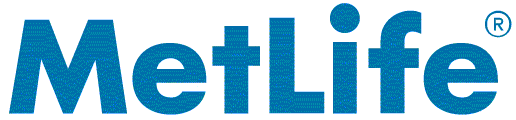
**ITG US Business IT**



**GPM STRATEGIC 3.0**

**Design Document Track 3**

**Pre Acxiom Daily,**

**Pre Acxiom Extract,**

**Group Plan Sponsor &**

**Post Acxiom Daily**

Version: 1.4

Date: 09/24/2014

|  |  |  |
| --- | --- | --- |
| Management: |  | **Project Manager** |
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| Revision History |

|  |  |  |  |
| --- | --- | --- | --- |
| **Date** | **Version** | **Description** | **Author** |
| 05/23/2014 | 1.0 | Initial Draft | Cognizant |
| 06/30/2014 | 1.1 | Modified as per review comments from Business for RM\_BUS\_ID population, Delta Action Code identification, Acxiom Preferred record creation process | Cognizant |
| 8/11/2014 | 1.2 | GPS logic updated for VRPS  GPS error handling updated  Party Preference logic updated.  Name and Address logic update for RAW vs STD fields. | Cognizant |
| 9/3/2014 | 1.3 | Address logic updated for Pre-Acxiom  Updated S2T are attached  Assumption section is updated  Name population logic for Pre-Acxiom process is updated  GPS validation logic is updated  Global party creation and deletion logic updated | Cognizant |
| 9/24/2014 | 1.4 | PHK Sync up process Logic updated  Phone number additional checks included for data quality | Cognizant |
| 6/15/2015 | 1.5 | MDM Configuration change: Acxiom contextual creation logic  S2T updated for UAT Defects of Track 1, Tactical defects & Death Suppression indicator CR. | Cognizant |

# Introduction

This document provides a high level understanding of the strategy & processes used for loading and extracting data to/from GPM 3.0 through different processes mentioned below.

1. Data loading through Pre-Acxiom Ongoing process into GPM 3.0 Database from the Source files.
2. Data loading through Group Plan Sponsor process into GPM 3.0 Database from the Source files.
3. Extracting data from GPM 3.0 Database and provide extracted data to Acxiom.
4. Data loading through Post-Acxiom Ongoing process into GPM 3.0 Database from the Acxiom response file.

* For Pre-Acxiom Ongoing process & Group Plan Sponsor process, source files coming from Mainframe system are sent to Trillium for Name and Address Standardization. Output file from Trillium is split into Easy-Moderate and Complex files. Easy moderate files are sent to Informatica Server for ETL processing.
* In Pre-Acxiom ongoing process, there will be three source files sent by Mainframe trillium team which are Party file, Registration File and Policy file.
* In Group Plan sponsor, there will be only one source file following a different format.
* In Post-Acxiom Ongoing process there will be one source file which will be sent by Acxiom similar to Party layout.

# Purpose

This document provides guidelines to all the relevant users for exploring design approach of ETL processes developed to accomplish the business requirements of Easy Moderate Ongoing data load in GPM Strategic 3.0. Moreover it is a useful background document for everyone to guide through in the project.

# In-Scope

* 1. All ETL processing will be done in Pre Landing DB unless and until it’s is specifically mentioned about a specific DB
  2. Goal is to Load Informatica MDM - Landing Layer, referred as GPM 3.0.

This will be done in following steps:

* + 1. Load Ongoing delta records from source files (Mainframe files Party, Policy, Registration) for Easy Moderate to Pre-Landing Layer
    2. Loading Group Plan sponsor data to Pre-Landing layer.
    3. Load ongoing delta records from Acxiom response file to Pre-Landing Layer.
    4. Load delta data from Pre-Landing layer to Landing layer.
  1. In Pre-Acxiom Extract process, information related to Individual and Organization Party will be extracted and sent to the Acxiom. However, no policy related information will be sent to Acxiom. Records updated through Pre-Acxiom Ongoing process or Group Plan sponsor will be considered for Extract.
  2. Minimum Data Validation of source files will be considered while loading to GPM 3.0 database.
  3. In Pre-Acxiom process, new party and policy information received from the source will added to the GPM 3.0 database and any existing party & policy information received will be updated.
  4. In Group Plan Sponsor process, new sponsor party information received from the Source will added to the GPM 3.0 database and any existing sponsor party information received will be updated.
  5. In Post-Acxiom Ongoing process, Post-Acxiom data validation will be considered while loading into GPM 3.0 database and it will be same as in GPM 2.x.
  6. In Post-Acxiom Ongoing process, Global Party will be created only for records having preferred indicator as “Y” in Acxiom response file. If there are multiple records having same RM ID and any one of them will be promoted as Global based on preferred Indicator (Y).
  7. In Post-Acxiom Ongoing process, Individual RMID/Business RMID (based on Acxiom Party Type) & Primary Hash Key (PHK) will be stored at both contextual (ML and Acxiom) and global level in the Party Table.
  8. In Post-Acxiom Ongoing process, AB address along with Address Enriched information & Additional address received from Acxiom will be inserted / updated into GPM Pre-Landing layer.
  9. Process of pushing files to DET server for Acxiom and getting the post Acxiom files will remain same as in GPM 2.x.
  10. Once an existing sponsor comes for new admin systems, a new relationship will be built using existing policy and the corresponding parties which already exists in the GPM database based on the GRPID.

