

Standard Processing for Raisers Edge Migrations
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Purpose

This document outlines standard data processing used by NW Data Centric, LLC during migrations of data from Raisers Edge systems to Salesforce.

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Motivation

Very large portions of NWDC standard processing use automation developed over the course of many previous Raisers Edge migrations.

Because of the use of previously developed automation, the standard processing approach is:

1. typically completed with a shorter timeline
2. typically much less expensive, since the need for custom programming is much reduced
3. higher data quality, because the processing output has been tested and reviewed in several previous RE migrations

Transformations required during RE-to-SF migrations are often very complex. As a result, a desire to customize data migration processing to use new or additional data sources, or to implement other changes can often result in substantial increases in project expenses and timelines.

Standard processing should always be given serious considerations as the first option for RE data migration to SF.

Export of Raisers Edge Data

At this point, I typically extract data from RE using RE “export” and “query” functionality available within the RE user interface.

1. RE “export” functions used to define most data extraction:

- A) Actions
- B) Appeals
- C) Campaigns
- D) Funds
- E) Gifts
- F) Individual Relationships

2. RE “query” functions used to extract RE “attribute” data

Each attribute exported with a unique query providing the attribute data and key links to the described Constituent, Gift, etc.

I typically prefer establishing those definitions myself, as RE users typically do NOT understand how the user interface locations and labeling they are familiar with correspond to underlying RE tables/fields.

Different extraction approaches could be used: RE RODBA (“read only database access”) module, RE API access. But a change to these alternatives would perhaps involve a major effort.

General Principles for Minimizing Data Migration Effort/Expense

1. Identify all needed fields *before* data processing/data loading activities are started.

A simple transfer of additional RE fields to corresponding records like Accounts, Contacts,

Opportunities is generally easy and straightforward, and does not cause a significant increase in expense.

However, that simplicity and ease is very dependent on timing.

- A) If the need for these fields is identified *before* data processing/loading starts – there is typically only a minor impact on data migration expense.
- B) If instead these fields are identified only *after* data processing/loading starts, a significant additional expense can result.

Revisions added at this late stage often require numerous processing steps that are otherwise avoided:

- i. revise RE export definitions,
- ii. re-run RE exports,
- iii. alter data processing automation to handle the new fields,
- iv. generate new CSV files for use with the SF Data Loader,
- v. revise SF Data Loader field mapping
- vi. run new SF Data Loader operations.

If one new field is identified, then later another, then later another, all these steps may need to be repeated in each case. The time required for running these steps repeatedly can result in a major increase in overall data migration expenses.

- 2. For areas of data processing which are very complex, seriously consider whether standard processing can meet core needs *before* considering any major customizations.

Data processing areas of high complexity that should receive this consideration include:

- A) Processing to identify multi-person SF household Accounts
- B) SF Affiliations
- C) SF Relationships
- D) SF Campaigns
- E) SF Opportunities
- F) SF Payments

- 3. Always consult the persons performing data migration before customizing SF configuration.

A customization that seems simple from the configuration angle might actually cause major problems with data migration processing. Major increases in data migration expense might result and might not even be understood as an impact until a critical point in the project.

- 4. If persons other than the data migrators are modifying SF configuration (creating new fields, modifying picklists, changing field names, changing “required” settings of fields), those persons must notify the data migrators of the changes they've made.

The ideal is that changes like this should not be actually implemented until after the data migrator(s) review and approve the change. But if this standard is not fulfilled, at least a notification at the time of the change is very important.

Changes made without notifying the data migrators may very well cause major disruptions right in the midst of data loading operations where these changes are unexpectedly revealed.

Standard Data Processing Description

A high-level description of standard automation that may be applied during an RE migration is provided here.

Synthesis of SF Account Records

A SF Account record is created to represent

- 1) Every RE “organization” Constituent
- 2) Every RE non-constituent “organization” represented in the RE “Relationships” export
- 3) Any RE “individual” Constituent with no spouse

A “spouse” might be designated by a variety of “relationship code” or “reciprocal relationship code” values in RE (“wife”, “husband”, “significant other”, “partner”, etc). A “spouse” relationship might also be represented by a “true” value in the “is spouse” field on an RE Relationship record.

Typically, a code conversion map is developed jointly by NWDC and the client to convert inconsistent RE “relationship code” and “reciprocal relationship codes” into a “spouse” value that will be used in SF. The same conversion is used to determine whether a spouse relationship is present for determining whether a multi-person SF household Account should be created to represent a couple.

