReportColorRange

**columns** a ReportColumn

**crossFilters** a ReportCrossFilter

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

- ADP
- AED
- AFA

- AFN
- ALL
- AMD
- ANG
- AOA
- ARS
- ATS
- AUD
- AWG
- AZM
- AZN
- BAM
- BBD
- BDT
- BEF
- BGL
- BGN
- BHD
- BIF
- BMD
- BND
- BOB
- BOV
- BRB
- BRL
- BSD
- BTN
- BWP
- BYB
- BYN
- BYR
- BZD
- CAD
- CDF
- CHF
- CLF
- CLP
- CNY
- COP
- CRC
- CSD
- CUC

- CUP
- CVE
- CYP
- CZK
- DEM
- DJF
- DKK
- DOP
- DZD
- ECS
- 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**

**cachedData** 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

**endDate** 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\_PREV1FY
- 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\_CURNEXT3Q
- INTERVAL\_CURY
- INTERVAL\_PREVY
- INTERVAL\_PREV2Y
- INTERVAL\_AGO2Y
- INTERVAL\_NEXTY
- INTERVAL\_PREVCURY
- INTERVAL\_PREVCUR2Y
- INTERVAL\_CURNEXTY
- INTERVAL\_LAST7
- INTERVAL\_LAST30
- INTERVAL\_LAST60
- INTERVAL\_LAST90
- INTERVAL\_LAST120
- INTERVAL\_NEXT7
- INTERVAL\_NEXT30
- INTERVAL\_NEXT60
- INTERVAL\_NEXT90
- INTERVAL\_NEXT120
- LAST\_FISCALWEEK
- THIS\_FISCALWEEK
- NEXT\_FISCALWEEK

- LAST\_FISCALPERIOD
- THIS\_FISCALPERIOD
- NEXT\_FISCALPERIOD
- LASTTHIS\_FISCALPERIOD
- THISNEXT\_FISCALPERIOD
- CURRENT\_ENTITLEMENT\_PERIOD
- PREVIOUS\_ENTITLEMENT\_PERIOD
- PREVIOUS\_TWO\_ENTITLEMENT\_PERIODS
- TWO\_ENTITLEMENT\_PERIODS\_AGO
- CURRENT\_AND\_PREVIOUS\_ENTITLEMENT\_PERIOD
- CURRENT\_AND\_PREVIOUS\_TWO\_ENTITLEMENT\_PERIODS

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

### **ReportType**

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

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

**baseObject** a character

**category** a ReportTypeCategory - which is a character taking one of the following values:

- accounts
- opportunities
- forecasts
- cases
- leads
- campaigns
- activities
- busop
- products
- admin
- territory
- other
- content
- usage\_entitlement
- wdc
- calibration
- territory2

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

**description** a character

**join** a ObjectRelationship

**label** a character

**sections** a ReportLayoutSection

**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'  
**hstsOnForcecomSites** 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

**contentType** a character  
**description** a character

#### **StrategyNode**

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

**SubtabComponents**

**containers** a Container

**SummaryLayout**

**masterLabel** a character

**sizeX** an integer

**sizeY** an integer

**sizeZ** an integer

**summaryLayoutItems** a SummaryLayoutItem

**summaryLayoutStyle** a SummaryLayoutStyle - which is a character taking one of the following values:

- Default
- QuoteTemplate
- DefaultQuoteTemplate
- ServiceReportTemplate
- ChildServiceReportTemplateStyle
- DefaultServiceReportTemplate
- CaseInteraction
- QuickActionLayoutLeftRight
- QuickActionLayoutTopDown
- PathAssistant

**SummaryLayoutItem**

**customLink** a character

**field** a character

**posX** an integer

**posY** an integer

**posZ** an integer

**SupervisorAgentConfigSkills**

**skill** a character

**SynonymDictionary**

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

**groups** a SynonymGroup

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

**label** a character

**SynonymGroup**



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

- en\_US
- de
- es
- fr
- it
- ja
- sv
- ko
- zh\_TW
- zh\_CN
- pt\_BR
- nl\_NL
- da
- th
- fi
- ru
- es\_MX
- no
- hu
- pl
- cs
- tr
- in
- ro
- vi
- uk
- iw
- el
- bg
- en\_GB
- ar
- sk
- pt\_PT
- hr
- sl
- fr\_CA
- ka
- sr
- sh
- en\_AU
- en\_MY

- 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

**terms** a character

**TabLimitConfig**

**maxNumberOfPrimaryTabs** a character

**maxNumberOfSubTabs** a character

**Territory**

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

**Territory2**

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

**Territory2Model**

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

**Territory2Rule**

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

**Territory2RuleAssociation**

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

**ruleName** a character

### **Territory2RuleItem**

**field** a character

**operation** a FilterOperation - which is a character taking one of the following values:

- equals
- notEqual
- lessThan
- greaterThan
- lessOrEqual
- greaterOrEqual
- contains
- notContain
- startsWith
- includes
- excludes
- within

**value** a character

### **Territory2Settings**

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

**defaultAccountAccessLevel** a character

**defaultCaseAccessLevel** a character

**defaultContactAccessLevel** a character

**defaultOpportunityAccessLevel** a character

**opportunityFilterSettings** a Territory2SettingsOpportunityFilter

### **Territory2SettingsOpportunityFilter**

**apexClassName** a character

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

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

### **Territory2Type**

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

**description** a character

**name** a character

**priority** an integer

### **TopicsForObjects**

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

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

**entityApiName** a character

#### **TouchMobileSettings**

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

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

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

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

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

#### **TransactionSecurityAction**

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

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

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

**notifications** a TransactionSecurityNotification

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

#### **TransactionSecurityNotification**

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

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

**user** a character

#### **TransactionSecurityPolicy**

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

**action** a TransactionSecurityAction

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

**apexClass** a character

**description** a character

**developerName** a character

**eventName** a TransactionSecurityEventName - which is a character taking one of the following values:

- ReportEvent
- ApiEvent
- AdminSetupEvent
- LoginEvent

**eventType** a MonitoredEvents - which is a character taking one of the following values:

- AuditTrail
- Login

- Entity
- DataExport
- AccessResource

**executionUser** a character

**flow** a character

**masterLabel** a character

**resourceName** a character

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

- CustomApexPolicy
- CustomConditionBuilderPolicy

### Translations

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

**customApplications** a CustomApplicationTranslation

**customDataTypeTranslations** a CustomDataTypeTranslation

**customLabels** a CustomLabelTranslation

**customPageWebLinks** a CustomPageWebLinkTranslation

**customTabs** a CustomTabTranslation

**flowDefinitions** a FlowDefinitionTranslation

**quickActions** a GlobalQuickActionTranslation

**reportTypes** a ReportTypeTranslation

**scontrols** a ScontrolTranslation

### UiFormulaCriterion

**leftValue** a character

**operator** a character

**rightValue** a character

### UiFormulaRule

**booleanFilter** a character

**criteria** a UiFormulaCriterion

### UiPlugin

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

**description** a character

**extensionPointIdentifier** a character

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

**language** a character

**masterLabel** a character

**UserCriteria**

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

**creationAgeInSeconds** an integer

**description** a character

**lastChatterActivityAgeInSeconds** an integer

**masterLabel** a character

**profiles** a character

**userTypes** a NetworkUserType - which is a character taking one of the following values:

- Internal
- Customer
- Partner

**Users**

**user** a character

**ValidationRule**

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

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

**description** a character

**errorConditionFormula** a character

**errorDisplayField** a character

**errorMessage** a character

**ValidationRuleTranslation**

**errorMessage** a character

**name** a character

**ValueSet**

**controllingField** a character

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

**valueSetDefinition** a ValueSetValuesDefinition

**valueSetName** a character

**valueSettings** a ValueSettings

**ValueSettings**

**controllingFieldValue** a character

**valueName** a character

**ValueSetValuesDefinition**



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

**value** a CustomValue

#### **ValueTranslation**

**masterLabel** a character

**translation** a character

#### **ValueTypeField**

**fields** a ValueTypeField

**foreignKeyDomain** a character

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

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

**minOccurs** an integer

**name** a character

**picklistValues** a PicklistEntry

**soapType** a character

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

#### **VisualizationPlugin**

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

**description** a character

**developerName** a character

**icon** a character

**masterLabel** a character

**visualizationResources** a VisualizationResource

**visualizationTypes** a VisualizationType

#### **VisualizationResource**

**description** a character

**file** a character

**rank** an integer

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

- js
- css

#### **VisualizationType**

**description** a character

**developerName** a character

**icon** a character

**masterLabel** a character

**scriptBootstrapMethod** a character

### **WaveApplication**

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

**assetIcon** a character

**description** a character

**folder** a character

**masterLabel** a character

**shares** a FolderShare

**templateOrigin** a character

**templateVersion** a character

### **WaveDashboard**

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

**application** a character

**description** a character

**masterLabel** a character

**templateAssetSourceName** a character

### **WaveDataflow**

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

**dataflowType** a character

**description** a character

**masterLabel** a character

### **WaveDataset**

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

**application** a character

**description** a character

**masterLabel** a character

**templateAssetSourceName** a character

### **WaveLens**

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

**application** a character

**datasets** a character

**description** a character

**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'

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

**WaveXmdDimension**

**customActions** a WaveXmdDimensionCustomAction  
**customActionsEnabled** a character either 'true' or 'false'  
**dateFormat** a character  
**description** a character  
**field** a character  
**fullyQualifiedName** a character  
**imageTemplate** a character  
**isDerived** a character either 'true' or 'false'  
**isMultiValue** a character either 'true' or 'false'  
**label** a character  
**linkTemplate** a character  
**linkTemplateEnabled** a character either 'true' or 'false'  
**linkTooltip** a character

**members** a WaveXmdDimensionMember  
**origin** a character  
**recordDisplayFields** a WaveXmdRecordDisplayLookup  
**recordIdField** a character  
**recordOrganizationIdField** a character  
**salesforceActions** a WaveXmdDimensionSalesforceAction  
**salesforceActionsEnabled** a character either 'true' or 'false'  
**showDetailsDefaultFieldIndex** an integer  
**showInExplorer** a character either 'true' or 'false'  
**sortIndex** an integer

#### **WaveXmdDimensionCustomAction**

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

#### **WaveXmdDimensionMember**

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

#### **WaveXmdDimensionSalesforceAction**

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

#### **WaveXmdMeasure**

**dateFormat** a character  
**description** a character  
**field** a character  
**formatCustomFormat** a character  
**formatDecimalDigits** an integer