# Out of Scope

1. Any report generation from GPM Database.
2. Database Schema Definition for Landing Zone.
3. Use of any other tool than Informatica Power Center for Delta Identification.
4. Any data load related activity from GPM 3.0 landing layer to MDM Core tables.
5. Any Data Profiling activities during ETL load processes mentioned in ‘In-scope’ section.
6. Addressing any Data Quality Issues present in source files coming from Mainframe system.
7. Any file format level validation other than minimum data validation will not be performed on the source files received from source systems.
8. Data validation is not considered while extracting the data from GPM database.
9. Population of C\_L\_PARTY\_REL table in Pre-Acxiom Daily process except Vision and Group Plan Sponsor.
10. Grouping and Regrouping process (existing in GPM 2.x) based on RMID in Post-Acxiom process.
11. In Group Plan sponsor, Individual Party (Sponsored Party) related information will not be received and will not be loaded into GPM 3.0 database.
12. In Group Plan Sponsor, separate process/component for Post-Acxiom Global Parties creation.
13. Following processes are out of scope of this document:
    1. DNSS
    2. Privacy Opt Out
    3. Campaign Management
    4. OLED
    5. Source Data Quality issues as part of GPM 2.x
    6. E-Presentment
    7. EDM processing
    8. DMBA Extract/View creation
    9. External Match Process
    10. START4
    11. Household Grouping
14. DET transmission for sending and receiving Acxiom is out of ETL scope

# Assumptions:

1. Pre-Landing data model will be similar to Landing layer data model with few additional staging tables used completely for internal ETL purpose.
2. Any further changes (table addition and existing table structure change) in landing layer data model involved in GPM ETL processing may impact the design and detailed impact analysis needs to be performed before incorporating any changes.
3. ETL Key generation Logic will remain the same as in GPM 2.x for Pre Landing DB.
4. In Pre-Acxiom process, insert/update of records will be based on PARTY; POLICY keys value pairs and Role which will be stored in ORIGIN\_SRC\_KEY column of Party table. Extended ley information which includes First Name, SSN and DOB will be taken to account in case there is multiple matches come from GPM Pre Landing DB.
5. If delta action code ‘D’ is coming for a Policy in Policy source file, then the status code should be set as “Inactive” for all the Party information associated with that particular policy in the Party and Agreement Table only.



1. There will be no policy file coming from source/mainframe for Group Plan sponsor data. Policy data is expected to be already present in the database through Pre-Acxiom process (History and Ongoing).
2. In Group Plan Sponsor, Sponsor party information and its association will be stored in a separate partition as new admin and SSAAA part will be predefined which will be same as in GPM 2.x.
3. Only sponsor Party will be loaded in the GPM database for Group Plan sponsor source, which will be linked with the existing Policies and the respective parties in the policy.
4. The Group Plan Sponsor party (sponsor) information will be identified based on CDF\_CUST\_NO (received in Party key section i.e., D\_RGST\_PRTY\_KEY\_1 of the GPS Source file) only. For Group Plan sponsor process, CDF\_CUST\_NO information will be stored in C\_L\_PARTY\_ALT \_ID table for sponsor parties.
5. In Group Plan Sponsor, GRP\_ID and GRP\_NM columns in PARTY table will not be populated.
6. As part of Post-Acxiom Global Party creation process, it will handle the Group Plan Sponsor data just as any other party information coming from GPM 2.x.

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1. File formats used in different processes in GPM 2.x will remain same for GPM 3.0 also. Following are the processes where this assumption will be valid:
   1. Pre Acxiom Daily (Party, Policy and Registration file)
   2. Pre Acxiom Extract (Input file to Acxiom)
   3. Post Acxiom file format (Acxiom response file)
   4. GPS Source file
2. In Post-Acxiom ongoing process, one RMID will have only one active Global party (HUB\_STATE\_IND =1).
3. In Post-Acxiom Daily process, Acxiom contextual PARTY information will be stored in Acxiom partition (SRC\_SYSTEM=’AXM’). Acxiom contextual party information will be indirectly linked to Policy through ML contextual records (SRC\_SYSTEM=’ML’) which came from individual admin systems in Pre Acxiom Daily process.
4. As confirmed by Business Acxiom will not provide standardized name for Individual and Organization. Refer the email sent from Marc Rosen, Dated: Wed 5/7/2014 3:30 PM.



1. In Post-Acxiom ongoing process, if an address is sent to Acxiom then at least one address in AE section will be received. If no address is sent for a party to Acxiom through the extract process then no address will be provided by the Acxiom.
2. In Post-Acxiom ongoing process, standardized address will be updated/inserted in Address table regardless of DSF\_DLV\_CD value.
3. GROUP and PARTY\_GROUP tables will not be populated through Post-Acxiom as well as other ongoing processes (Pre-Acxiom ongoing, Complex ongoing and Group Plan sponsor).
4. In Group Plan Sponsor, only one phone (D\_RGSTPT\_PHONE\_RAW\_1) and email information (D\_RGSTPT\_EMAIL\_1) will be stored for a sponsor party which is same as in GPM 2.x.
5. In Group Plan Sponsor, relationship between sponsor party and sponsored parties will be maintained in PARTY\_REL table.

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# Dependencies:

1. All the tables and data models need to be confirmed before the Design & Analysis phase.
2. Any change in the ETL Key generation Logic for Pre Landing DB will impact the design.
3. Source to target mapping of any new attributes needs to be known before the design phase.
4. If there is a change in data model, an impact analysis needs to be done and may lead to a change in design.
5. **Performance testing is aligned with UAT Testing support & all necessary environments matching production configuration to perform performance testing is assumed to be provided by MetLife.**
6. In Group Plan Sponsor, policy key information should be present in below format only, for all systems except MAH & CRIL

* Pol\_Key\_1 : Source System Identifier
* Pol\_Key\_2 : Admin System Identifier
* Pol\_Key\_3 : Group Identifier (GRPID)

# Minimum data validation rule for ongoing processes:

Minimum data validation checks will be done during the ongoing processes wherever needed.

