

Duplicate Record Avoidance Admin Utility

Summary

Currently, the Salesforce APIs used by the Salesforce Field Service mobile app do not have support for detecting duplicate requests. Due to the nature of poor mobile network connectivity, some customers are experiencing upload issues where multiple attempts are being made to upload a new record and thus causing duplicate records to be created.

The mobile app has been updated in Spring '21 (starting with Beta2 release) to support the avoidance of duplicate records for two different scenarios: Record Creation via Flow and File Uploads via Flow.

Record Creation via Flow

The Field Service mobile app can utilize a custom field defined as a unique External ID field to determine if records have already been created on the server. When a field named “SFS_External_ID__c” exists on an object, the mobile app will pre-populate the value automatically with a universally unique ID (UUID). If the UUID already exists on the server, then the record create operation still residing on the mobile device can be considered a duplicate and will be correctly handled.

NOTE: This functionality to detect duplicates will be used automatically if the object type being created has a field named “SFS_External_ID__c”. Therefore, the only requirement to take advantage of this feature is to define a new custom field named “SFS_External_ID__c” on object(s) as explained in the section below (and ensuring your mobile users have access to read and update this field). See subsequent sections below for instructions on how to define this field.

NOTE: Adding this this new custom field will consume portions of your organizations limits such as the maximum number of fields and maximum number of External ID fields.

File Uploads via Flow

The mobile app can do a pre-flight check to find a matching file on the server. A file is considered a match if the MD5 checksum value of the new file matches the MD5 checksum value of a file on the server that is also owned by the mobile user.

The pre-flight check is only performed if a connected app attribute named DUPLICATE_AVOIDANCE is defined with a value of “true”. See instructions below on how to define this custom attribute on both the Android and iOS connected apps.

NOTE: The usage of this feature slightly alters the behavior from previous versions of the app as follows.

- When the DUPLICATE_AVOIDANCE feature is enabled, the same file uploaded multiple times will be treated as a single unique file on the server. For example, if the mobile user uploads the exact same image for every work order, only a single file will be created on the server and it will be associated with each work order. However, if the DUPLICATE_AVOIDANCE feature is disabled (or user is using a previous version of the app), a new file will be created for each upload even though the file is actually identical and each unique file upload will be associated to the work order.
- After this feature is enabled, if a user attempts to upload a file that already exists on the server, the app will choose the most recent version on the server and will continue to use it from that point on for resolving duplicates.

- When a file is associated to an object, the latest version of the file will always be shown in the Files related list. Therefore, if a single file is associated to multiple work orders and a user uploads a new version of the file, then the new version will be reflected on all work orders. Likewise, if the file is deleted from the server, it will be removed from all objects it is associated with.

Uncovered Scenarios

Scenarios that are not covered include the following:

- Quick Action Record Creates (including Quick Actions launched from a flow) - In most cases, a quick action can be converted to a flow to create new records.
- Feed File Posts - It is currently possible for feed posts to be duplicated on the Chatter feed.
- Record Updates - It is possible that an update can be sent multiple times. In most cases, this is harmless, but if a trigger or process builder flow executes on updates it might be something to consider.
- Service Report creation.

Instructions

Enabling Duplicate Avoidance for Record Creation via a Flow

Each object is required to have a custom field defined that can be used to uniquely identify objects created by the mobile app. This can be done in two ways: manually or via a Salesforce Labs unmanaged package named “Field Service Duplicate Avoidance Admin Utility” that contains a simple admin utility to aid in the addition of these fields as well as providing mobile users access to the field via a permission set.

Admin Utility

Salesforce Labs will provide an admin utility that can be installed via App Exchange. This utility allows an admin to add fields to any selected object as well as to automatically update a selected permission set to grant READ and EDIT permissions to the new field.

NOTE

Please ensure that either your environment has been configured with the [My Domain](#) feature, or that you have added your instance URL as a [Remote Site setting](#). This will allow the package to make the required callouts to configure your org.

To install the Field Service Duplicate Avoidance Admin Utility, search for and install it from AppExchange into your org.

When installing, select “Do not install” and “Install for Admins Only”:



Install Salesforce Field Service Duplicate Avoidance Utility

By



What if existing component names conflict with ones in this package?

☒ Do not install.
 ☐ Rename conflicting components in package.

☒ Install for Admins Only

☐ Install for All Users

☐ Install for Specific Profiles...

Install

Cancel

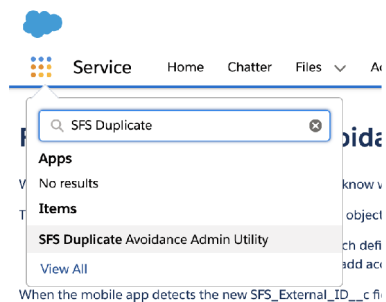
App Name	Publisher	Version Name	Version Number
Salesforce Field Service Duplicate Avoidance Utility		1.3	1.3

Description

WARNING! USE AT YOUR OWN RISK! SFS Admin Utility that allows admin to add duplicate avoidance custom field to selected tables, as well as assign the permission set to users. The permission set is updated each time a new table is processed so that users will immediately see the field and be able to update it on mobile.

