RAD 2 APEX Coding Project

Scenario

Client receives a .csv file containing contact data each month. The file is a dump from an external database and does not delineate what data is new, what data is updated and what data is unchanged since the previous month's file was provided.

Each row in the .csv does contain a unique external ID that is also stored on Salesforce contact records and can be used to determine if a contact already exists in Salesforce.

No integration with the external database is possible.

Solution Requirement

Client has a small staff and an inexperienced Salesforce administrator and requires a repeatable, reliable, and efficient way to insert and/or update contact records in Salesforce based on the contents of the file.

Solutions Considered

Option 1: Create an integration with the external database using a third-party app such as Workato. This option was rejected.

Option 2: Include a "created date" and a "last modified date" or some other data for each row(record) in the .csv to indicate whether a record is new, updated, or unchanged since the previous month's file. This option was rejected. (Option 2 is not a complete solution but would simplify processing of the file.)

Option 3: Import file as leads and utilize existing lead conversion process with some modifications. This was rejected there is no confusion between leads and the monthly file reconciliation process and the file reconciliation process doesn't impact lead reporting and metrics.

Solution Selected

The solution is somewhat similar to the lead creation and conversion process.

The following configuration updates and coding are required:

- Create a custom object and custom fields that will temporarily store the data from the .csv.
- Create code that determines if a holding object record already exists as a contact in Salesforce (using the unique External ID to find matches).
- Create formula fields that, if the contact already exists in Salesforce, compare the existing Salesforce contact record to the new holding object record.

Solution Selected

(continued)

- Create a formula field (checkbox) that evaluates to TRUE if the data in holding object record is the same as the data in the contact record.
- Code that creates a new account record and a new contact record for each holding object record that does not match an existing contact record.
- Code that updates existing contact records if a holding object record matches an existing contact record AND there are differences in the data in the holding object record compared to the contact record. (Contact records where data matches that in the holding object record are not updated.)
- Code that deletes holding object records once monthly processing is complete.

Solution in Action

The solution requires minimal monthly intervention by the user. Each month the user initiates processing from a flow screen.

The process is initiated when a system administrator user starts the Monthly Reconcile flow.

1. The flow asks the user to select the .csv to be uploaded.
2. Visualforce page displays the data in the file. If the data file appears correctly, the user imports the file and creates a holding object record for each row(record) in the file.
3. Code parses the . csv file to:
   a. Identify holding object records that do not exist as Salesforce contact records.
   b. Identify holding object records that do exist as Salesforce contact records.

Solution in Action

4. Code populates a lookup field on the holding object record with the related contact ID when step 3.a. finds a match between the holding object record and an existing contact record.
5. Code creates new account and contact records for holding object records that do not exist as Salesforce contacts.
6. Custom formula fields identify data differences between holding object records and related contact records.
7. User reviews data changes identified in step 6. onscreen or (via report?).
8. When review of data changes is complete, code updates contact records with the new data from the related holding object record.
9. Code deletes holding object records.