**HallMark (HP\_ANTHEM) Incentive Export**

**Summary**

Create a defined layout export for HallMark-Anthem Incentive events configured as ‘Rewarded’. The old export derived information from tables in EVolap which are no longer being populated. The new export needs to be developed to derive information from tables in Vertica.Incentive and SCP. (membership crosswalked with guid)

We are first going to review the old data sources for the export file and then review the new environment and finally the gaps.

**The needed file format is like:**

'HDR|'||@v\_date||'|CHS|'||@v\_batchnum||'|v1.01',1

'DTL|'||INDV\_INCENTIVE\_EVENT\_ID||'|'||MEMBER\_IDENTITY||'|'||ORG\_UNIT\_DETERMINANT\_1||'|'||VENDOR\_PROGRAM\_ID||'|'||VENDOR\_MILESTONE\_ID||'|'||iVENDOR\_ACTIVITY\_ID||'|'||TO\_CHAR(EVENT\_COMPLETED\_DATE, 'YYYYMMDDhh24miss')||'|||||||||',2

'TRL|'||@v\_records,3

**Example of details:**

|  |
| --- |
| DTL,incentive\_event\_id,membershipid,org\_unit\_determinant\_1,vprogramid,vmilestone,v\_activityid,completeddate |
| DTL|723940871|137094B6DD4F34C40C8C6DC891921BA7|358285|272038|89|WBA01|20180427155318||||||||| |
| DTL|723939621|C1BF54130B93ED7B306D41B8B332FC6E|358285|272038|89|WBA01|20180427143839||||||||| |
| DTL|723938141|8B075B87C31C96A61F711F1A0E69524E|358285|272038|89|WBA01|20180427133312||||||||| |
| DTL|723936841|F193D8B6966FCD2E06D691B5D4742A19|300116|272038|86|HLOWI1|20180427121300||||||||| |
| DTL|723936801|F193D8B6966FCD2E06D691B5D4742A19|300116|272038|89|WBA01|20180427121100||||||||| |
| DTL|723930161|5ADBEC7714E019D3B594025A9829FC20|085875|272038|86|HLOWI1|20180427114601||||||||| |
| DTL|723930091|5ADBEC7714E019D3B594025A9829FC20|085875|272038|89|WBA01|20180427114353||||||||| |
| DTL|723920481|A6D6265A1667AC0495CADAD7A4DD4068|358285|272038|89|WBA01|20180427070603||||||||| |

**EVolap Environment**

The tables are explained from the last table populated to the first source. The export process accumulates information from many sources and accepts variables from the stored procedures and SSIS packages utilized.

Table **HWAY\_REPORTING.XT\_HALLMART\_OUTPUT\_TEMPLATE** -The export final step table with the records sequence by type of HDR, DTL, and TRL. The stored procedure, HWAY\_REPORTING.XT\_RULE\_HALLMARKEXTRACT, populates the table.

It uses these tables as sources:

**EMBRACE.VENDOR\_INCENTIVE** – SSIS package collects records to export, maintains BatchID and Status\_Code

**HWAY\_REPORTING.XT\_HALLMARK\_TEMPLATE** – merging of export data from multiple sources

**HWAYS\_MASTER.INCENTIVE\_REWARD\_VENDOR** – mapping table of vendor\_id to incentive\_event\_value\_id

Example of Mapping:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| INCENTIVE\_REWARD\_VENDOR\_ID | INCENTIVE\_EVENT\_VALUE\_ID | VENDOR\_ID | VENDOR\_PROGRAM\_ID | VENDOR\_MILESTONE\_ID | VENDOR\_ACTIVITY\_ID |
| 451415622 | 116031962 | 8652323970 | 319638 | 28 | 02TCP |
| 102390622 | 102088222 | 8652323970 | 244749 | 25 | 01WEI |
| 102390582 | 102088302 | 8652323970 | 244749 | 25 | 01WEI |