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

**formatPrefix** a character

**formatSuffix** a character

**formatUnit** a character

**formatUnitMultiplier** a numeric

**fullyQualifiedName** a character

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

**label** a character

**origin** a character

**showDetailsDefaultFieldIndex** an integer

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

**sortIndex** an integer

### **WaveXmdOrganization**

**instanceUrl** a character

**label** a character

**organizationIdentifier** a character

**sortIndex** an integer

### **WaveXmdRecordDisplayLookup**

**recordDisplayField** a character

### **WebLink**

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

**availability** a WebLinkAvailability - which is a character taking one of the following values:

- online
- offline

**description** a character

**displayType** a WebLinkDisplayType - which is a character taking one of the following values:

- link
- button
- massActionButton

**encodingKey** a Encoding - which is a character taking one of the following values:

- UTF-8
- ISO-8859-1
- Shift\_JIS
- ISO-2022-JP
- EUC-JP
- ks\_c\_5601-1987

- Big5
- GB2312
- Big5-HKSCS
- x-SJIS\_0213

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

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

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

**height** an integer

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

**linkType** a WebLinkType - which is a character taking one of the following values:

- url
- sControl
- javascript
- page
- flow

**masterLabel** a character

**openType** a WebLinkWindowType - which is a character taking one of the following values:

- newWindow
- sidebar
- noSidebar
- replace
- onClickJavaScript

**page** a character

**position** a WebLinkPosition - which is a character taking one of the following values:

- fullScreen
- none
- topLeft

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

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

**scontrol** a character

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

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

**url** a character

**width** an integer

### **WebLinkTranslation**

**label** a character

**name** a character

### **WebToCaseSettings**

**caseOrigin** a character  
**defaultResponseTemplate** a character  
**enableWebToCase** a character either 'true' or 'false'

### **WeightedSourceCategory**

**sourceCategoryApiName** a character  
**weight** a numeric

### **Workflow**

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

### **WorkflowAction**

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

### **WorkflowActionReference**

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

- FieldUpdate
- KnowledgePublish
- Task
- Alert
- Send
- OutboundMessage
- FlowAction

### **WorkflowAlert**

**extends WorkflowAction** see documentation for WorkflowAction  
**ccEmails** a character  
**description** a character  
**protected** a character either 'true' or 'false'  
**recipients** a WorkflowEmailRecipient



**senderAddress** a character

**senderType** a ActionEmailSenderType - which is a character taking one of the following values:

- CurrentUser
- OrgWideEmailAddress
- DefaultWorkflowUser

**template** a character

### **WorkflowEmailRecipient**

**field** a character

**recipient** a character

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

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

### **WorkflowFieldUpdate**

**extends WorkflowAction** see documentation for WorkflowAction

**description** a character

**field** a character

**formula** a character

**literalValue** a character

**lookupValue** a character

**lookupValueType** a LookupValueType - which is a character taking one of the following values:

- User

- Queue
- RecordType

**name** a character

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

**operation** a FieldUpdateOperation - which is a character taking one of the following values:

- Formula
- Literal
- Null
- NextValue
- PreviousValue
- LookupValue

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

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

**targetObject** a character

#### **WorkflowFlowAction**

**extends WorkflowAction** see documentation for WorkflowAction

**description** a character

**flow** a character

**flowInputs** a WorkflowFlowActionParameter

**label** a character

**language** a character

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

#### **WorkflowFlowActionParameter**

**name** a character

**value** a character

#### **WorkflowKnowledgePublish**

**extends WorkflowAction** see documentation for WorkflowAction

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

- PublishAsNew
- Publish

**description** a character

**label** a character

**language** a character

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

#### **WorkflowRule**

**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  
**tab** a character

### **Value**

a list that can be used as input to one of the CRUD Metadata API operations: [sf\\_create\\_metadata](#), [sf\\_update\\_metadata](#), [sf\\_update\\_metadata](#)

---

 parameterized\_search\_control

*Auxiliary for Controlling Parametrized Searches*


---

### Description

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

### Usage

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

```
## 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 salesforcer backwards compatible version of the RForcecom function rforcecom.bulkAction*

---

**Description****[Soft-deprecated]**

This function is a convenience wrapper for submitting bulk API jobs

**Usage**

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

**Value**

A tbl\_df of the results of the bulk job

**References**

[https://developer.salesforce.com/docs/atlas.en-us.api\\_asynch.meta/api\\_asynch](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)
```

---

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

---

**Description**

**[Soft-deprecated]**

**Usage**

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

**Arguments**

session	list; a list containing "sessionId", "instanceURL", and "apiVersion" as returned by RForcecom::rforcecom.login. This argument is ignored in all backward compatible calls because the authorization credentials are stored in an environment internal to the salesforcer package, so it is no longer necessary to pass the session in each function call.
soqlQuery	character; a string defining a SOQL query (e.g. "SELECT Id, Name FROM Account").
object	character; the name of one Salesforce objects that the function is operating against (e.g. "Account", "Contact", "CustomObject__c")
interval_seconds	an integer defining the seconds between attempts to check for job completion
max_attempts	an integer defining then max number attempts to check for job completion before stopping
verbose	logical; an indicator of whether to print additional detail for each API call, which is useful for debugging. More specifically, when set to TRUE the URL, header, and body will be printed for each request, along with additional diagnostic information where available.

**Value**

A data.frame of the recordset returned by query

---

rforcecom.create	<i>The salesforcer backwards compatible version of RForcecom::rforcecom.create</i>
------------------	--

---

**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	<i>The salesforcer backwards compatible version of RForcecom::rforcecom.delete</i>
------------------	--

---

**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: "999x000000xxxxxZZZ")

**Value**

NULL if successful otherwise the function errors out

---

```
rforcecom.getObjectDescription
```

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

---

### Description

**[Soft-deprecated]**

### Usage

```
rforcecom.getServerTimestamp(session)
```

**Arguments**

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

---

rforcecom.login	<i>The salesforcer backwards compatible version of RForcecom::rforcecom.login</i>
-----------------	---

---

**Description****[Soft-deprecated]****Usage**

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

**Arguments**

username	Your username for login to the Salesforce.com. In many cases, username is your E-mail address.
password	Your password for login to the Salesforce.com. Note: DO NOT FORGET your Security Token. (Ex.) If your password is "Pass1234" and your security token is "XYZXYZXYZXYZ", you should set "Pass1234XYZXYZXYZXYZ".
loginURL	(optional) Login URL. If your environment is sandbox specify (ex:) "https://test.salesforce.com".
apiVersion	(optional) Version of the REST API and SOAP API that you want to use. (ex:) "35.0" Supported versions from v20.0 and up.

**Value**

sessionID	Session ID.
instanceURL	Instance URL.
apiVersion	API Version.

---

rforcecom.query	<i>The salesforcer backwards compatible version of RForcecom::rforcecom.query</i>
-----------------	---

---

**Description****[Soft-deprecated]****Usage**

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

**Arguments**

session	list; a list containing "sessionId", "instanceURL", and "apiVersion" as returned by RForcecom::rforcecom.login. This argument is ignored in all backward compatible calls because the authorization credentials are stored in an environment internal to the salesforcer package, so it is no longer necessary to pass the session in each function call.
soqlQuery	character; a string defining a SOQL query (e.g. "SELECT Id, Name FROM Account").
queryAll	logical; indicating if the query recordset should include deleted and archived records (available only when querying Task and Event records)

**Value**

Result dataset.

---

rforcecom.retrieve	<i>The salesforcer backwards compatible version of RForcecom::rforcecom.retrieve</i>
--------------------	--

---

**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: "999x000000xxxxZZZ")
offset	Specifies the starting row offset. (ex: "100")
order	A list for controlling the order of query results. (ex: c("Industry","Name"))
inverse	If it is TRUE, the results are ordered in descending order. This parameter works when order parameter has been set. (Default: FALSE)
nullsLast	If it is TRUE, null records list in last. If not null records list in first. This parameter works when order parameter has been set. (Default: FALSE)

---

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

---

### Description

**[Soft-deprecated]**

### Usage

```
rforcecom.search(session, queryString)
```

### Arguments

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

---

rforcecom.update	<i>The salesforcer backwards compatible version of RForcecom::rforcecom.update</i>
------------------	--

---

**Description****[Soft-deprecated]****Usage**

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

**Arguments**

session	list; a list containing "sessionId", "instanceURL", and "apiVersion" as returned by RForcecom::rforcecom.login. This argument is ignored in all backward compatible calls because the authorization credentials are stored in an environment internal to the salesforcer package, so it is no longer necessary to pass the session in each function call.
objectName	character; the name of the Salesforce object that the function is operating against (e.g. "Account", "Contact", "CustomObject__c").
id	Record ID to update. (ex: "999x000000xxxxZZZ")
fields	Field names and values. (ex: Name="CompanyName", Phone="000-000-000" )

**Value**

NULL if successful otherwise the function errors out

---

rforcecom.upsert	<i>The salesforcer backwards compatible version of RForcecom::rforcecom.upsert</i>
------------------	--

---

**Description****[Soft-deprecated]****Usage**

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

**Arguments**

session	list; a list containing "sessionId", "instanceURL", and "apiVersion" as returned by RForcecom::rforcecom.login. This argument is ignored in all backward compatible calls because the authorization credentials are stored in an environment internal to the salesforcer package, so it is no longer necessary to pass the session in each function call.
objectName	character; the name of the Salesforce object that the function is operating against (e.g. "Account", "Contact", "CustomObject__c").
externalIdField	An external Key's field name. (ex: "AccountMaster__c")
externalId	An external Key's ID. (ex: "999x000000xxxxxZZZ")
fields	Field names and values. (ex: Name="CompanyName", Phone="000-000-000" )

**Value**

NULL if successful otherwise the function errors out

---

sf_abort_job_bulk	<i>Abort Bulk API Job</i>
-------------------	---------------------------

---

**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 <a href="#">sf_create_job_bulk</a> . 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](https://developer.salesforce.com/docs/atlas.en-us.api_asynch.meta/api_asynch)