Following are the minimum validation rules:

1. Must have at least minimum ‘PARTY NAME’.
   * 1. For Individual: It can be any part of name, like first, last or middle name.
     2. For Organization: It can be any name like Company Name, Legal Name, doing Business as Name or Abbreviated Name.
2. Additionally should have data for either as Address, an email address, phone number, DOB or tax id (e.g. SSN, ITIN, EIN).
3. The rejected records will be stored in separate error table in Pre-Landing layer.

# Pre-Acxiom ongoing process

### Source System files

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **S#** | **File Name** | **Application Type** | **Brief Description** | **File Structure** |
| 1 | PRTY\_\*.TXT | Fixed Width File | This file will have enriched Name and Address information from MF Trillium. |  |
| 2 | RGST\_\*.TXT | Fixed Width File | This file will have Raw information related to Individual or Organization. |  |
| 3 | POL\_\*.TXT | Fixed Width File | This file will have information related to Policies for Parties. |  |

### Block diagram Pre Acxiom Ongoing Process

**Party Data processing**

For Delta-Action ‘D’:

Delete existing parties in database (Soft delete)

For Delta-Action ‘A’:

Insert new parties in database parties

Minimum Data validation

Party Data file

Registration Data file

ETL (Informatica Mapping)

GPM

Pre-Landing 3.0

For Delta-Action ‘U’:

Update existing parties in database

GPM

Landing 3.0

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**Party Data Processing Description:**

* + 1. GPM Informatica ETL team will receive Registration and Party file for party related information along with their respective control file. A count validation in the Party file and Registration file with respect to the control file will be done before performing the minimum data validation and loading to Pre-Landing Layer.
    2. Following tasks are done during data validation:
       1. Duplicate Handling: Different duplicate scenario are handled (same as in GPM 2.X) which are as follows:
          - **Duplicate Party & Policy number**: If combination of Party record number (**D\_CTRL\_SRC\_PRTY\_REC\_NBR)** and policy record number (**D\_CTRL\_SRC\_POL\_REC\_NBR**) received in the MF Source files is duplicate in then duplicate records will be routed to error.
          - **Duplicate Party key, Policy key, First Name, SSN and DOB**: If the combination of Party keys, Policy keys, Role, First name , SSN and DOB is duplicate in Party file, then only one record is passed which is stored into another file having layout same as Party file and rest of the duplicate records are routed to error table.
       2. **Minimum Data validation** of Party data file and Registration data file is carried out. A file is generated with valid records which act as source for the ETL Informatica Mappings which loads data in Party and its child tables.
    3. Party information is inserted/updated/deleted through ETL Informatica mappings using following logic:
       1. Party Add and Party Update is determined using the logic mentioned in the attached document below. Based on ETL logic of delta identification DELTA\_ACTION\_CD determined from ETL process may be different from source file DELTA\_ACTION\_CD value. Party delete scenario is based on the DELTA\_ACTION\_CD=’D’ coming from the source file.



* + - 1. For delta action code ‘A’, party information will be inserted. For this, HUB\_STATE\_IND will have ‘1’ in PARTY and its corresponding child tables.
      2. For delta action code ‘U’, party information will be updated. For this, HUB\_STATE\_IND will have ‘1’ in PARTY and its corresponding child tables.
      3. For delta action code ‘D’, Party information will be considered for update and the status code will be set as “Inactive” The value HUB\_STATE\_IND will be ‘1’ in the Party table and all the child tables of Party. Flow chart of party delete is given below



* + - 1. Address population Logic:

1. If Standard value of address is not present in source file, then non-standard address value will be populated for both Standard and Non Standard attribute of C\_L\_ADDR table. Ex: If concatenated value of standard address coming in source file is blank then nonstandard values will be populated in the standard columns as well as nonstandard columns of Address table. Standard value of following columns will be used for concatenated check of Standard address
2. ADDR\_LINE\_1
3. ADDR\_LINE\_2
4. ADDR\_LINE\_3
5. ADDR\_LINE\_4
6. ADDR\_LINE\_5
7. CITY
8. STATE
9. COUNTRY\_CD
10. POSTAL\_CD
11. POSTAL\_ACTION\_CD
12. Following fields will not be considered for standardized data population check mentioned above as these columns does not have the corresponding RAW attributes.
13. LATITUDE
14. LONGITUDE
15. PO\_BOX
16. STREET\_NUM
17. STREET\_NM
18. COUNTY
    * + 1. Name population logic:
    1. Both standardized and non-standardized names will be populated in C\_L\_PARTY table.

For Individuals prefix, first, middle, last and suffix will be concatenated and will be populated in FULL\_NM column of C\_L\_PARTY table. Prefix, Last Name and Suffix will be taken from corresponding non-standard attributes for FULL\_NM population as standardized Prefix, Last Name and Suffix is not present in Party source file. If D\_PE\_ROOT\_FRST\_NM, D\_PE\_ROOT\_MID1\_NM, D\_PE\_ROOT\_MID1\_NM, D\_PE\_ROOT\_MID3\_NM attributes does not have any value from source then D\_PB\_IND\_NM\_FIRST, D\_PB\_IND\_NM\_MID\_1, D\_PB\_IND\_NM\_MID\_2, D\_PB\_IND\_NM\_MID\_3 attributes from source file will be considered.

* 1. For Individual records RAW\_FULL\_NM in C\_L\_PARTY table will be populated by concatenating following columns from Party source file:

D\_PB\_IND\_NM\_PREFIX

D\_PB\_IND\_NM\_FIRST

D\_PB\_IND\_NM\_MID\_1

D\_PB\_IND\_NM\_MID\_2

D\_PB\_IND\_NM\_MID\_3

D\_PB\_IND\_NM\_LAST

D\_PB\_IND\_NM\_SUF\_1

* 1. For Organization following are the different type of names coming in the source file which will be used to populate RAW\_FULL\_NM column of C\_L\_PARTY table as well as ALT\_NAME\_VALUE of C\_L\_PARTY\_ALT\_NM table.