Example of program\_id, milestoneid, and vendor\_activityid

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Program Name** | **Program Code** | **Incentive Name** | **Milestone Code** | **Activity Code** |
| Healthy Lifestyles (CCP) CA | 250023 | 3,000 points on HL | 81 | CCPHL1 |
| 5,000 points on HL | 82 | CCPHL2 |
| 10,000 points on HL | 83 | CCPHL3 |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Program Name** | **Program Code** | **Incentive Name** | **Milestone Code** | **Activity Code** |
| Healthy Lifestyles - CDHP with WBA | 319638 | Enrollment in the Weight Management Program | 25 | 01WEI |
| 3rd call completion in the Weight Management Program | 26 | 02WEI |
| Enrollment in the Tobacco Cessation Program | 27 | 01TCP |
| 3rd call completion in the Tobacco Cessation Program | 28 | 02TCP |
| WBA Completion | 89 | WBA01 |

The SSIS package exports the **HWAY\_REPORTING.XT\_HALLMART\_OUTPUT\_TEMPLATE** to a file and encrypts the file.

Table **HWAY\_REPORTING.XT\_HALLMARK\_TEMPLATE** contains a combination of records from various tables and eliminates duplicates. The stored procedure HWAY\_REPORTING.XT\_RULE\_HALLMARKINSERT inserts records into the table.

It uses these tables as sources:

**EMBRACE.VENDOR\_INCENTIVE**- SSIS package collects records to export, maintains BatchID and Status\_Code

**EMBRACE.INDV\_INCENTIVE\_EVENT**- master incentive event table; incentive\_status\_master\_id=6844346460

**EMBRACE.MEMBERSHIP**- membership\_id, individual\_id

**PRODUCTION.MEMBER\_COVERAGE\_ASSN**= contract\_id=3931, member\_master\_id, org\_unit\_determinant\_1

**PRODUCTION.COVERAGE**- contract\_id, coverage\_id

**PRODUCTION.COVERAGE\_DEMOGRAPHIC\_ASSN**- contract\_id, coverage\_id

**PRODUCTION.MEMBER\_DEMOGRAPHIC**- contract\_id, member\_demographic\_id

**PRODUCTION.MEMBER\_IDENTITY**- contract\_id, member\_identity\_type\_id=8652527740

Table **EMBRACE.VENDOR\_INCENTIVE** – Created just for this process, contains records for only vendor\_id=8652323970; the BatchID and Status\_Code are maintained in this table. The stored procedure, HWAY\_REPORTING.XT\_RULE\_HALLMARKBATCH updates the batch information; The stored procedure, HWAY\_REPORTING.XT\_RULE\_HALLMARKHARVEST append the records to the table.

It uses these tables as sources:

**EMBRACE.INDV\_INCENTIVE\_EVENT**= master incentive event table; incentive\_event\_value\_id; incentive\_status\_master\_id=6844346460; event\_completed\_date> sysdate-30 --to check for missed records, batched is null

**HWAYS\_MASTER.INCENTIVE\_REWARD\_VENDOR**- mapping table; incentive\_event\_value\_id, vendor\_id=8652323970

**EMBRACE.INDV\_GROUP\_INCENTIVE\_EVENT**- indv\_incentive\_event\_id

Table **EMBRACE.INDV\_INCENTIVE\_EVENT** – master incentive event table; indv\_incentive\_event\_id, incentive\_status\_master\_id=6844346460

It uses these tables as sources:

**HWAYS\_MASTER.INCENTIVE\_REWARD\_VENDOR** – incentive\_event\_value\_id and vendor\_id mapping (key for population of HWAYS\_MASTER.INCENTIVE\_REWARD\_VENDOR where vendor\_id = 8652323970

**EMBRACE.INDIVIDUAL** – INDIVUAL\_ID

**EMBRACE.MEMBERSHIP**- MEMBERSHIP\_ID AND INDIVIDUAL\_ID

**HWAYS\_MASTER.INCENTIVE\_EVENT\_VALUE** -incentive\_event\_value\_id and standard\_incentive\_event\_id

**HWAYS\_MASTER.INCENTIVE\_STATUS\_MASTER** – \_ID-value 6844346460 is record for type REWARDED

**VERTICA Tables**

The incentive tables are part of the **INCENTIVES** schema. The field client\_id=’HP\_ANTHEM’ allows us to query Anthem records.