- 4) Any RE non-constituent” represented in the RE “Relationships” export without a spouse
The same calculation description provided under item 3 just above applies in this situation.
- 5) Any situation where RE data indicates a “household” Account representing multiple persons should be created.

Note: A PDF file representing a flowchart of the data processing approach for detecting multi-person households (“flowchart_re_multi-pn_hshld.pdf”) is available and might be found accompanying this document.

Multi-person household situations are detected by a complicated bit of standard automation that will be described in detail in other parts of this document. The main features of that calculation are:

- A) Multi-person household Accounts are only created to represent persons having a “spouse” relationship defined in RE (See comments under point 3 above for explanation of how a spouse relationship is judged to be present.)

If an RE record documents a non-constituent spouse. but provides no first name, that record is omitted from any further processing. (For example, if all we know about John Smith's spouse is that her name is “Ms. Smith”, Ms. Smith's record is omitted from any consideration).

- B) Multi-person household Accounts are only created when spouses share a street address.

If a person has several addresses in RE, the address marked as “preferred” is used for this purpose.

Spouses that use different addresses are assumed to maintain separate households and separate SF household Accounts are created for them.

Addresses are compared by using a constructed “match key” that is usually composed of: the first two words of the street address and the city name. Matching values of this key are taken to indicate an address match. This approach is not perfect, but has been shown in practice to correctly identify the vast majority of matching addresses. (If RE addresses have been standardized to US Postal Service standards, the matching performance can be expected to be better.)

If the RE Relationship record indicating the spouse relationship has the “is household head” field set to true, that person is marked as the Account.PrimaryContact.

- 6) Accounts can be synthesized for other special-purpose situations at a specific client request, however that will be not be done with standard automation and will result in additional data migration expenses.

Synthesis of SF Contact Records

A SF Contact record is created in these situations:

1. For each RE “individual” Constituent
2. For each RE non-constituent represented in the RE “Relationships” export
Spouses sharing an address with a constituent are excluded if the non-constituent provides no “first name” value.
3. For RE “organization” Constituents and non-constituents represented only in the RE “Relationships” export. a “dummy” Contact record is created.

This Contact record is synthesized to allow linking to Campaigns and similar uses. The Contact FirstName/LastName values are typically “Friend at”/{org name}.

Synthesis of SF NPSP Affiliation Records

Note: A PDF files providing a flowchart of the typical data processing (“flowchart_re_rel_to_sf_affil.pdf”) is available, and might be found accompanying this document.

Standard automation creates Affiliation records to represent these situations:

1. An RE Relationship record indicates a link between an individual Constituent or a non-constituent individual and an RE “organization” Constituent.

An RE Relationship may simultaneously represent several types of relationships. and standard processing creates a separate Affiliation record to represent each of these situations:

- A) An “employee” situation, indicated by either a “true” value in the “is employee” field or by use of a “relationship code” value containing the word “employee” or converted to an “employee” value through a code conversion map.
- B) A “formally designated contact” situation, as indicated by a “true” value in the “is contact”

field.

In this situation, the value of the “contact type” field is used as the Affiliation.Role value

C) Any other situation indicated by a “relationship code” value

The RE “relationship code” value will be placed in the Affiliation.Role field.

“Relationship code” values that are interpreted to indicate “employee” situations are covered by step A above. These records are not used in this current step.

NOTE: It is common for RE instance to contain many “relationship code” values that actually seem inappropriate for description of an individual-to-organization link. If transfer of these values to SF Affiliations is undesirable, a manual clean-up project or a comprehensive code conversion map will need to be developed to change those values.

2. An RE Relationship record indicates a link between an individual (either a constituent or a non-constituent) and a non-Constituent organization documented only within the RE “Relationship” data export.

Affiliation values are assigned as noted in point 1 just above.

3. The “date from” and “date to” values on the source RE Relationship record are transferred to the Affiliation.StartDate and EndDate fields.

NOTE: Some discussion about this step may be justified. RE Relationship records may document *several* different types of links (employee, contact, etc) but they provide only one “status” value and only one set of “date from/date to” fields. RE users who set a “date from” value may actually have intended that value to apply to only one of these multiple relationships.

4. If the RE Relationship source record has status = “former” or a “date to” value, the Affiliation.Status field is set to “Former”. Otherwise, it is set to “Current”.

NOTE: Some discussion about this step may be justified. RE Relationship records may document *several* different types of links (employee, contact, etc) but provide only one “status” value and only one set of “date from/date to” fields. RE users who set a “date from” value may actually have intended that value to apply to only one of these multiple relationships.