**Examples**

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

## End(Not run)
```

---

```
sf_analytics_notifications_limits
```

*Return limits of analytics notifications*

---

**Description**

**[Experimental]**

**Usage**

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

**Arguments**

source	character; a vector of character to specify what type of analytics notification to return. Valid values are:  <b>lightningDashboardSubscribe</b> Dashboard subscriptions <b>lightningReportSubscribe</b> Report subscriptions <b>waveNotification</b> 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 "000") 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:  <b>lightningDashboardSubscribe</b> Dashboard subscriptions <b>lightningReportSubscribe</b> Report subscriptions <b>waveNotification</b> 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 "000") 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  
*Describe an analytics notification*

---

**Description**

**[Experimental]**

**Usage**

```
sf_analytics_notification_describe(notification_id)
```

**Arguments**

notification\_id

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

**Value**

list

---

sf\_analytics\_notification\_update  
*Update an analytics notification*

---

**Description**

**[Experimental]**

**Usage**

```
sf_analytics_notification_update(notification_id, body)
```

**Arguments**

notification\_id

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

body

list; a list of data to be formatted as JSON before being sent to an API 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**

```
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 <code>https://login.salesforce.com</code> . If needing to log into a sandbox or dev environment then provide its login URL (e.g. <code>https://test.salesforce.com</code> )
token	optional; an actual token object or the path to a valid token stored as an <code>.rds</code> 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 <code>.httr-oauth-salesforcer</code> , 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](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 .httr-oauth-salesforcer)
sf_auth()

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

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

## End(Not run)
```

---

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 <a href="#">sf_create_job_bulk</a> . It will start with "750".
batch_id	character; the Salesforce Id assigned to a submitted batch as returned by <a href="#">sf_create_batches_bulk</a> . 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](https://developer.salesforce.com/docs/atlas.en-us.api_asynch.meta/api_asynch)

**Examples**

```
## 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**

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

**Value**

A tbl\_df of parameters defining the batch identified by the batch\_id

**Note**

This is a legacy function used only with Bulk 1.0.

## References

[https://developer.salesforce.com/docs/atlas.en-us.api\\_asynch.meta/api\\_asynch](https://developer.salesforce.com/docs/atlas.en-us.api_asynch.meta/api_asynch)

## Examples

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

## End(Not run)
```

---

sf_close_job_bulk	<i>Close Bulk API Job</i>
-------------------	---------------------------

---

## Description

This function closes a Job in the Salesforce Bulk API

## Usage

```
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 <a href="#">sf_create_job_bulk</a> . 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](https://developer.salesforce.com/docs/atlas.en-us.api_asynch.meta/api_asynch)

**Examples**

```
## 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**

```
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: <a href="#">sf_create</a> , <a href="#">sf_delete</a> , <a href="#">sf_update</a> , <a href="#">sf_upsert</a> , <a href="#">sf_reset_password</a> . For more information, read the Salesforce documentation <a href="#">here</a> .
LocaleOptions	list; containing the language element. This control specifies the language of the labels returned by the <a href="#">sf_describe_objects</a> 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 <a href="#">here</a> . The list of valid user locales is available <a href="#">here</a> .
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: <a href="#">sf_create</a> , <a href="#">sf_update</a> , <a href="#">sf_upsert</a> , <a href="#">sf_retrieve</a> , <a href="#">sf_query</a> . For more information, read the Salesforce documentation <a href="#">here</a> .
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: <a href="#">sf_update</a> , <a href="#">sf_upsert</a> . For more information, read the Salesforce documentation <a href="#">here</a> .
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: <a href="#">sf_query</a> , <a href="#">sf_retrieve</a> . For more information, read the Salesforce documentation <a href="#">here</a> .
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 <a href="#">sf_delete</a> function using the SOAP API. For more information, read the Salesforce documentation <a href="#">here</a> .
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. <a href="#">sf_create</a> (., api_type = "Bulk 1.0")) or creating a Bulk 1.0 job with <a href="#">sf_create_job_bulk</a> . For more information, read the Salesforce documentation <a href="#">here</a> .
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 <a href="#">sf_create_job_bulk</a> . 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 <a href="#">here</a> .

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 <code>sf_query(. , api_type = "Bulk 1.0")</code> or <code>sf_query_bulk</code> . For more information, read the Salesforce documentation <a href="#">here</a> .
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-Creat")
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	<i>Convert Leads</i>
-----------------	----------------------

---

### 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**

<code>input_data</code>	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.
<code>guess_types</code>	logical; indicating whether or not to use <code>col_guess()</code> to try and cast the data returned in the recordset. If TRUE then <code>col_guess()</code> is used, if FALSE then all fields will be returned as character. This is helpful when <code>col_guess()</code> 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").
<code>api_type</code>	character; one of "REST", "SOAP", "Bulk 1.0", or "Bulk 2.0" indicating which API to use when making the request.
<code>control</code>	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 <a href="#">sf_control</a> .
<code>...</code>	arguments passed to <a href="#">sf_control</a>
<code>verbose</code>	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

```
## 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	<i>Copy a dashboard</i>
-------------------	-------------------------

---

**Description****[Experimental]****Usage**

```
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 "00I").

**Value**

list

---

sf_copy_report	<i>Copy a report</i>
----------------	----------------------

---

**Description****[Experimental]**

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

**Usage**

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

**Arguments**

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

Other Report functions: [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\\_query\\_report\(\)](#), [sf\\_run\\_report\(\)](#), [sf\\_update\\_report\(\)](#)

## Examples

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

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

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

# not providing a name appends " - Copy" to the name of the report being cloned
report_details <- sf_copy_report(this_report_id)

# example of providing new name to the copied report
report_details <- sf_copy_report(this_report_id, "My New Copy of Report ABC")

## End(Not run)
```



sf\_create

*Create Records***Description****[Stable]**

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

**Usage**

```
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 <a href="#">sf_control</a> .
...	arguments passed to <a href="#">sf_control</a> or further downstream to <a href="#">sf_bulk_operation</a>
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 <- 2
new_contacts <- tibble(FirstName = rep("Test", n),
                      LastName = paste0("Contact", 1:n))
new_recs1 <- sf_create(new_contacts, object_name = "Contact")

# add control to allow the creation of records that violate a duplicate rules
new_recs2 <- sf_create(new_contacts, object_name = "Contact",
                      DuplicateRuleHeader=list(allowSave=TRUE,
                                              includeRecordDetails=FALSE,
                                              runAsCurrentUser=TRUE))

# example using the Bulk 1.0 API to insert records
new_recs3 <- sf_create(new_contacts, object_name = "Contact",
                      api_type = "Bulk 1.0")

## End(Not run)
```

---

sf\_create\_attachment *Create Attachments*

---

**Description****[Experimental]**

This function will allow you to create attachments (and other blob data, such as Documents) by supplying file paths (absolute or relative) to media that you would like to upload to Salesforce along with accompanying metadata, such as a Description, Keywords, ParentId, FolderId, etc.

**Usage**

```
sf_create_attachment(
  attachment_input_data,
  object_name = c("Attachment", "Document"),
  api_type = c("SOAP", "REST", "Bulk 1.0", "Bulk 2.0"),
  control = list(...),
  ...,
  verbose = FALSE
)
```

**Arguments**

attachment_input_data	named vector, matrix, data.frame, or tbl_df; data can be coerced into a data.frame. The input must contain a column entitled 'Body' with an absolute or relative file path (unless creating a Document using a Url) along with other required fields depending on the object. If performing an update operation, then one column or field of the input must be the Id of the record to modify.
object_name	character; the name of the Salesforce object that the function is operating against (e.g. "Account", "Contact", "CustomObject__c").
api_type	character; one of "REST", "SOAP", "Bulk 1.0", or "Bulk 2.0" indicating which API to use when making the request.
control	list; a list of parameters for controlling the behavior of the API call being used. For more information of what parameters are available look at the documentation for <a href="#">sf_control</a> .
...	arguments passed to <a href="#">sf_control</a> or further downstream to <a href="#">sf_bulk_operation</a>
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

```
## 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 an already existing Bulk API Job by chunking into temp files

## Usage

```
sf_create_batches_bulk(
  job_id,
  input_data,
  batch_size = NULL,
  api_type = c("Bulk 1.0", "Bulk 2.0"),
  verbose = FALSE
)
```

## Arguments

`job_id` character; the Salesforce Id assigned to a submitted job as returned by [sf\\_create\\_job\\_bulk](#). It will start with "750".

input_data	named vector, matrix, data.frame, or tbl_df; data can be coerced into CSV file for submitting as batch request
batch_size	integer; the number of individual records to be included in a single batch uploaded to the Bulk APIs (1.0 or 2.0).
api_type	character; one of "REST", "SOAP", "Bulk 1.0", or "Bulk 2.0" indicating which API to use when making the request.
verbose	logical; an indicator of whether to print additional detail for each API call, which is useful for debugging. More specifically, when set to TRUE the URL, header, and body will be printed for each request, along with additional diagnostic information where available.

**Value**

a tbl\_df containing details of each batch

**References**

[https://developer.salesforce.com/docs/atlas.en-us.api\\_asynch.meta/api\\_asynch](https://developer.salesforce.com/docs/atlas.en-us.api_asynch.meta/api_asynch)

**Examples**

```
## Not run:
# NOTE THAT YOU MUST FIRST CREATE AN EXTERNAL ID FIELD CALLED My_External_Id
# BEFORE RUNNING THIS EXAMPLE
# inserting 2 records
my_data <- tibble(Name=c('New Record 1', 'New Record 2'),
                  My_External_Id__c=c('11111', '22222'))
job_info <- sf_create_job_bulk(operation='insert',
                              object='Account')
batches_ind <- sf_create_batches_bulk(job_id = job_info$id,
                                     input_data = my_data)

# upserting 3 records
my_data2 <- tibble(My_External_Id__c=c('11111', '22222', '99999'),
                  Name=c('Updated_Name1', 'Updated_Name2', 'Upserted_Record'))
job_info <- sf_create_job_bulk(operation='upsert',
                              externalIdFieldName='My_External_Id__c',
                              object='Account')
batches_ind <- sf_create_batches_bulk(job_id = job_info$id,
                                     input_data = my_data2)

sf_get_job_bulk(job_info$id)

## End(Not run)
```