D\_PB\_ORG\_NM ‘Organization Name’

D\_RGSTPT\_DBA\_NM                    ‘Doing Business as Name’

D\_RGSTPT\_ABBREV\_NM             ‘Abbreviated Name’

D\_RGSTPT\_ORG\_LGL\_NM          ‘Legal Name’

If D\_PB\_ORG\_NM is present then it will go to RAW\_FULL\_NM column of C\_L\_PARTY table, If not other name attributes as mentioned above will be processed in the order they are mentioned. ‘Legal Name’, ‘Doing Business as Name’ and ‘Abbreviated Name’s will also be populated in C\_L\_PARTY\_ALT\_NM table irrespective of the fact that they may be present in C\_L\_PARTY table.

If D\_PE\_ROOT\_ORG\_NM is present then it will go to FULL\_NM column of C\_L\_PARTY table, If not other name attributes as mentioned above will be processed in the order they are mentioned.

* + - 1. For Phone, Citizenship & Email the logic for loading information (Insert/Update logic) for a party is mentioned below:
         * All phone, email and citizenship information received in source file will be checked if that is present in GPM database. For e.g. for phone, phone type and phone value will be checked (For citizenship, only citizenship value will be checked). If that exists in database then no operation will be done. If not, then such information will be inserted into GPM database. This will be party specific insert as there is no bridge table to establish the link between party and phone so that only unique Phone number and Phone type combination can be stored.
         * Duplicate phone, email and citizenship information will be checked in source file. For e.g. if for a particular party, email information coming in different source column are same (email address type and email address) then only one email information will be loaded into GPM database.
         * **For Delta Action code ‘D’:** In the party table the status code will be set as “Inactive” for such records.
         * Further logic for phone number will be applied as mentioned in below email. This will help to reduce data quality issues encountered in tactical. Please note that not all data quality issues can be resolved by this logic.



* + - 1. In Party Preference table, records will be loaded as per condition mentioned in following table:

|  |  |  |  |
| --- | --- | --- | --- |
| Delta Action Code | Preferred\_Indicator  (Source file) | present in Party\_Pref Table | Action |
| A | Y | No | Insert Record in Party\_Pref Table |
| A | N | No | No Action |
| U | Y | No | Insert Record in Party\_Pref Table |
| U | Y | Yes | Make HUB\_STATE\_IND = 1 |
| U | N | Yes | Make HUB\_STATE\_IND = -1 |
| U | N | No | No Action |

* + 1. Once the information from files is loaded into GPM 3.0 Pre-landing layer, and then delta data will be loaded to Landing layer from Pre-Landing layer. Loading the Landing database will be always truncate load.

**Policy Data processing**

For Delta-Action ‘D’:

Delete existing policy (Soft delete)

Policy Data file

ETL (Informatica Mapping)

For Delta-Action ‘U’:

Update existing policy

For Delta-Action ‘A’:

Insert new policy

GPM

Pre-Landing 3.0

GPM

Landing 3.0

3

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**Policy Data Processing Description:**

1. GPM Informatica ETL team will receive Policy file from Mainframe team with its control file. ETL process will validate only the record count present in data file with control file and process the Data file to Load data (insert/update) to Pre-Landing tables. **No Minimum data validation will be carried out on Policy file.**
2. Policy information will be inserted/updated/deleted using following logic:
3. Policy Add and Policy Update is determined using the logic mentioned in the attached document below and DELTA\_ACTION\_CD is determined from ETL process which may be different from source file DELTA\_ACTION\_CD value. Party delete scenario is based on the DELTA\_ACTION\_CD=’D’ coming from the source file and will be treated as update.



1. For delta action code ‘A’, Policy information will be inserted. For this, HUB\_STATE\_IND will have ‘1’ in Agreement and its corresponding child tables.
2. For delta action code ‘U’, Policy information will be updated. For this, HUB\_STATE\_IND will have ‘1’ in Agreement and its corresponding child tables.
3. For delta action code ‘D’, Policy information will be considered as Update rather than soft delete (Refer mail attached in Appendix section named as Policy delete scenario handling). The code status in Agreement table will be set as “**Inactive**”. Also status code all the Parties associated with such policy will be set as “**Inactive**”. Flow chart is given below:



1. For delta action code ‘N’, if policy information coming from source file is present in GPM database, then such records will not be processes further. If not, then such information will be added into GPM database i.e, delta action code for such records will be calculated as ‘A’.
2. Once the information from files is loaded into GPM 3.0 Pre-landing layer, and then delta data will be loaded to Landing layer from Pre-Landing layer. Loading the Landing database will be always truncate load.

### Source to Target Data mapping

For Pre-Acxiom Daily, the Source to Target data mapping document is attached below:



# Group Plan Sponsor Process

### Group Plan Sponsor file layout

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **S#** | **File Name** | **Application Type** | **Brief Description** | **File Structure** |
| 1 | Group Plan sponsor file | Fixed Width File | This file will have Group Plan sponsor related information. |  |

### Block diagram for Group Plan Sponsor process

**Loading Sponsor Parties:**

To insert a single Party Information based on unique CDF\_CUST\_NO into GPM 3.0.