Possible Customizations Not Covered by Standard Automation

Processing of Affiliation data is very complex. Because of that, customizations to incorporate data from additional, non-standard areas of RE can be very time consuming and expensive.

During a migration using standard Affiliation processing, it would be typical to use only 10-15 hours verifying correct data processing. In recent projects, requests to process data from a new RE subject areas for synthesis of SF Affiliations required upwards of 50 hours to complete – a 4-fold increase in time spent on this one processing area.

Customizations that have been requested in previous projects:

1. Conversion of RE Relationship “education” records to SF Affiliations
2. Conversion of RE Constituent Primary Business information to SF Affiliations

These data sometimes provide duplications of information also provided in RE Relationship records, resulting in a requirement for complicated de-duplication automation.

3. Conversion of RE Constituent Primary Alumni information to SF Affiliations

These data sometimes duplicate information also provided in RE Relationship records, resulting in a requirement for complicated de-duplication automation.

4. Conversion of RE Constituency Codes to SF Affiliations.
5. Conversion of RE Attribute values to SF Affiliations.
6. Conversion of constituent/solicitor associations
7. Use of different record types for different types of Affiliations
8. Consistent population of lookup fields referencing specific Accounts, etc. (For instance, Accounts representing a specific division/department of the client's organization.)

Because of the complexity of the Affiliations processing automation, these customizations may result in a substantial increase in data migration time and expense.

Synthesis of SF NPSP Relationship Records

Note: A PDF file providing a flowchart of the typical data processing ("flowchart_re_rel_to_sf_rel.pdf") is available, and might be found accompanying this document.

NPSP Relationship records are synthesized in this way:

1. A code conversion map is developed to map RE "relationship code" and "reciprocal relationship code" values to values that will be used in SF.

The conversions are commonly designed to accomplish these goals:

A) Correct spelling errors and standardize values used to represent similar situations

For instance,

- i. change "in-law (daughter)" to "child in-law"
- ii. change "spouse" to "spouse"

B) Change gender specific values to gender-neutral values

For instance,

- i. change "wife" to "spouse"
- ii. change "grandfather" to "grandparent"

C) Eliminate values that are not desired in SF

For instance

- i. change "owner" to blank value ("owner may be considered an inappropriate description of a person-to-person relationship")

2. Apply the developed code conversion to both "relationship code" and "recip relationship code" values to obtain values that will be represented in SF
3. De-duplicate the converted relationship code values

After conversion, a specific person-to-person link might represent the same "type" of

relationship more than once, so a de-duplication is needed.

This de-duplication is a very complex operation – revisions/modifications would be time-consuming.

4. Set the NPSP Relationship.Status value

A) If the relationship code value in RE contains the word “former”, set the value “Former”

B) If the RE Relationship record has a “date to” value, set the value “Former”

C) Otherwise, set Relationship.Status = “Current”

NOTE: Some discussion about steps used to set Relationship.Status may be justified. RE Relationship records may document *several* different types of links (employee, contact, etc) but provide only one “status” value and only one “date from” field. Users who set a “date from” value may actually have intended that value to apply to only one of these multiple relationships.

Possible Customizations Not Covered by Standard Automation

These customizations have been requested in previous projects:

1. Conversion of RE Constituency Codes to Relationships
2. Conversion of RE solicitor assignments to Relationships
3. Synthesis of Relationships from RE Constituent Appeal Assignments

Because of the complexity of the Relationship processing automation, these customizations may result in a substantial increase in data migration time and expense.

Synthesis of SF Campaign Records

Usage patterns for RE Campaigns, Appeals and Packages vary among organizations using Raisers Edge. The most common situation is the one that is most readily handled by standard automation:

1. RE Packages are defined as children of RE Appeals
2. RE Appeals are defined as children of RE Campaigns and once a Campaign “parent” is established, the Appeal is never relinked to another RE Campaign
3. RE Gifts sometimes indicate links to Campaign/Appeal combinations that differ from any defined within the formal RE Campaign.Appeal hierarchy.

SF Campaign records are then usually synthesized in this way:

1. A SF Campaign is created for each RE Campaign record
2. A SF Campaign is created for each RE Appeal record

This SF Campaign links to the appropriate SF Campaign to represent the same Campaign/Appeal link defined in RE.

3. (If RE Packages are being transferred) A SF Campaign is created for each RE Package.