---

sf\_create\_job\_bulk      *Create Bulk API Job*

---

**Description**

This function initializes a Job in the Salesforce Bulk API

**Usage**

```

sf_create_job_bulk(
  operation = c("insert", "delete", "upsert", "update", "hardDelete", "query",
    "queryall"),
  object_name,
  soql = NULL,
  external_id_fieldname = NULL,
  api_type = c("Bulk 1.0", "Bulk 2.0"),
  content_type = c("CSV", "ZIP_CSV", "ZIP_XML", "ZIP_JSON"),
  concurrency_mode = c("Parallel", "Serial"),
  column_delimiter = c("COMMA", "TAB", "PIPE", "SEMICOLON", "CARET", "BACKQUOTE"),
  control = list(...),
  ...,
  line_ending = deprecated(),
  verbose = FALSE
)

```

**Arguments**

operation	character; a string defining the type of operation being performed (e.g. "insert", "update", "upsert", "delete", "hardDelete", "query", "queryall").
object_name	character; the name of the Salesforce object that the function is operating against (e.g. "Account", "Contact", "CustomObject__c").
soql	character; a string defining a SOQL query (e.g. "SELECT Id, Name FROM Account").
external_id_fieldname	character; string identifying a custom field on the object that has been set as an "External ID" field. This field is used to reference objects during upserts to determine if the record already exists in Salesforce or not.
api_type	character; one of "REST", "SOAP", "Bulk 1.0", or "Bulk 2.0" indicating which API to use when making the request.
content_type	character; being one of 'CSV', 'ZIP_CSV', 'ZIP_XML', or 'ZIP_JSON' to indicate the type of data being passed to the Bulk APIs. For the Bulk 2.0 API the only valid value (and the default) is 'CSV'.
concurrency_mode	character; either "Parallel" or "Serial" that specifies whether batches should be completed sequentially or in parallel. Use "Serial" only if lock contentions persist with in "Parallel" mode. Note: this argument is only used in the Bulk 1.0 API and will be ignored in calls using the Bulk 2.0 API.
column_delimiter	character; indicating the column delimiter used for CSV job data. The default value is COMMA. Valid values are: "BACKQUOTE", "CARET", "COMMA", "PIPE", "SEMICOLON", and "TAB", but this package only accepts and uses "COMMA". Also, note that this argument is only used in the Bulk 2.0 API and will be ignored in calls using the Bulk 1.0 API.

control	list; a list of parameters for controlling the behavior of the API call being used. For more information of what parameters are available look at the documentation for <a href="#">sf_control</a> .
...	arguments passed to <a href="#">sf_control</a>
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](https://developer.salesforce.com/docs/atlas.en-us.api_asynch.meta/api_asynch)

### Examples

```
## 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 <a href="#">sf_control</a> .
...	arguments passed to <a href="#">sf_control</a>
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](#)





```
## End(Not run)
```

---

```
sf_create_report      Create a report
```

---

## Description

### [Experimental]

Create a new report using a POST request. To create a report, you only have to specify a name and report type to create a new report; all other metadata properties are optional. It is recommended to use the metadata from existing reports pulled using [sf\\_describe\\_report](#) as a guide on how to specify the properties of a new report.

## Usage

```
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 meta-data information on. A list of valid report types that can be created using this function will be available in the <code>reportTypes.type</code> column of results returned by <a href="#">sf_list_report_types</a> . (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: <code>reportMetadata</code> , <code>reportTypeMetadata</code> , <code>reportExtendedMetadata</code> .
verbose	logical; an indicator of whether to print additional detail for each API call, which is useful for debugging. More specifically, when set to <code>TRUE</code> 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

Other Report functions: [sf\\_copy\\_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\\_query\\_report\(\)](#), [sf\\_run\\_report\(\)](#), [sf\\_update\\_report\(\)](#)

## Examples

```
## Not run:
# creating a blank report using just the name and type
my_new_report <- sf_create_report("Top Accounts Report", "AccountList")

# creating a report with additional metadata by grabbing an existing report
# and modifying it slightly (only the name in this case)

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

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

# third, pull down its metadata and update the name
report_describe_list <- sf_describe_report(this_report_id)
report_describe_list$reportMetadata$name <- "TEST API Report Creation"

# fourth, create the report by passing the metadata
my_new_report <- sf_create_report(report_metadata=report_describe_list)

## End(Not run)
```

---

sf\_delete

*Delete Records*

---

## Description

**[Stable]**

Deletes one or more records from your organization's data.

## Usage

```
sf_delete(
  ids,
  object_name = NULL,
  api_type = c("REST", "SOAP", "Bulk 1.0", "Bulk 2.0"),
  guess_types = TRUE,
```

```

control = list(...),
...,
all_or_none = deprecated(),
verbose = FALSE
)

```

### 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 <a href="#">sf_control</a> .
...	arguments passed to <a href="#">sf_control</a> or further downstream to <a href="#">sf_bulk_operation</a>
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

```

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 <a href="#">sf_control</a> or further downstream to <a href="#">sf_bulk_operation</a>
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

```
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 <a href="#">sf_create_job_bulk</a> . 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

```
## 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 <a href="#">sf_control</a> .
...	arguments passed to <a href="#">sf_control</a>
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

```
## Not run:  
metadata_info <- sf_delete_metadata(metadata_type = 'CustomObject',  
                                   object_names = c('Custom_Account25__c'))  
  
## End(Not run)
```



---

sf_delete_report	<i>Delete a report</i>
------------------	------------------------

---

## Description

### [Experimental]

Delete a report by sending a DELETE request to the Report resource. Deleted reports are moved to the Recycle Bin.

## Usage

```
sf_delete_report(report_id, verbose = FALSE)
```

## Arguments

report_id	character; the Salesforce Id assigned to a created analytics report. It will start with "000".
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

Other Report functions: [sf\\_copy\\_report\(\)](#), [sf\\_create\\_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\\_query\\_report\(\)](#), [sf\\_run\\_report\(\)](#), [sf\\_update\\_report\(\)](#)

## 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 delete  
this_report_id <- all_reports$Id[1]  
  
# third, delete that report using its Id  
success <- sf_delete_report(this_report_id)
```

```
## End(Not run)
```

---

```
sf_delete_report_instance
    Delete a report instance
```

---

## Description

### [Experimental]

If the given report instance has a status of Success or Error, delete the report instance.

## Usage

```
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 "000".
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

```
## 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

```
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(verbose = 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](https://developer.salesforce.com/docs/atlas.en-us.api_meta.meta/api_meta)

## Examples

```
## 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

```
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 <a href="#">sf_control</a> .
...	arguments passed to <a href="#">sf_control</a>
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**

```
## Not run:
account_metadata <- sf_describe_objects("Account")
account_metadata_SOAP <- sf_describe_objects("Account", api_type="SOAP")
multiple_objs_metadata <- sf_describe_objects(c("Contact", "Lead"))

account_metadata_REST <- sf_describe_objects("Account", api_type="REST")

## 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**

```
sf_describe_object_fields(object_name)
```

**Arguments**

`object_name` character; the name of the Salesforce object that the function is operating against (e.g. "Account", "Contact", "CustomObject\_\_c").

**Value**

A `tbl_df` containing one row per field for the requested object.

**Note**

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

**Examples**

```
## Not run:
acct_fields <- sf_describe_object_fields('Account')

## End(Not run)
```

---

sf\_describe\_report     *Describe a report*

---

## Description

### [Experimental]

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

## Usage

```
sf_describe_report(report_id, verbose = FALSE)
```

## Arguments

report_id	character; the Salesforce Id assigned to a created analytics report. It will start with "000".
verbose	logical; an indicator of whether to print additional detail for each API call, which is useful for debugging. More specifically, when set to TRUE the URL, header, and body will be printed for each request, along with additional diagnostic information where available.

## Details

- Report metadata gives information about the report as a whole. Tells you such things as, the report type, format, the fields that are summaries, row or column groupings, filters saved to the report, and so on.
- Report type metadata tells you about all the fields available in the report type, those you can filter, and by what filter criteria.
- Report extended metadata tells you about the fields that are summaries, groupings, and contain record details in the report.

## Value

list containing up to 4 properties that describe the report:

**attributes** Report type along with the URL to retrieve common objects and joined metadata.

**reportMetadata** Unique identifiers for groupings and summaries.

**reportTypeMetadata** Fields in each section of a report type plus filter information for those fields.

**reportExtendedMetadata** Additional information about summaries and groupings.

## Salesforce Documentation

- [Documentation](#)
- [Example](#)

## See Also

Other Report functions: [sf\\_copy\\_report\(\)](#), [sf\\_create\\_report\(\)](#), [sf\\_delete\\_report\(\)](#), [sf\\_describe\\_report\\_type\(\)](#), [sf\\_execute\\_report\(\)](#), [sf\\_list\\_report\\_fields\(\)](#), [sf\\_list\\_report\\_filter\\_operators\(\)](#), [sf\\_list\\_report\\_types\(\)](#), [sf\\_list\\_reports\(\)](#), [sf\\_query\\_report\(\)](#), [sf\\_run\\_report\(\)](#), [sf\\_update\\_report\(\)](#)

## Examples

```
## 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

```
sf_describe_report_type(report_type, verbose = FALSE)
```

## Arguments

report_type	character; a character representing the type of report to retrieve the metadata information on. A list of valid report types that can be described using this function will be available in the reportTypes.type column of results returned <a href="#">sf_list_report_types</a> . (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**

Other Report functions: [sf\\_copy\\_report\(\)](#), [sf\\_create\\_report\(\)](#), [sf\\_delete\\_report\(\)](#), [sf\\_describe\\_report\(\)](#), [sf\\_execute\\_report\(\)](#), [sf\\_list\\_report\\_fields\(\)](#), [sf\\_list\\_report\\_filter\\_operators\(\)](#), [sf\\_list\\_report\\_types\(\)](#), [sf\\_list\\_reports\(\)](#), [sf\\_query\\_report\(\)](#), [sf\\_run\\_report\(\)](#), [sf\\_update\\_report\(\)](#)

**Examples**

```
## 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 <a href="#">sf_query</a> 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**

```
## 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)
```

```
# downloading an attachment by its Id
# (the file name will be the same as it exists in Salesforce)
sf_download_attachment(sf_id = queried_attachments$Id[1])

## End(Not run)
```

---

sf\_empty\_recycle\_bin *Empty Recycle Bin*

---

## Description

### [Experimental]

Delete records from the recycle bin immediately and permanently.