GPM

Landing 3.0

Group Sponsor File

ETL (Informatica Mappings)

Pre-Landing

3.0

Perform a lookup on Database using CDF\_CUST\_NO

Based on the Party\_Id received from the lookup, party information will be Added/Updated

Minimum Data validation

1

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33

43

**Flow Description:**

1. Group Plan sponsor file is received from MF Source system which contains Party and Registration information for Group Plan Sponsor parties which needs to be loaded into GPM Pre-Landing database.
2. Minimum data validation will be done on all the key fields (mentioned below) and other mandatory fields of Group Plan sponsor file which are the driving attributes to load data into Pre-Landing Database. Following are the validation rules:
   1. If any of the following columns are blank or NULL then records are routed to T\_GPM\_ERR table:
      * + D\_RGST\_ORG\_NM
        + D\_POL\_KEY\_1
        + D\_POL\_KEY\_2
        + D\_POL\_KEY\_3
   2. Following are the possible scenarios that can occur after doing lookup on CDF Customer Number in PARTY table using CDF Customer Number information coming in Source file:
      * + CDF\_CUST\_NUM present in DB: If Fetched PARTY\_ID is of PERSON i.e. PARTY\_TP is ‘P’ and D\_RGSTPT\_ORG\_TYP is ‘I’ or ‘P’ (which means it is individual), then such records are sent to T\_GPM\_GPS\_ERR table.
        + Duplicates based on CDF Customer Number: For such records only one record is considered and rest are discarded
   3. **Minimum Data validation** of GPS data file is carried out. A file is generated with valid records which act as source for the ETL Informatica Mappings which loads data in Party and its child tables (*Refer Section 8 - Minimum data validation rule for ongoing processes).*
3. Based on Delta Action code, information of Sponsor parties will be inserted or updated. Delta Action code is identified in the following manner:



* 1. For Delta Action Code ‘A’: Sponsor party information will be inserted into Database.
  2. For Delta Action Code ‘U’: Sponsor party information will be updated into Database.
  3. For delta action code ‘D’, Party information will be considered as update and the sponsor party will have the status code updated as “**Inactive**”. The value HUB\_STATE\_IND will be’’1’ in the Party table and all the child tables of Party.
  4. Address population Logic:

1. If Standard value of address is not present in source file, then non-standard address value will be populated for both Standard and Non Standard attribute of C\_L\_ADDR table. In such scenario, ADDR\_STD\_IND column in Address table will be ‘N’, else it will be ‘Y’. Ex: If concatenated value of standard address coming is source file is blank then nonstandard values will be populated in the standard columns of Address table. Standard value of following columns will be used for concatenated check of Standard address:
2. ADDR\_LINE\_1.
3. ADDR\_LINE\_2
4. ADDR\_LINE\_3
5. ADDR\_LINE\_4
6. ADDR\_LINE\_5
7. POSTAL\_EXTN\_CD
8. CITY
9. STATE
10. COUNTRY\_CD
11. POSTAL\_CD
12. Following fields will not be considered for standardized data population check mentioned above as these columns does not have the corresponding RAW attributes.
13. LATITUDE
14. LONGITUDE
15. PO\_BOX
16. STREET\_NUM
17. STREET\_NM
18. COUNTY
    1. Name population logic:
    2. For Organization following name information is coming in the source file which will be used to populate RAW\_FULL\_NM & FULL\_NM column of C\_L\_PARTY table.

D\_RGST\_ORG\_NM                       ‘Organization Name’

* 1. For GPS process, PARTY\_ALT\_NM table will not be populated as we are not receiving different name columns information for organization.
  2. For a Party, Phone, citizenship & Email logic for loading information(Insert/Update logic) is mentioned below:
     + - * **For Delta Action code ‘A’:** All the phone number, citizenship & email information coming from source file will be loaded into Pre-Landing database.
         * **For Delta Action code ‘U’:** For Phone, Email and Citizenship update, lookup will be done on respective tables with the Sponsor Party ID. If it is present in the table, then such record will be updated in database else it will go insert. For ex. If P1 is Sponsor Party ID is present in Phone table, then phone information (not blank) coming from source will updated in the Phone table.
         * **For Delta Action code ‘D’** In the party table the status code will be set as “Inactive” for such records
  3. For GPS we are not getting Address preferred information hence PARTY\_PREF table will not be populated with Preferred Address information. However for population of Email and Phone information, logic will be similar to Pre-Acxiom process. For more details, please refer Pre-Acxiom process.
  4. For ETL purpose, all the Sponsor Party information will be stored into T\_PARTY\_SPNSR\_GRPID table. This will be helpful for creating relationship between Agreement and Sponsor Party in the situation where Agreement information for that Sponsor Party is received after the Sponsor Party Information.

1. Once the information from files is loaded into GPM 3.0 Pre-landing layer, and then delta data will be loaded to Landing layer from Pre-Landing layer. Loading the Landing database will be always truncate load.

**Association between Party & Policy:**

To create the association between Party and Policy in the GPM 3.0

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GPM

Landing 3.0

Group Sponsor File

ETL (Informatica Mappings)

Pre-Landing

3.0

Perform a lookup on database

Using Source System, Admin System and Group Id

Based on the Agreement ID received from the lookup, Policy relation will be inserted

Minimum Data validation

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To associate Party and Policy in GPM 3.0. ETL steps and functionalities are highlighted for this Party to Policy association in the above diagram.