This SF Campaign links to the appropriate SF Campaign to reproduce the same Appeal/Package link defined in RE.

4. If data exam shows that RE Gifts provide Campaign/Appeal combinations not represented in the formal RE Campaign/Appeal hierarchy...
 - A) Queries are used to determine what new RE Campaign/Appeal combinations are used in RE Gifts
 - B) Each new combination of RE Campaign/Appeal that is documented in RE Gifts is used to synthesize new SF Campaigns representing these situations.

Possible Customizations Not Covered by Standard Automation

It is possible to create SF Campaigns from other types of RE data, but this is not covered by standard, pre-existing automation and will require custom programming and additional data migration expenses. Examples include:

1. RE Constituency Codes
2. RE Constituent Attribute Values
3. RE Relationships with specified “relationship code” values

Synthesis of SF Campaign Member Records

SF Campaign Members are created to represent

1. RE links between Constituents and RE Campaigns and Appeals

Possible Customizations Not Covered By Standard Automation

If creation of non-standard, custom SF Campaigns is being undertaken, additional custom programming will be required and will result in additional data migration expense.

These customizations have been requested in previous projects:

1. Conversion of RE Constituency Codes to SF Campaigns/Campaign Members
2. Conversion of RE Constituent Attributes to SF Campaigns/Campaign Members
3. Conversion of RE Solicitor assignments to SF Campaigns/Campaign Members
4. Conversion of specified RE Relationships to SF Campaigns/Campaign Members
5. Population of lookup fields to other objects (for instance, Accounts) which are determined by complex calculations

If data volume is high, this particular type of customization can also cause increases in SF data loading times.

These customizations may result in a substantial increase in data migration time and expense if associated data handling needs are complex.

Synthesis of SF NPSP General Accounting Unit Records

SF General Accounting Unit records are synthesized to represent each RE Fund record.

Synthesis of SF Opportunity Records

SF Opportunity records are created to represent:

1. RE Gifts that are one-time gifts and not installment payments

RE Gifts with these RE Gift.Type values would be included:

- A) Cash
- B) Gift-In-Kind
- C) MG Pledge
- D) Other
- E) Planned Gift
- F) Pledge
- G) Recurring Gift Pay-Cash
- H) Stock/Property
- I) Stock/Property (Sold)

2. RE Gifts that represent pledges

RE Gifts with these RE Gift.Type values would be included

- A) MG Pay-Cash
- B) Pay-Cash
- C) Pay-Other

Opportunity.RecordType is typically obtained from a simple one-factor conversion of the RE Gift.Type field. Rarely, the value of a 2d field such as RE Gift.Subtype is also considered. Either of these approaches are easy and fast to use during data migration - typically requiring less than 20 mins of attention from the data migrator.

Opportunity.Stage value is usually handled by an approach that is similar to that used for Opportunity.RecordType – a relatively simple code conversion from one or (sometimes) two RE Gift field values.

A simple transfer of additional RE Gift fields to an Opportunity record is generally easy and straightforward, and does not cause a significant increase in expense if the need for these fields is identified before data processing/loading starts. If instead these fields are identified only later, a significant additional expense can be realized because of subsequent need to revise RE export definitions, re-run RE exports, alter data processing automation to handle the new fields, generate new CSV files for use with the SF Data Loader, revise SF Data Loader field mapping and run new SF Data Loader operations. *It is very important to identify all needed fields before data processing or data loading activities are started.*

Possible Customizations Not Covered by Standard Automation

These customizations have been occasionally (uncommonly/rarely) requested, but are not covered by standard automation.

1. Multi-factor calculations of Opportunity.RecordType

This is sometimes very complex to program – especially in high data volume situations. In a recent project, the client requested a calculation of OpportunityRecordType that required a consideration of four different input fields, with very detailed handling according to the values encountered. As opposed to the standard approach outlined above, which requires perhaps 20 mins, this multi-factor approach required nearly 50 hrs to implement correctly and in a way that did not hinder overall data processing performance – over a 60-fold increase in programming time.

2. Multi-factor calculations of Opportunity.Stage value

This sort of customization can cause an increase in data migration expenses similar to the increase outlined for Opportunity.RecordType just above.

3. Separation of RE Gift field data into different SF Opportunity fields based on linkages to RE Campaigns or Appeals.

4. Synthesis and linking of Opportunities to special-purpose SF Campaigns used to represent situations where RE shows a Gift linked to *multiple* Appeals or Campaigns.