## Usage

```
sf_empty_recycle_bin(ids, api_type = c("SOAP"), verbose = FALSE)
```

## Arguments

ids	vector, matrix, data.frame, or tbl_df; if not a vector, there must be a column called Id (case-insensitive) that can be passed in the request
api_type	character; one of "REST", "SOAP", "Bulk 1.0", or "Bulk 2.0" indicating which API to use when making the request.
verbose	logical; an indicator of whether to print additional detail for each API call, which is useful for debugging. More specifically, when set to TRUE the URL, header, and body will be printed for each request, along with additional diagnostic information where available.

## Details

When emptying recycle bins, consider the following rules and guidelines:

- The logged in user can delete any record that he or she can query in their Recycle Bin, or the recycle bins of any subordinates. If the logged in user has Modify All Data permission, he or she can query and delete records from any Recycle Bin in the organization.
- Do not include the IDs of any records that will be cascade deleted, or an error will occur.
- Once records are deleted using this call, they cannot be undeleted using `link{sf_undelete}`
- After records are deleted from the Recycle Bin using this call, they can be queried using the `queryall` argument for some time. Typically this time is 24 hours, but may be shorter or longer.

## Value

tbl\_df of records with success indicator

## References

[https://developer.salesforce.com/docs/atlas.en-us.api.meta/api/sforce\\_api\\_calls\\_emptyrecyclebin.htm](https://developer.salesforce.com/docs/atlas.en-us.api.meta/api/sforce_api_calls_emptyrecyclebin.htm)

## Examples

```
## Not run:
new_contact <- c(FirstName = "Test", LastName = "Contact")
new_records <- sf_create(new_contact, object_name = "Contact")
delete <- sf_delete(new_records$id[1],
                   AllOrNoneHeader = list(allOrNone = TRUE))
is_deleted <- sf_query(sprintf("SELECT Id, IsDeleted FROM Contact WHERE Id='%s'",
                              new_records$id[1]),
                      queryall = TRUE)
hard_deleted <- sf_empty_recycle_bin(new_records$id[1])

# confirm that the record really is gone (can't be deleted)
undelete <- sf_undelete(new_records$id[1])
# if you use queryall you still will find the record for ~24hrs
is_deleted <- sf_query(sprintf("SELECT Id, IsDeleted FROM Contact WHERE Id='%s'",
                              new_records$id[1]), queryall = TRUE)

# As of v48.0 (Spring 2020) you can query the Ids of all records in the Recycle
# Bin, which makes it easier to clear the entire bin because you can grab the
# Ids of the records first
records_in_bin <- sf_query("SELECT Record FROM DeleteEvent")
records_emptied_from_bin <- sf_delete(records_in_bin$Record)

## End(Not run)
```

---

sf\_execute\_report      *Execute a report*

---

## Description

### [Experimental]

Get summary data with or without details by running a report synchronously or asynchronously through the API. When you run a report, the API returns data for the same number of records that are available when the report is run in the Salesforce user interface. Include the `filters` argument in your request to get specific results on the fly by passing dynamic filters, groupings, and aggregates in the report metadata. Finally, you may want to use [sf\\_run\\_report](#).

## Usage

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

```

    labels = TRUE,
    guess_types = TRUE,
    bind_using_character_cols = deprecated(),
    as_tbl = TRUE,
    report_metadata = NULL,
    verbose = FALSE
)

```

## Arguments

report_id	character; the Salesforce Id assigned to a created analytics report. It will start with "000".
async	logical; an indicator, by default set to TRUE, which executes the report asynchronously. If executed asynchronously, this function will return a list of attributes of the created report instance. The results can be pulled down by providing the report id and instance id to the function <a href="#">sf_get_report_instance_results</a> . 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 0016A00000035mJEQAY. The former (label) more accurately reflects the "Account.Name".
guess_types	logical; indicating whether or not to use <code>col_guess()</code> to try and cast the data returned in the recordset. If TRUE then <code>col_guess()</code> is used, if FALSE then all fields will be returned as character. This is helpful when <code>col_guess()</code> will mangle field values in Salesforce that you'd like to preserve during translation into a <code>tbl_df</code> , 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 <code>bind_rows</code> 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 <code>tbl_df</code> .
report_metadata	list; a list with one element named "reportMetadata" having additional list elements underneath. All possible elements of reportMetadata are documented <a href="#">HERE</a> , but you will most commonly only need to specify the following 3 elements to filter or query the results of an existing report: <b>reportFormat</b> A character specifying the format of the report with possible values: "TABULAR", "SUMMARY", "MATRIX", or "MULTI_BLOCK".

	<b>reportBooleanFilter</b> A character denoting how the individual filters specified in reportFilters should be combined. For example, "(1OR4)AND2AND3".
	<b>reportFilters</b> 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 <a href="#">sf_list_report_filter_operators</a> .
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's 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**

Other Report functions: [sf\\_copy\\_report\(\)](#), [sf\\_create\\_report\(\)](#), [sf\\_delete\\_report\(\)](#), [sf\\_describe\\_report\\_type\(\)](#), [sf\\_describe\\_report\(\)](#), [sf\\_list\\_report\\_fields\(\)](#), [sf\\_list\\_report\\_filter\\_operators\(\)](#), [sf\\_list\\_report\\_types\(\)](#), [sf\\_list\\_reports\(\)](#), [sf\\_query\\_report\(\)](#), [sf\\_run\\_report\(\)](#), [sf\\_update\\_report\(\)](#)

**Examples**

```
## 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)
```

---

sf\_filter\_dashboard\_operators\_list

*List dashboard filter operators*

---

**Description**

**[Experimental]**

**Usage**

```
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**

```
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**

```
## 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**

```
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 <a href="#">here</a> .
next_records_url	character (leave as NULL); a string used internally by the function to paginate through to more records until complete
api_type	character; one of "REST", "SOAP", "Bulk 1.0", or "Bulk 2.0" indicating which API to use when making the request.
verbose	logical; an indicator of whether to print additional detail for each API call, which is useful for debugging. More specifically, when set to TRUE the URL, header, and body will be printed for each request, along with additional diagnostic information where available.

**Value**

A tbl\_df of parameters defining the details of all bulk jobs

**Note**

parameterized\_search\_list elements that can be set to filter the results:

- isPkChunkingEnabledA logical either TRUE or FALSE. TRUE only returns information about jobs where PK Chunking has been enabled.
- jobTypeA character string to return jobs matching the specified type. Must be one of: "BigObjectIngest", "Classic", "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](https://developer.salesforce.com/docs/atlas.en-us.api_asynch.meta/api_asynch/get_all_jobs.htm)

**Examples**

```
## Not run:
job_info <- sf_create_job_bulk('insert', 'Account')
all_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

```
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 <a href="#">here</a> .
next_records_url	character (leave as NULL); a string used internally by the function to paginate through to more records until complete
api_type	character; one of "REST", "SOAP", "Bulk 1.0", or "Bulk 2.0" indicating which API to use when making the request.
verbose	logical; an indicator of whether to print additional detail for each API call, which is useful for debugging. More specifically, when set to TRUE the URL, header, and body will be printed for each request, along with additional diagnostic information where available.

## Value

A tbl\_df of parameters defining the details of all bulk jobs

## Note

parameterized\_search\_list elements that can be set to filter the results:

- isPkChunkingEnabledA logical either TRUE or FALSE. TRUE only returns information about jobs where PK Chunking has been enabled.

- `jobTypeA` character string to return jobs matching the specified type. Must be one of: "BigObjectIngest", "Classic", "V2Query". Classic corresponds to Bulk 1.0 API jobs and V2Query corresponds to the Bulk 2.0 API jobs.
- `concurrencyModeA` character string to return jobs matching the specified concurrency mode. Must be one of: "serial" or "parallel", but only "serial" is currently supported.

## References

[https://developer.salesforce.com/docs/atlas.en-us.api\\_asynch.meta/api\\_asynch/get\\_all\\_jobs.htm](https://developer.salesforce.com/docs/atlas.en-us.api_asynch.meta/api_asynch/get_all_jobs.htm)

## Examples

```
## Not run:
job_info <- sf_create_job_bulk('insert', 'Account')
all_query_jobs_info <- sf_get_all_query_jobs_bulk()
# just the Bulk API 2.0 query jobs
all_query_jobs_info <- sf_get_all_query_jobs_bulk(parameterized_search_list=list(jobType='V2Query'))
# just the Bulk API 1.0 query jobs
all_query_jobs_info <- sf_get_all_query_jobs_bulk(parameterized_search_list=list(jobType='Classic'))

## End(Not run)
```

---

`sf_get_dashboard_data` *Get dashboard data in a tabular format*

---

## Description

**[Experimental]**

## Usage

```
sf_get_dashboard_data(
  dashboard_id,
  running_user = NULL,
  dashboard_filters = c(character(0))
)
```

## Arguments

<code>dashboard_id</code>	character; the Salesforce Id assigned to a created dashboard. It will start with "01Z".
<code>running_user</code>	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\_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**

```
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.
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**

```
## Not run:  
# get all deleted Contact records from midnight until now  
deleted_recs <- sf_get_deleted("Contact", Sys.Date(), Sys.time())  
  
## End(Not run)
```

---

sf\_get\_job\_bulk

*Get Bulk API Job*

---

**Description**

This function retrieves details about a Job in the Salesforce Bulk API

**Usage**

```
sf_get_job_bulk(  
  job_id,  
  api_type = c("Bulk 1.0", "Bulk 2.0"),  
  query_operation = FALSE,  
  verbose = FALSE  
)
```

**Arguments**

job_id	character; the Salesforce Id assigned to a submitted job as returned by <a href="#">sf_create_job_bulk</a> . 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](https://developer.salesforce.com/docs/atlas.en-us.api_asynch.meta/api_asynch)

**Examples**

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

```
## End(Not run)
```

---

```
sf_get_job_records_bulk
```

*Returning the Details of a Bulk API Job*

---

**Description**

This function returns detailed (row-level) information on a job which has already been submitted completed (successfully or not).

**Usage**

```
sf_get_job_records_bulk(
  job_id,
  api_type = c("Bulk 1.0", "Bulk 2.0"),
  record_types = c("successfulResults", "failedResults", "unprocessedRecords"),
  combine_record_types = TRUE,
  verbose = FALSE
)
```

**Arguments**

job_id	character; the Salesforce Id assigned to a submitted job as returned by <a href="#">sf_create_job_bulk</a> . 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](https://developer.salesforce.com/docs/atlas.en-us.api_asynch.meta/api_asynch)

**Examples**

```
## 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,
    report_instance_id,
    labels = 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 "000".
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 0016A00000035mJEQAY. 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**

```
## 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**

```
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

```
## 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

```
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 <a href="#">sf_create_job_bulk</a> . It will start with "750".
api_type	character; one of "REST", "SOAP", "Bulk 1.0", or "Bulk 2.0" indicating which API to use when making the request.
verbose	logical; an indicator of whether to print additional detail for each API call, which is useful for debugging. More specifically, when set to TRUE the URL, header, and body will be printed for each request, along with additional diagnostic information where available.