* Look up is done using Source System, Admin system and Group ID on Agreement table in GPM database. Based on Agreement Id received by doing look up, relation with Sponsor party with policy is established in GPM database. Once all the party related tables are loaded, the group sponsor party information will be associated with individual party in PARTY\_REL table and Agreement information based on Policy Keys and Party Keys in PARTY\_AGMT table. Following is the detailed logic about how the link is established:
* **UIS** - The Plan Sponsor feed should be left padded with zero to be 7 characters total.
* **TERM** - The Plan Sponsor feed should be left padded with zero to be 7 characters total.
* **LTC** - The Plan Sponsor feed should be left padded with zero to be 7 characters total.
* **GVUL** - The Plan Sponsor feed should be left padded with zero to be 7 characters total.
* **GUL** - The Plan Sponsor feed should be left padded with zero to be 7 characters total.
* **PCTS -** The Plan Sponsor feed should be selected without modifying the value coming in the source file.
* **GPAY** - The GAC Number should be left padded with zeroes to be 6 characters if the GAC number contains only numeric digits. If the GAC NUM has an Alpha character embedded then it will be left padded with zeroes to be 7 characters total.
* **ATLAS** - The Plan Sponsor feed should be left padded with zero to be 7 characters total.
* **VRPS** - The matching logic for VRPS needs to be refined into multi -pass checks. The first pass is that Plan Sponsor feed should be left padded with zero to be 7 characters total. The second pass would be to match the first 6 characters of the Policy GRPID to the Plan Sponsor. (Only plan sponsor GRP\_IDs that are 6 bytes long.). If not found then do a third pass matching the first 7 characters of the GPM Policy to the Plan Sponsor. If there is still not a match, then check to see if the GPM Policy GRPID has a leading zero (some are loaded missing the leading zero). If leading zero is missing, then add the leading zero and re-attempt the matching logic in pass 1, 2, & 3 in that order.
* **CI** – Policy file needs to be corrected by source system to include GRPID in the source file so that the relationship can be established between sponsor and sponsored parties.
* **MAH** - GRPID information will be received in the last filler space of Policy Source file for Sponsored parties. In the filler space, first 9 characters have the value of GRPID.

### Source to Target Data mapping

For Group Plan Sponsor, the Source to Target data mapping document is attached below:



# Pre-Acxiom Extract process

### Pre-Acxiom extract file layout

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **S#** | **File Name** | **Application Type** | **Brief Description** | **File Structure** |
| 1 | Pre-Acxiom Extract file | Fixed Width File | This file will have extracted information of Party which will be sent to Acxiom for Enrichment. |  |

### Block diagram for Extraction process

Pre-Landing GPM 3.0

ETL (Informatica Mapping)

DET Server

Location

FTP

Fixed width flat file

For Acxiom

Acxiom

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**Flow Description:**

1. ETL Informatica Mapping will be created to extract data from GPM Pre-Landing DB
2. ETL Informatica mappings will generate a fixed width file (of Acxiom Input layout).Selection criteria for fetching data from Pre- Landing layer (GPM 3.0 Database) are mentioned below:
   * MetLife contextual parties will be only considered for sending to Acxiom
   * Party should be active (HUB\_STATE\_IND should be 1).
   * Source system should be ‘ML’
   * Parties having source delta action code as ‘D’ will not be sent to Acxiom.
3. Each Extract file created by the extract process will be not greater than 2.5 GB .File generated at step #2 will be Ftpie’d to predefined location in DET server.
4. DET job running in the server will pick up the file, encrypt the file and send it to Acxiom through a secure communication channel. DET transmission is out of ETL scope.

### Source to Target Data mapping

For Pre-Acxiom Extract process, the Source to Target data mapping document is attached below:



# Post-Acxiom ongoing process

### Acxiom response file layout

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **S#** | **File Name** | **Application Type** | **Brief Description** | **File Structure** |
| 1 | Acxiom Response file | Fixed Width File | This file will have Acxiom Enriched information and RMID, PHK ,Preferred indicator etc. of Party |  |

### Block diagram for Post-Acxiom ongoing process

GPM

Landing 3.0

Acxiom Response file

(2.5 GB)

ETL (Informatica Mappings)

Pre-Landing

3.0

Insert/Update Contextual Information of Parties in Acxiom Partition.

Create Global Party records based on Preferred Indicator ‘Y’

Post Acxiom Data validation

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**Flow Description:**

1. Post Acxiom process receives a Flat File (size less than 2.5 GB) from Acxiom which is referred as Acxiom Response file with control file. Acxiom sends the enriched Address information for each party along with Recognition Manager Section Preferred Indicator and Primary Hash Key (PHK).Along with Acxiom response file, Acxiom will send Reject file which is specific for Reject record creation at Acxiom end. The file structure that Acxiom will send is not same as the Acxiom response or Party file rather it will be similar to Acxiom extract file which ETL team has sent to Acxiom. ETL team will analyze and will store information into Error table which will be sent to DMBA layer. Acxiom Reject file structure is mentioned below:

Note: Currently Acxiom is not sending the Reject files in GPM tactical.



1. In Post-Acxiom data validations following checks are done:
   1. **Invalid PARTY\_ID error:**If the PARTY\_ID received in Acxiom Response file is not present in Party table of GPM database, then those record falls under Invalid PARTY\_ID error and such records will be routed to T\_GPM\_ACXM\_ERR table with proper error description.
   2. **Burst Error:**If **Burst Record No** is NOT EQUAL to zero for a record, then the record falls under **Burst error** category. And such records will be routed to T\_GPM\_ACXM\_ERR table with proper error description.
   3. **Duplicate Party Id :**If duplicate Party Id is received in Acxiom Response file from Acxiom (for burst Record No <>zero) then such records are routed to error.
   4. **PARTY\_TP Mismatch Error:** If the PARTY\_TP received from Acxiom is different to the PARTY\_TP received for first time from Acxiom, then such records will routed to error table with proper description. For ex. First time PARTY\_TP is ‘P’ is received from Acxiom. Next time same Party ID is received from Acxiom however having different PARTY\_TP. Such record will be logged to error table. Please refer appendix section for confirmation email (Acxiom Contextual party type mismatch) of the same.
   5. **RM ID missing for Party Type in GPM:** If the Acxiom contextual party type is ‘O’ and RM\_BUS\_ID is not present in the file then the record will be moved to error table. Similar logic will be applied for Individual party type.