[Additional Details](#)
[View Components](#)

Once the package is installed, a new item can be found in the App Launcher named “SFS Duplicate Avoidance Admin Utility”:



This provides a way to select objects that exist on the server, including custom objects, and to automatically add the new custom field:

Field Service Duplicate Avoidance Admin Utility

WARNING: This is an admin utility. Only use this if you know what you're doing!

This utility does the following things to each processed object:

- Adds a new custom field, SFS_External_ID__c, which defines a non-required, indexed, unique external id field.
- Optionally updates the selected permission set to add access to the new field.

When the mobile app detects the new SFS_External_ID__c field, it avoids duplicate record creations.

Add Custom Field to Selected Objects (Multi-select by holding CMD or CTRL)

Objects without the SFS_External_ID__c field:

Authorization Form

Authorization Form Consent

Authorization Form Data Use

Authorization Form Text

Briefcase Assignment

Calendar

Case

Case Comment

Case Contact Role

Case Solution

Objects with the SFS_External_ID__c field:

Account

Asset

Product Consumed

Work Order

Select a permission set to update along, or select – None --. The selected permission set will be updated to have READ and EDIT access on the new field for the selected objects above.

FSL Resource Permissions

Add Custom Field To Selected Objects

NOTE

The selected permission set must have all of the selected objects available in the permission set's Object Settings. For example, the standard Field Service Mobile permission set does not declare access to the Product Consumed object, so attempting to update the Field Service Mobile permission set while selecting the Product Consumed object will cause the permission set update operation to fail.

Manual Custom Field Setup

In the case where a customer prefers to have more control and to enable this feature manually, these are the steps that will be required for each subject:

Create a new custom field of type “Text” and click Next. Then, fill out the form as follows and click Next.

Field Label = “SFS External ID”

Type = Text

Length = 36

Field Name = “SFS_External_ID”

Unique: Checked (Treat “ABC” and “abc” as duplicate values)

External ID: Checked

The field definition should match this exactly, then click Save.

Setup > OBJECT MANAGER

Account

Details

Fields & Relationships

Page Layouts

Lightning Record Pages

Buttons, Links, and Actions

Compact Layouts

Field Sets

Object Limits

Record Types

Related Lookup Filters

Search Layouts

Search Layouts for Salesforce Classic

Hierarchy Columns

Triggers

Validation Rules

Account

New Custom Field

Step 2. Enter the details

Field Label: SFS_External_ID

Length: 36

Field Name: SFS_External_ID

Description: This will be used by the Salesforce Field Service mobile app to ensure records created on mobile are not duplicated due to network errors and issues.

Help Text:

Required: ☐ Always require a value in this field in order to save a record

Unique: ☒ Do not allow duplicate values

☒ Treat "ABC" and "abc" as duplicate values (case insensitive)

☐ Treat "ABC" and "abc" as different values (case sensitive)

External ID: ☒ Set this field as the unique record identifier from an external system

Default Value: [Show Formula Editor](#)

Use formula syntax: Enclose text and picklist value API names in double quotes ("the_text"), include numbers without quotes (25), show percentages as decimals (0.15), and express date calculations in the standard format: (today() + 7). To reference a field from a Custom Metadata type record use: \$CustomMetadata.Type__and.RecordIdName_Field__c

After the field is added, it is important to update any permission sets such as Field Service Resource Permissions so that mobile users have read and update permissions on the new field.

NOTE: It is not necessary to add this field to any page layouts.

Create Connected App Custom Attribute

An administrator will need to add the connected app attribute to both the Android and iOS Field Service connected apps. This is accomplished by the following steps (see accompanying image, too). Note that after the connected app attribute is added, mobile users must log out and back in again in order to pick up the new attribute.

1. In Setup, search for Manage Connected Apps
2. For both Salesforce Field Service for iOS and Salesforce Field Service for Android:
 - a. Tap the name to show the connected app information.
 - b. In the Custom Attributes section, click New and add a new custom attribute with the name of DUPLICATE_AVOIDANCE and a value of "true" (quotes included). See example below.
3. Users will need to log out and back in for the new custom attribute to be picked up (an admin can force logout if needed by going to Setup → Users → Users, selecting a user, and then clicking Revoke next to any Salesforce Field Service rows that appear in the Oauth Connected Apps related list. WARNING: Any unsaved data on the mobile client will be lost!)



Search Setup



Setup

Home

Object Manager



manage connected

Apps

Connected Apps

Manage Connected Apps

Didn't find what you're looking for?
Try using Global Search.



SETUP

Create Custom Attribute

Attribute key **DUPLICATE_AVOIDANCE**

Attribute value

Insert Field

Insert Operator

"true"

Save

Cancel