## Value

A tbl\_df of parameters defining the batch identified by the batch\_id

## Note

This is a legacy function used only with Bulk 1.0.

## References

[https://developer.salesforce.com/docs/atlas.en-us.api\\_asynch.meta/api\\_asynch](https://developer.salesforce.com/docs/atlas.en-us.api_asynch.meta/api_asynch)

## Examples

```
## 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

```
sf_list_api_limits()
```

## Value

list

## Note

This resource is available in REST API version 29.0 and later for API users with the View Setup and Configuration permission. The resource returns these limits:

- Daily API calls
- Daily asynchronous Apex method executions (batch Apex, future methods, queueable Apex, and scheduled Apex)
- Daily Bulk API calls
- Daily Streaming API events (API version 36.0 and earlier)
- Daily durable Streaming API events (API version 37.0 and later)
- Streaming API concurrent clients (API version 36.0 and earlier)
- Durable Streaming API concurrent clients (API version 37.0 and later)
- Daily generic streaming events (API version 36.0 and earlier)
- Daily durable generic streaming events (API version 37.0 and later)
- Daily number of mass emails that are sent to external email addresses by using Apex or APIs
- Daily number of single emails that are sent to external email addresses by using Apex or APIs



- Concurrent REST API requests for results of asynchronous report runs
- Concurrent synchronous report runs via REST API
- Hourly asynchronous report runs via REST API
- Hourly synchronous report runs via REST API
- Hourly dashboard refreshes via REST API
- Hourly REST API requests for dashboard results
- Hourly dashboard status requests via REST API
- Daily workflow emails
- Hourly workflow time triggers
- Hourly OData callouts
- Daily and active scratch org counts
- Data storage (MB)
- File storage (MB)

### Examples

```
## Not run:
sf_list_api_limits()

## End(Not run)
```

---

sf\_list\_dashboards      *List dashboards*

---

### Description

#### [Experimental]

Returns a list of recently used dashboards

### Usage

```
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	<i>List All Objects of a Certain Metadata Type in Salesforce</i>
------------------	--

---

**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](https://developer.salesforce.com/docs/atlas.en-us.api_meta.meta/api_meta)

**Examples**

```
## Not run:  
# pull back a list of all Custom Objects and Email Templates  
my_queries <- list(list(type='CustomObject'),  
                  list(folder='unfiled$public',  
                        type='EmailTemplate'))  
metadata_info <- sf_list_metadata(queries=my_queries)  
  
## End(Not run)
```

---

sf_list_objects	<i>List Organization Objects and their Metadata</i>
-----------------	---

---

**Description****[Stable]**

Lists the available objects and their metadata for your organization's data.

**Usage**

```
sf_list_objects()
```

**Value**

```
list
```

**Examples**

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

---

sf_list_reports	<i>List reports</i>
-----------------	---------------------

---

**Description****[Experimental]**

Displays a list of full list of reports based on the Report object. If recent is up to 200 tabular, matrix, or summary reports that you recently viewed. To get additional details on reports by format, name, and other fields, use a SOQL query on the Report object.

**Usage**

```
sf_list_reports(recent = FALSE, as_tbl = TRUE, verbose = FALSE)
```

**Arguments**

recent	logical; an indicator of whether to return the 200 most recently viewed reports or to invoke a query on the Report object to return all reports in the Org. By default, this argument is set to FALSE meaning that all of the reports, not just the most recently viewed reports are returned. Note that the default behavior of the reports list endpoint in the Reports and Dashboards REST API is only the most recently viewed up to 200 reports.
--------	---

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

**Value**

tbl\_df by default, or a list depending on the value of argument as\_tbl

**Salesforce Documentation**

- [Documentation](#)
- [Example](#)

**Note**

This function will only return up to 200 of recently viewed reports when the recent argument is set to TRUE. For a complete details you must use [sf\\_query](#) on the report object.

**See Also**

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\\_query\\_report\(\)](#), [sf\\_run\\_report\(\)](#), [sf\\_update\\_report\(\)](#)

**Examples**

```
## Not run:
# to return all possible reports, which is queried from the Report object
reports <- sf_list_reports()

# return the results as a list
reports_as_list <- sf_list_reports(as_tbl=FALSE)

# return up to 200 recently viewed reports
all_reports <- sf_list_reports(recent=TRUE)

## End(Not run)
```

---

sf\_list\_report\_fields *Get a list of report fields*

---

**Description****[Experimental]**

The Report Fields resource returns report fields available for specified reports. Use the resource to determine the best fields for use in dashboard filters by seeing which fields different source reports have in common. Available in API version 40.0 and later.

**Usage**

```
sf_list_report_fields(
  report_id,
  intersect_with = c(character(0)),
  verbose = FALSE
)
```

**Arguments**

**report\_id** character; the Salesforce Id assigned to a created analytics report. It will start with "000".

**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**

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\\_filter\\_operators\(\)](#), [sf\\_list\\_report\\_types\(\)](#), [sf\\_list\\_reports\(\)](#), [sf\\_query\\_report\(\)](#), [sf\\_run\\_report\(\)](#), [sf\\_update\\_report\(\)](#)

**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 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

```
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

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\\_types\(\)](#), [sf\\_list\\_reports\(\)](#), [sf\\_query\\_report\(\)](#), [sf\\_run\\_report\(\)](#), [sf\\_update\\_report\(\)](#)

## Examples

```
## 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

```
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 "000".
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**

```
## 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**

```
sf_list_report_types(as_tbl = TRUE, verbose = FALSE)
```

**Arguments**

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

**Value**

tbl\_df by default, or a list depending on the value of argument as\_tbl

**Salesforce Documentation**

- [Documentation](#)

**See Also**

Other Report functions: [sf\\_copy\\_report\(\)](#), [sf\\_create\\_report\(\)](#), [sf\\_delete\\_report\(\)](#), [sf\\_describe\\_report\\_type\(\)](#), [sf\\_describe\\_report\(\)](#), [sf\\_execute\\_report\(\)](#), [sf\\_list\\_report\\_fields\(\)](#), [sf\\_list\\_report\\_filter\\_operators\(\)](#), [sf\\_list\\_reports\(\)](#), [sf\\_query\\_report\(\)](#), [sf\\_run\\_report\(\)](#), [sf\\_update\\_report\(\)](#)



**Examples**

```
## Not run:
report_types <- sf_list_report_types()
unique_report_types <- report_types %>% select(reportTypes.type)

# return the results as a list
reports_as_list <- sf_list_report_types(as_tbl=FALSE)

## End(Not run)
```

---

sf\_list\_resources      *List the Resources for an API*

---

**Description**

**[Stable]**

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

**Usage**

```
sf_list_resources()
```

**Value**

list

**Examples**

```
## Not run:
sf_list_resources()

## End(Not run)
```

---

sf\_list\_rest\_api\_versions      *List REST API Versions*

---

**Description**

**[Stable]**

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

**Usage**

```
sf_list_rest_api_versions()
```

**Value**

list

**Examples**

```
## 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**

```
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 <a href="#">sf_merge</a> 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 <a href="#">sf_control</a> .
...	arguments passed to <a href="#">sf_control</a>
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 <- 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$Description[2]))
# check the second and third records now have the same Master Record Id as the first
merge_check <- sf_query(sprintf("SELECT Id, MasterRecordId, Description
                                FROM Contact WHERE Id IN ('%s')",
                                paste0(new_recs1$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 <code>col_guess()</code> to try and cast the data returned in the recordset. If TRUE then <code>col_guess()</code> is used, if FALSE then all fields will be returned as character. This is helpful when <code>col_guess()</code> will mangle field values in Salesforce that you'd like to preserve during translation into a <code>tbl_df</code> , 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 <a href="#">sf_control</a> .
...	arguments passed to <a href="#">sf_control</a> or further downstream to <a href="#">sf_query_bulk</a> .
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

<code>bind_using_character_cols</code>	logical; an indicator of whether to cast the data to all character columns to ensure that <code>bind_rows</code> 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.
<code>object_name_append</code>	logical; whether to include the object type (e.g. Account or Contact) as part of the column names (e.g. Account.Name).
<code>object_name_as_col</code>	logical; whether to include the object type (e.g. Account or Contact) as a new column.
<code>verbose</code>	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](https://developer.salesforce.com/docs/atlas.en-us.api_asynch.meta/api_asynch)

### Examples

```
## 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.

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 <a href="#">sf_control</a> .
...	other arguments passed on to <a href="#">sf_control</a> or <a href="#">sf_create_job_bulk</a> 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

```
## 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**

```

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(...),
  ...,
  api_type = "Bulk 2.0",
  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 <code>col_guess()</code> to try and cast the data returned in the recordset. If TRUE then <code>col_guess()</code> is used, if FALSE then all fields will be returned as character. This is helpful when <code>col_guess()</code> will mangle field values in Salesforce that you'd like to preserve during translation into a <code>tbl_df</code> , 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 <code>bind_rows</code> 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 <code>sf_control</code> .
...	other arguments passed on to <code>sf_control</code> or <code>sf_create_job_bulk</code> to specify the <code>content_type</code> , <code>concurrency_mode</code> , and/or <code>column_delimiter</code> .



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)
```

---

sf\_query\_report

*Get Report Data without Saving Changes to or Creating a Report*

---

### Description

#### [Experimental]

Run a report without creating a new report or changing the existing one by making a POST request to the query resource. This allows you to get report data without filling up your Org with unnecessary reports.