Unlike Post Acxiom validation of GPM 2.x, here if the preferred record coming in the source file has any of the above mentioned error, then that preferred record only (not the entire group) will be sent to Error table. And other valid records belonging to that same group i.e., having same RM\_ID will be considered as valid record if it does not have any above mentioned error.

* 1. **Minimum Data validation** of Acxiom response data file is carried out. A file is generated with valid records which act as source for the ETL Informatica Mappings which loads data in Party and its child tables (*Refer Section 8 - Minimum data validation rule for ongoing processes).*

After the completion of Post-Acxiom data validation, flat file will be generated which has all the valid records and it will act as a source for all the sub processes in the Post-Acxiom ongoing process.

1. Update/Insert Contextual and GLOBAL party creation:
2. Acxiom Contextual Creation

During this process, new PARTY\_ID will be generated for the records which will be inserted into database and such records which will have SSAAA part belonging to their respective admin system (Origin Src Sys) PARTY\_ID which will be sent to Acxiom through extract process will be stored in ORIG\_PARTY\_ID column in PARTY table.

1. Name Population Logic
   1. Business confirmed that Acxiom will not provide standardized name for Individual or Business.
   2. For individual parties Name attributes which are coming in RAW or PB section of the Acxiom response file will be populated to standardized name attributes of Acxiom Contextual party. Following are the attributes which will be considered for populating standardized name attributes from Acxiom response file:
      * D\_PB\_IND\_NM\_PREFIX
      * D\_PB\_IND\_NM\_FIRST
      * D\_PB\_IND\_NM\_MID\_1
      * D\_PB\_IND\_NM\_MID\_2
      * D\_PB\_IND\_NM\_MID\_3
      * D\_PB\_IND\_NM\_LAST
      * D\_PB\_IND\_NM\_SUF\_1

These above mentioned attributes will be concatenated and will be populated in FULL\_NM column of C\_L\_PARTY table. All three Middle names will be concatenated together and will be populated in MIDDLE\_NM

column of C\_L\_PARTY table.

* 1. For Organization D\_PB\_ORG\_NM will be considered for populating FULL\_NM in C\_L\_PARTY table.

1. Address Population Logic:
   1. For Acxiom Addresses, the RAW address attributes . will be populated from AB section of the Acxiom Response file for both type of Addresses i.e., Acxiom Enriched address and Best Address from Acxiom.
   2. If all the AE address attributes are blank in Acxiom response file then AE address row will not be created in GPM database. In the same way, if all ADDL attributes are blank then no row will be created for ADDL address.
   3. **Address Update/Insert:** Acxiom response file will be the source of this process. Detail for updating and inserting of address data through Post-Acxiom process is mentioned in below attached document:



1. Old Acxiom Address Soft Deletion:
   1. During Ongoing process when Acxiom will start giving party information then the relationship between Party to Address for the old Acxiom address in PARTY\_ADDRESS(linked with ML Party ID) table will be soft deleted (HUB\_STATE\_IND will be set as -1) and new Party-Address relationship will be created(Linked with AXM Party ID) ,for Acxiom given address with SRC\_SYSTEM=’AXM’. However, Address present in C\_L\_ADDR table will also be soft (HUB\_STATE\_IND will be set as -1) deleted which was originally linked to MetLife party
2. Old Acxiom Identifiers Soft Deletion:
   1. During Ongoing process when Acxiom will start giving party information, Identifiers which are linked to MetLife Contextual Party ID present in Acxiom Partition will be soft deleted and new entry will be created for that identifier into Acxiom Partition(SRC\_SYSTEM=’AXM’) with the Acxiom Contextual Party ID of that Party. Identifiers provided by Acxiom are Primary Hash Key, Individual & Business RMID, Individual & Business Abilitec Id, EIN and SSN.
3. Old Death Suppression indicator deletion(Death Suppression CR):
   1. During Ongoing process when Acxiom will start giving party information, death suppression indicator information which is linked to MetLife Contextual Party ID present in Acxiom Partition(SRC\_SYSTEM=’AXM’) will be soft deleted and new entry will be created for that information into Acxiom Partition (SRC\_SYSTEM=’AXM’) with the Acxiom Contextual Party ID of that Party.
4. RM\_ID Population logic:
   1. During Post Acxiom ongoing process, RM\_ID will be stored in Party table based on PARTY\_TP i.e., If Party is ‘ORG’ (PARTY\_TP=’O’) then RM\_BUS\_ID will be stored in Party table and if it is Individual (PARTY\_TP=’P’) then RM\_IND\_ID will be stored in Party table. However in PARTY\_ALT\_ID table, both RM\_IDs (Business and Individual) will be stored irrespective of the Party Type in Pre-Landing layer. Acxiom contextual records will be loaded with Party\_TP as coming from Acxiom. SSN and EIN both will be checked and will be stored in GPM 3.0. Business is aware of the scenario that it might so happen where Party\_TP coming from Acxiom is different from Party\_TP sent by Trillium. Even in this scenario ETL team will INSERT/UPDATE the contextual records based on Party\_TP sent by Acxiom.
5. Update ML/ Acxiom Partition records:
   1. During the contextual update process, RMID will be updated for the ML system records based on PARTY\_ID and PARTY\_TP (sent by Acxiom).Also PHK and VENDOR\_PARTY\_TP(Party Type provided by Acxiom) information will be updated for such records in the same way. In PARTY\_ADDR table (column name: PARTY\_ADDR\_VENDOR\_ID) D\_AE\_IND\_LNK\_ABILITEC\_ID will be inserted/updated if PARTY\_TP in PARTY table is Person, for organization D\_AE\_BUS\_LNK\_ABILITEC\_ID will be populated. In ADDR table (column name: ADDR\_VENDOR\_ID) D\_AE\_ABILITEC\_ID will be populated.
   2. During contextual update, if Acxiom provides SSN/EIN value (D\_PB\_EIN/D\_PB\_IND\_SSN in response file) then that information will be loaded into PARTY\_ALT\_ID table regardless of Party type in Acxiom partition. (refer mail attached in Appendix section: RM\_ID clarification)
6. Insert/Soft delete Phone Information:
   1. During contextual update process, lookup will be done on PARTY\_PHONE table using Acxiom Party ID and Phone number, if that is not present in database then such phone number is inserted else no action will be done. However if any other Phone number exists in database for that Party and the same phone number is not present in file, then such phone number will be soft deleted.
   2. Further logic for phone number will be applied as mentioned in below email. This will help to reduce data quality issues encountered in tactical. Please note that not all data quality issues can be resolved by this logic.