SF typically allows an Opportunity to be linked directly to only *one* SF Campaign.

Synthesis of SF NPSP Payment Records

Typical “best practice” use of SF NPSP Payments is to use Payments to represent:

1. An actual “payment” received for a one-time gift
2. Each anticipated installment payment on a “pledge” promise

These would be linked to the Opportunity record used to represent the overall pledge “promise”

As a result, NPSP Payment records are synthesized in this way:

1. If a one-time gift is represented
2. If an installment anticipated for a pledge is being represented:
 - A) The “scheduled date”, “payment date”, “amount”, “payment method”, and “paid” field values are taken from the corresponding RE “Gift Installment” and “Gift Installment Payment” records.

“Payment method” is typically obtained from a simple code conversion of the RE Gift.PayMethod field. (RE typically uses *slightly* different values than SF.)

Synthesis of SF NPSP GAU Allocation Records

GAU Allocations are synthesized to represent all allocations of portions of an RE Gift to an RE Fund.

1. The RE Fund is represented by the NPSP General Accounting Unit record that is linked by the GAU Allocation record
2. The NPSP Allocation is linked to the SF Opportunity that represents the RE Gift.

Synthesis of SF Opportunity Contact Role Records

Opportunity Contact Roles are created to represent:

1. Donors who are individuals (links to SF Contact record representing the individual)
2. RE Gift Soft Credits
3. RE Gift links to solicitors

NOTE: RE soft credit and solicitor links to gifts can assign partial credit for the RE Gift. SF Opportunity Contact Role records do not provide this ability – they merely indicate the person who fulfilled the role of “solicitor” or “soft credit recipient” for the linked SF Opportunity.

Synthesis of SF NPSP Partial Soft Credit Records

NPSP Partial Soft Credits are difficult to process and load. In most of my RE migrations, a decision is made to avoid using them. In addition, reporting on these data is not always intuitive and easy.

Even with use of pre-existing automation, loading of Partial Soft Credits will cause a notable increase in data migration costs.

A decision to process and load these records should be avoided unless tracking of partial soft credits for solicitors, etc is of high importance.

Handling of RE “Attribute” Data

RE “Attributes” are difficult and expensive to handle during an RE data migration.

RE Export definitions represent attributes in a difficult-to-use fashion. As a result, attributes can not be included in the same exports used to obtain most RE data.

Instead, it is necessary to export each RE Attribute that must be examined using the following process:

1. Create an RE Query that exports the attribute to a CSV with key identifiers (like the Constituent ID, Constituent System ID, etc)
2. Run the RE Query and export the results
3. Link the exported CSV file to the data transformation system
4. Construct queries to examine important characteristics of the attribute:
 - A) Does the attribute take just one value for each record it is linked to? Or can multiple values be assumed?
 - B) How many records are there?
 - C) What type of data is provided?
 - i. Date values?
 - ii. Yes/No?
 - iii. Free text?
 - iv. A set of “picklist” type values?

If a set of “picklist” type values, what exact values are allowed?

D) Is the attribute “description” field the only value of interest for transfer?

Attribute records generally also provide a “Date” and “Comment” field. It must be determined whether these values are also important for transfer. If they are, a need for custom SF structures may be indicated.

RE Attributes also frequently require one or more code conversion maps to convert RE values into values desired within a SF picklist, etc.

In recent projects, each attribute being transferred requires nearly an hour of data migration time. And that is in a situation where automation is available to perform many of the needed steps with a small use of time.

RE Data Areas Not Covered by Standard Automation

Because data in these subjects is rarely transferred during RE data migrations, there may be no pre-existing automation available for use. Custom programming may be required and data migration expenses will increase:

1. Data that has been managed in an unusual or idiosyncratic fashion

For instance, if RE Campaigns/Appeals/Packages have been used in a very unusual fashion. In this type of situation, there will be no pre-existing automation to apply. Data migration expenses associated with construction of “one off” programming will accrue.

2. Events
3. Event Participants
4. Gift Amendments
5. Gift Adjustments
6. Gift Benefits
7. Grants
8. Jobs
9. Proposals
10. Volunteer information
11. Synthesis of SF Product, Pricebook and Opportunity Product records

This sort of data is rarely included in RE data migrations. As a result, no pre-existing automation will be available, and custom data handling automation will need to be constructed.

12. Synthesis of SF Recurring Donation records

This type of data is only rarely transferred from RE to SF. As a result, no pre-existing automation will be available, and custom data handling automation will need to be constructed.