### Usage

```
sf_query_report(report_id, report_metadata = NULL, verbose = FALSE)
```

**Arguments**

report_id	character; the Salesforce Id assigned to a created analytics report. It will start with "000".
report_metadata	list; a list with one element named "reportMetadata" having additional list elements underneath. All possible elements of reportMetadata are documented <a href="#">HERE</a> , but you will most commonly only need to specify the following 3 elements to filter or query the results of an existing report: <ul style="list-style-type: none"> <li><b>reportFormat</b> A character specifying the format of the report with possible values: "TABULAR", "SUMMARY", "MATRIX", or "MULTI_BLOCK".</li> <li><b>reportBooleanFilter</b> A character denoting how the individuals filters specified in reportFilters should be combined. For example, "(1OR4)AND2AND3".</li> <li><b>reportFilters</b> 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 <a href="#">sf_list_report_filter_operators</a>.</li> </ul>
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 <a href="#">sf_create_job_bulk</a> . It will start with "750".
batch_id	character; the Salesforce Id assigned to a submitted batch as returned by <a href="#">sf_create_batches_bulk</a> . It will start with "751".
result_id	character; a string returned from <a href="#">sf_batch_details_bulk</a> when a query has completed and specifies how to get the recordset
guess_types	logical; indicating whether or not to use <code>col_guess()</code> to try and cast the data returned in the recordset. If TRUE then <code>col_guess()</code> is used, if FALSE then all fields will be returned as character. This is helpful when <code>col_guess()</code> will mangle field values in Salesforce that you'd like to preserve during translation into a <code>tbl_df</code> , 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 <code>bind_rows</code> 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

```
## 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)
```

---

sf\_query\_result\_bulk\_v1

*Retrieve the results of a Bulk 1.0 query*

---

### Description

This function returns the row-level recordset of a Bulk 1.0 query which has already been submitted to Bulk API Job and has Completed state

### Usage

```
sf_query_result_bulk_v1(
  job_id,
  batch_id = NULL,
  result_id = NULL,
  guess_types = TRUE,
  bind_using_character_cols = deprecated(),
  api_type = c("Bulk 1.0"),
  verbose = FALSE
)
```

**Arguments**

job_id	character; the Salesforce Id assigned to a submitted job as returned by <a href="#">sf_create_job_bulk</a> . It will start with "750".
batch_id	character; the Salesforce Id assigned to a submitted batch as returned by <a href="#">sf_create_batches_bulk</a> . It will start with "751".
result_id	character; a string returned from <a href="#">sf_batch_details_bulk</a> when a query has completed and specifies how to get the recordset
guess_types	logical; indicating whether or not to use <code>col_guess()</code> to try and cast the data returned in the recordset. If TRUE then <code>col_guess()</code> is used, if FALSE then all fields will be returned as character. This is helpful when <code>col_guess()</code> will mangle field values in Salesforce that you'd like to preserve during translation into a <code>tbl_df</code> , 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 <code>bind_rows</code> 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**

```
## 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 <a href="#">sf_create_job_bulk</a> . It will start with "750".
guess_types	logical; indicating whether or not to use <code>col_guess()</code> to try and cast the data returned in the recordset. If TRUE then <code>col_guess()</code> is used, if FALSE then all fields will be returned as character. This is helpful when <code>col_guess()</code> will mangle field values in Salesforce that you'd like to preserve during translation into a <code>tbl_df</code> , 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 <code>bind_rows</code> 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 <a href="#">sf_query_result_bulk_v2</a> that is included in the query string of the next call to paginate through all records returned by the query.
api_type	character; one of "REST", "SOAP", "Bulk 1.0", or "Bulk 2.0" indicating which API to use when making the request.

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

### Value

`tbl_df`, formatted by Salesforce, containing query results

### References

[Bulk 2.0 documentation](#)

### Examples

```
## Not run:
my_query <- "SELECT Id, Name FROM Account LIMIT 1000"
job_info <- sf_create_job_bulk(operation = 'query', object = 'Account', api_type="Bulk 2.0")
query_info <- sf_submit_query_bulk(job_id = job_info$id, soql = my_query, api_type="Bulk 2.0")
result <- sf_batch_details_bulk(job_id = query_info$jobId,
                               batch_id = query_info$id)
recordset <- sf_query_result_bulk(job_id = query_info$jobId,
                                 batch_id = query_info$id,
                                 result_id = result$result)
sf_close_job_bulk(job_info$id, api_type="Bulk 2.0")

## End(Not run)
```

---

`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

```
sf_read_metadata(metadata_type, object_names, verbose = FALSE)
```

### Arguments

`metadata_type` character; string on what type of metadata to create.

`object_names` a character vector of names that we wish to read metadata for

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

**Value**

A list containing a response for each requested object

**References**

[https://developer.salesforce.com/docs/atlas.en-us.api\\_meta.meta/api\\_meta](https://developer.salesforce.com/docs/atlas.en-us.api_meta.meta/api_meta)

**Examples**

```
## 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**

```
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

```
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](https://developer.salesforce.com/docs/atlas.en-us.api_meta.meta/api_meta)

## Examples

```
## Not run:
renamed_custom_object <- sf_rename_metadata(metadata_type = 'CustomObject',
                                             old_fullname = 'Custom_Account32__c',
                                             new_fullname = 'Custom_Account99__c')

## End(Not run)
```

---

sf\_report\_folders\_list

*List report folders*

---

### Description

**[Experimental]**

### Usage

sf\_report\_folders\_list()

### Value

list

---

sf\_report\_folder\_children

*Get the subfolders (children) of a report folder*

---

### Description

**[Experimental]**

### Usage

sf\_report\_folder\_children(report\_folder\_id, page\_size = 10, page = NULL)

### Arguments

report\_folder\_id

character; the Salesforce Id assigned to a created analytics folder (it will start with "00I").

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 "00I").
------------------	---

**Value**

logical

---

sf\_report\_folder\_describe

*Describe a report folder*

---

### Description

**[Experimental]**

### Usage

```
sf_report_folder_describe(report_folder_id)
```

### Arguments

report\_folder\_id

character; the Salesforce Id assigned to a created analytics folder (it will start with "00I").

### 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

```
sf_report_folder_shares_add(report_folder_id, body)
```

### Arguments

report\_folder\_id

character; the Salesforce Id assigned to a created analytics folder (it will start with "00I").

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\_shares\_list

*List the shares in a report folder*

---

**Description**

**[Experimental]**

**Usage**

```
sf_report_folder_shares_list(report_folder_id)
```

**Arguments**

report\_folder\_id

character; the Salesforce Id assigned to a created analytics folder (it will start with "00I").

**Value**

list

---

sf\_report\_folder\_shares\_update

*Update the shares for a report folder*

---

**Description**

**[Experimental]**

Creates new shares to replace the existing shares in the share list for the folder.

**Usage**

```
sf_report_folder_shares_update(report_folder_id, body)
```

**Arguments**

report\_folder\_id

character; the Salesforce Id assigned to a created analytics folder (it will start with "00I").

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\_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 "001").

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 "001").

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**

```
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 "001").
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 "00I").
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_reset_password	<i>Reset User Password</i>
-------------------	----------------------------

---

**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 documentation for <a href="#">sf_control</a> .
...	arguments passed to <a href="#">sf_control</a>
verbose	logical; an indicator of whether to print additional detail for each API call, which is useful for debugging. More specifically, when set to TRUE the URL, header, and body will be printed for each request, along with additional diagnostic information where available.

**Value**

list

**Examples**

```
## Not run:
# 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**

```
sf_retrieve(
  ids,
  fields,
  object_name,
  api_type = c("REST", "SOAP", "Bulk 1.0", "Bulk 2.0"),
  guess_types = TRUE,
  control = list(...),
  ...,
  verbose = FALSE
)
```

**Arguments**

ids	vector, matrix, data.frame, or tbl_df; if not a vector, there must be a column called Id (case insensitive) that can be passed in the request.
fields	character; one or more strings indicating the fields to be returned on the records
object_name	character; the name of the Salesforce object that the function is operating against (e.g. "Account", "Contact", "CustomObject__c").
api_type	character; one of "REST", "SOAP", "Bulk 1.0", or "Bulk 2.0" indicating which API to use when making the request.
guess_types	logical; indicating whether or not to use col_guess() to try and cast the data returned in the recordset. If TRUE then col_guess() is used, if FALSE then all fields will be returned as character. This is helpful when col_guess() will mangle field values in Salesforce that you'd like to preserve during translation into a tbl_df, like numeric looking values that must be preserved as strings ("48.0").

control	list; a list of parameters for controlling the behavior of the API call being used. For more information of what parameters are available look at the documentation for <a href="#">sf_control</a> .
...	arguments passed to <a href="#">sf_control</a>
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**

```
## 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**

```
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](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\\_request.htm](https://developer.salesforce.com/docs/atlas.en-us.api_meta.meta/api_meta/meta_retrieve_request.htm)

**Examples**

```
## Not run:
retrieve_request <- list(unpackaged=list(types=list(members='*',
                                                    name='CustomObject'))))
retrieve_info <- sf_retrieve_metadata(retrieve_request)

## End(Not run)
```

---

sf\_run\_bulk\_operation *Run Bulk Operation*

---

**Description**

**[Stable]**

This function is a convenience wrapper for submitting bulk API jobs

**Usage**

```

sf_run_bulk_operation(
  input_data,
  object_name,
  operation = c("insert", "delete", "upsert", "update", "hardDelete"),
  external_id_fieldname = NULL,
  guess_types = TRUE,
  api_type = c("Bulk 1.0", "Bulk 2.0"),
  batch_size = NULL,
  interval_seconds = 3,
  max_attempts = 200,
  wait_for_results = TRUE,
  record_types = c("successfulResults", "failedResults", "unprocessedRecords"),
  combine_record_types = TRUE,
  control = list(...),
  ...,
  verbose = FALSE
)

sf_bulk_operation(
  input_data,
  object_name,
  operation = c("insert", "delete", "upsert", "update", "hardDelete"),
  external_id_fieldname = NULL,
  guess_types = TRUE,
  api_type = c("Bulk 1.0", "Bulk 2.0"),
  batch_size = NULL,
  interval_seconds = 3,
  max_attempts = 200,
  wait_for_results = TRUE,
  record_types = c("successfulResults", "failedResults", "unprocessedRecords"),
  combine_record_types = TRUE,
  control = list(...),
  ...,
  verbose = FALSE
)

```

**Arguments**

<code>input_data</code>	named vector, matrix, data.frame, or tbl_df; data can be coerced into CSV file for submitting as batch request
<code>object_name</code>	character; the name of the Salesforce object that the function is operating against (e.g. "Account", "Contact", "CustomObject__c").
<code>operation</code>	character; string defining the type of operation being performed
<code>external_id_fieldname</code>	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 col_guess() to try and cast the data returned in the recordset. If TRUE then col_guess() is used, if FALSE then all fields will be returned as character. This is helpful when col_guess() will mangle field values in Salesforce that you'd like to preserve during translation into a tbl_df, like numeric looking values that must be preserved as strings ("48.0").
api_type	character; one of "REST", "SOAP", "Bulk 1.0", or "Bulk 2.0" indicating which API to use when making the request.
batch_size	integer; the number of individual records to be included in a single batch uploaded to the Bulk APIs (1.0 or 2.0).
interval_seconds	integer; defines the seconds between attempts to check for job completion.
max_attempts	integer; defines then max number attempts to check for job completion before stopping.
wait_for_results	logical; indicating whether to wait for the operation to complete so that the batch results of individual records can be obtained
record_types	character; one or more types of records to retrieve from the results of running the specified job
combine_record_types	logical; indicating for Bulk 2.0 jobs whether the successfulResults, failedResults, and unprocessedRecords should be stacked together by binding the rows
control	list; a list of parameters for controlling the behavior of the API call being used. For more information of what parameters are available look at the documentation for <a href="#">sf_control</a> .
...	other arguments passed on to <a href="#">sf_control</a> or <a href="#">sf_create_job_bulk</a> 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 TRUE the URL, header, and body will be printed for each request, along with additional diagnostic information where available.