1. PHK Sync Up Process:
   1. Refer below attached document for details of PHK Sync Up process:



1. Global Party Creation/Deletion:
   1. Based on the following conditions, Global parties are created
      * + If new preferred indicator is ‘Y’ and new RMID (Business RM\_ID if Acxiom Party type is ‘O’ else Individual RM\_ID if Acxiom Party type is ‘P’) is not blank then such records are processed for inserting/updating global parties. Using D\_RGSTPT\_PRTY\_KEY\_1 value coming in Acxiom response file, lookup will be done on ORIG\_PARTY\_ID column of PARTY table in Acxiom Preferred Partition. If any active preferred record (HUB\_STATE\_IND=1) is present for that Party ID then preferred record is updated else new preferred is created.
   2. Attributes mentioned in the following sheet will be promoted during the creation of Global Party.



* 1. Acxiom is not providing standard names so the values present in RAW/Party Burst section of the file will be populated in standard name columns of C\_L\_PARTY table during Global Party creation process.
  2. Different scenarios for Acxiom preferred record creation are mentioned below in attached sheet:



* 1. Global Party Deletion (Soft delete): After the creation of global party, it may happen that for a particular RMID there will be more than one global party id having HUB\_STATE\_IND as ‘1’. In that scenario, for all the records other than latest global party are selected, and HUB\_STATE\_IND will be set to ‘-1’ which indicates that those records are inactive records.

1. Once the information from Acxiom response file is loaded into GPM 3.0 Pre-landing layer, and then delta data will be loaded to Landing layer from Pre-Landing layer. Loading the Landing database will be always truncate load.
2. While loading data from Pre-Landing to Landing database, Acxiom-Contextual PARTY\_IDs and GLOBAL PARTY\_IDs will be changed to their original contextual PARTY\_IDs i.e. PARTY\_IDs of the information which is coming from source file (Mainframe systems). For example please refer to below attached sheet:



### Source to Target Data mapping

For Post-Acxiom ongoing process, the Source to Target data mapping documents are attached below:

# 

# Unix Script details:

All the Informatica mappings will be triggered through scripts. There will be two scripts developed for Informatica mappings, details of the same are mentioned below:

* Parameter setter script: This script will be used to set the values of all the required parameter/variables used in the Informatica mappings. Using this script, values such as source location of file, target location of file (if generated), Database connection details and many more information are initialized, which are required while executing the Informatica mappings.
* Main Script: This script will be used to trigger the Informatica Mappings through PMCMD command. Initially, parameter setter script is executed through this script. Then parameter file (.prm) is dynamically generated through this script which is used in Informatica mapping. After the generation of Parameter file, workflow is triggered using PMCMD command. If in case workflow gets failed during execution, then clean up functionality is implemented which will clean all the generated files during the execution. After the successful execution of workflow, Batch control workflow is triggered through the script**.**

# Scheduling activities:

There will be different maestro jobs developed for different ongoing processes such as Pre-Acxiom ongoing, Group Plan sponsor, Pre-Acxiom extract, Post-Acxiom ongoing.

* Pre-Acxiom & GPS: It will be developed in such manner that there will be one maestro jobs, each corresponding to admin system in the particular ongoing process.
* Post-Acxiom ongoing & Pre-Acxiom extract: It will be developed in the such manner that there will be one maestro jobs, each corresponding to sub process in the particular ongoing process.

# Error Capturing:

Error records will be generated in Error file and ftpied to MetLife IT / DMBA Layer for further analysis. Minimum data validation will be performed on the source file received from different sources in ongoing processes. And data which fails the minimum data validation checks will be routed to Error Tables. Also duplicate records coming from source file will be routed to different error table as per source file i.e. if records belong to RGST file then such records will be routed to T\_GPM\_RGST\_ERR table whereas for Party file T\_GPM\_PRTY\_ERR . There will be total 6 error table in ongoing processes, structure of all the 6 tables are mentioned below:

# Data Flow:

Following attached sheet contains data flow scenarios:



# Email Notification:

An Email Notification will be sent for the error records that have been generated in a separate Error file and ftpied to MetLife IT / DMBA Layer for further analysis.

# MDM Configuration Changes & UAT defect fix(Track1) :

Prior to ongoing process goes live, configuration changes is required at MDM end and for this a one-time fix (for history data) using data from Acxiom side table needs to be executed. PFB attached document with below line items:

* UAT defects (Defect#28951, Defect #29049).
* Defect #28943 & Defect #31370 (GRPID fix for CRIL & MAH system).
* MDM configuration change fix.
* Gender Code population (D\_PE\_IND\_GENDER) from Acxiom.
* Death Suppression Indicator CR (as Part of Defect #28640)



# Primary Role Indicator population :

For CIF & NON-CIF related systems Primary Role Indicator is required to be populated in Party Agreement table. PFB attached document with logic:



# Appendix:

1. **Physical Data model of Landing 3.0**

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1. **Clarification docs regarding business requirement logic applications:**