**Value**

A tbl\_df of the results of the bulk job

**Note**

With Bulk 2.0 the order of records in the response is not guaranteed to match the ordering of records in the original job data.

**See Also**

[Salesforce Documentation](#)

## Examples

```
## 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)
```

---

sf_run_bulk_query	<i>Run bulk query</i>
-------------------	-----------------------

---

## 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

```
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(...),
  ...,
  api_type = c("Bulk 2.0", "Bulk 1.0"),
  verbose = FALSE
)
```

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

```

```

    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 <code>col_guess()</code> to try and cast the data returned in the recordset. If TRUE then <code>col_guess()</code> is used, if FALSE then all fields will be returned as character. This is helpful when <code>col_guess()</code> will mangle field values in Salesforce that you'd like to preserve during translation into a <code>tbl_df</code> , 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 <code>bind_rows</code> 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 <code>sf_control</code> .
...	other arguments passed on to <code>sf_control</code> or <code>sf_create_job_bulk</code> to specify the <code>content_type</code> , <code>concurrency_mode</code> , and/or <code>column_delimiter</code> .
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](#) and [Bulk 2.0 documentation](#)

## Examples

```
## 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

```
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 "000".
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 <a href="#">sf_list_report_filter_operators</a> .
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 <a href="#">arrange</a> 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 <a href="#">sf_get_report_instance_results</a> . 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 <code>col_guess()</code> to try and cast the data returned in the recordset. If TRUE then <code>col_guess()</code> is used, if FALSE then all fields will be returned as character. This is helpful when <code>col_guess()</code> will mangle field values in Salesforce that you'd like to preserve during translation into a <code>tbl_df</code> , 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 <code>bind_rows</code> 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 <code>reportFormat</code> 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_search	<i>Perform SOSL Search</i>
-----------	----------------------------

---

**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**

[https://developer.salesforce.com/docs/atlas.en-us.soql\\_sosl.meta/soql\\_sosl/sforce\\_api\\_calls\\_sosl.htm](https://developer.salesforce.com/docs/atlas.en-us.soql_sosl.meta/soql_sosl/sforce_api_calls_sosl.htm)

**Examples**

```
## 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

## Examples

```
## Not run:  
sf_server_timestamp()  
  
## End(Not run)
```

---

```
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

```
## 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 <a href="#">sf_create_job_bulk</a> . 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**

```
## 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	<i>Undelete Records</i>
-------------	-------------------------

---

## Description

### [Experimental]

Undeletes records from the Recycle Bin.

## Usage

```
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 <a href="#">sf_control</a> .
...	arguments passed to <a href="#">sf_control</a>
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](https://developer.salesforce.com/docs/atlas.en-us.api.meta/api/sforce_api_calls_undelete.htm)

**Examples**

```
## 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**

```
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 <code>col_guess()</code> to try and cast the data returned in the recordset. If TRUE then <code>col_guess()</code> is used, if FALSE then all fields will be returned as character. This is helpful when <code>col_guess()</code> will mangle field values in Salesforce that you'd like to preserve during translation into a <code>tbl_df</code> , 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 <a href="#">sf_control</a> .
...	arguments passed to <a href="#">sf_control</a> or further downstream to <a href="#">sf_bulk_operation</a>
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 <- 2
new_contacts <- tibble(FirstName = rep("Test", n),
                      LastName = paste0("Contact", 1:n))
new_records <- sf_create(new_contacts, "Contact")
updated_contacts <- tibble(FirstName = rep("TestTest", n),
                          LastName = paste0("Contact", 1:n),
                          Id = new_records$id)
# update and allow fields to be truncated if they are too long
update <- sf_update(input_data = updated_contacts, object_name = "Contact",
                   AllowFieldTruncationHeader=list(allowFieldTruncation=TRUE))

## End(Not run)
```

---

 sf\_update\_attachment *Update Attachments*


---

## Description

### [Experimental]

This function will allow you to update attachments (and other blob data, such as Documents) by providing the Id of the attachment record and the file paths (absolute or relative) to media that you would like to upload to Salesforce along with other supported metadata for this operation (Name, Body, IsPrivate, and OwnerId).

## Usage

```
sf_update_attachment(
  attachment_input_data,
  object_name = c("Attachment"),
  api_type = c("SOAP", "REST", "Bulk 1.0", "Bulk 2.0"),
  control = list(...),
  ...,
  verbose = FALSE
)
```

## Arguments

attachment_input_data	named vector, matrix, data.frame, or tbl_df; data can be coerced into a data.frame. The input must contain a column entitled 'Body' with an absolute or relative file path (unless creating a Document using a Url) along with other required fields depending on the object. If performing an update operation, then one column or field of the input must be the Id of the record to modify.
object_name	character; the name of the Salesforce object that the function is operating against (e.g. "Account", "Contact", "CustomObject__c").
api_type	character; one of "REST", "SOAP", "Bulk 1.0", or "Bulk 2.0" indicating which API to use when making the request.
control	list; a list of parameters for controlling the behavior of the API call being used. For more information of what parameters are available look at the documentation for <a href="#">sf_control</a> .
...	arguments passed to <a href="#">sf_control</a> or further downstream to <a href="#">sf_bulk_operation</a>
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**

```
## 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 <a href="#">sf_control</a> .
...	arguments passed to <a href="#">sf_control</a>
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**

```
## 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 = '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
update_metadata <- custom_object
update_metadata$fullName <- 'Custom_Account1__c'
update_metadata$label <- 'New Label Custom_Account1'
update_metadata$pluralLabel <- 'Custom_Account1s_new'
updated_custom_object_result <- sf_update_metadata(metadata_type = 'CustomObject',
                                                  metadata = update_metadata)

## End(Not run)
```

---

sf\_update\_report

*Update a report*

---

**Description****[Experimental]**

Save changes to a report by sending a PATCH request to the Report resource. Note that saving a report deletes any running async report jobs because they might be obsolete based on the updates.





```
# 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

```
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 <a href="#">sf_create_job_bulk</a> . It will start with "750".
api_type	character; one of "REST", "SOAP", "Bulk 1.0", or "Bulk 2.0" indicating which API to use when making the request.
verbose	logical; an indicator of whether to print additional detail for each API call, which is useful for debugging. More specifically, when set to TRUE the URL, header, and body will be printed for each request, along with additional diagnostic information where available.

## Value

A list of parameters defining the job after signaling a completed upload

## Note

This function is typically not used directly. It is used in `sf_create_batches_bulk()` right after submitting the batches to signal to Salesforce that the batches should no longer be queued.

## References

[https://developer.salesforce.com/docs/atlas.en-us.api\\_asynch.meta/api\\_asynch](https://developer.salesforce.com/docs/atlas.en-us.api_asynch.meta/api_asynch)

**Examples**

```
## Not run:
upload_info <- sf_upload_complete_bulk(job_id=job_info$id)

## End(Not run)
```

sf\_upsert

*Upsert Records***Description****[Stable]**

Upserts one or more new records to your organization's data.

**Usage**

```
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**

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

control	list; a list of parameters for controlling the behavior of the API call being used. For more information of what parameters are available look at the documentation for <a href="#">sf_control</a> .
...	arguments passed to <a href="#">sf_control</a> or further downstream to <a href="#">sf_bulk_operation</a>
all_or_none	logical; allows a call to roll back all changes unless all records are processed successfully.
verbose	logical; an indicator of whether to print additional detail for each API call, which is useful for debugging. More specifically, when set to TRUE the URL, header, and body will be printed for each request, along with additional diagnostic information where available.

### Value

tbl\_df of records with success indicator

### Examples

```
## Not run:
n <- 2
new_contacts <- tibble(FirstName = rep("Test", n),
                       LastName = paste0("Contact-Create-", 1:n),
                       My_External_Id__c=letters[1:n])
new_contacts_result <- sf_create(new_contacts, object_name="Contact")

upserted_contacts <- tibble(FirstName = rep("Test", n),
                           LastName = paste0("Contact-Upsert-", 1:n),
                           My_External_Id__c=letters[1:n])
new_record <- tibble(FirstName = "Test",
                    LastName = paste0("Contact-Upsert-", n+1),
                    My_External_Id__c=letters[n+1])
upserted_contacts <- bind_rows(upserted_contacts, new_record)

upserted_contacts_result1 <- sf_upsert(upserted_contacts,
                                     object_name="Contact",
                                     "My_External_Id__c")

## End(Not run)
```

---

sf\_upsert\_metadata      *Upsert Object or Field Metadata in Salesforce*

---

### Description

#### [Experimental]

This function takes a list of Metadata components and sends them to Salesforce for creation or update if the object already exists

**Usage**

```
sf_upsert_metadata(
  metadata_type,
  metadata,
  control = list(...),
  ...,
  all_or_none = deprecated(),
  verbose = FALSE
)
```

**Arguments**

metadata_type	character; string on what type of metadata to create.
metadata	list; metadata components to be created formatted as XML before being sent via API.
control	list; a list of parameters for controlling the behavior of the API call being used. For more information of what parameters are available look at the documentation for <a href="#">sf_control</a> .
...	arguments passed to <a href="#">sf_control</a>
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**

```
## 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

**Examples**

```
## 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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