The tables are:

**INCENTIVES.sc\_incent\_member\_program**- keys member\_program\_id; contains client\_id=’HP\_ANTHEM’ (96637 records)

(320,433 total current records); the table appears to be a summary of the program

member\_program\_id **VARCHAR**( 100 ) **NOT** **NULL** ,

secure\_id **VARCHAR**( 100 ) ,

program\_id **VARCHAR**( 100 ) ,

client\_id **VARCHAR**( 100 ) ,

rewards\_member\_id **VARCHAR**( 100 ) ,

point\_balance **INT** ,

program\_points\_earned **INT** ,

program\_points\_redeemed **INT** ,

program\_points\_expired **INT** ,

config\_start\_date **TIMESTAMP** ,

config\_end\_date **TIMESTAMP** ,

config\_blackout\_date **TIMESTAMP** ,

program\_OID **VARCHAR**( 100 ) ,

relationship **VARCHAR**( 100 ) ,

gender **VARCHAR**( 100 ) ,

program\_age **INT** ,

health\_conditions **VARCHAR**( 1000 )

**INCENTIVES.sc\_incent\_member\_event\_groups**- keys member\_program\_id, event\_group\_id (153 current records); includes group names(3):

***RealAge Group, Take Action - Recurring Online Pathway, Access Your Health & Know Your Numbers***

member\_program\_id **VARCHAR**( 100 ) **NOT** **NULL** ,

event\_group\_id **VARCHAR**( 100 ) **NOT** **NULL** ,

group\_name **VARCHAR**( 1000 ) ,

config\_start\_date **TIMESTAMP** ,

config\_end\_date **TIMESTAMP** ,

config\_blackout\_date **TIMESTAMP** ,

is\_locked **VARCHAR**( 1 ) ,

show\_reward **VARCHAR**( 1 ) ,

max\_points **INT** ,

points\_word **VARCHAR**( 100 ) ,

group\_points\_earned **INT** ,

**type** **VARCHAR**( 100 )

**INCENTIVES.sc\_incent\_member\_events** -keys member\_program\_id, event\_group\_id, event\_id (244 current records)

member\_program\_id **VARCHAR**( 100 ) **NOT** **NULL** ,

event\_group\_id **VARCHAR**( 100 ) **NOT** **NULL** ,

event\_id **VARCHAR**( 100 ) **NOT** **NULL** ,

event\_type **VARCHAR**( 100 ) ,

event\_identifier **VARCHAR**( 100 ) ,

description **VARCHAR**( 1000 ) ,

required **VARCHAR**( 1 ) ,

config\_start\_date **TIMESTAMP** ,

config\_end\_date **TIMESTAMP** ,

config\_blackout\_date **TIMESTAMP** ,

config\_reward\_type **VARCHAR**( 100 ) ,

config\_show\_reward **VARCHAR**( 1 ) ,

config\_reward\_points **INT** ,

config\_max\_points **INT** ,

config\_points\_word **VARCHAR**( 100 ) ,

is\_eligible **VARCHAR**( 1 ) ,

event\_date **TIMESTAMP** ,

reward\_type **VARCHAR**( 100 ) ,

member\_reward\_id **VARCHAR**( 100 ) ,

reward\_points **INT** ,

reward\_points\_word **VARCHAR**( 100 ) ,

reward\_earned\_date **TIMESTAMP** ,

reward\_activity\_date **TIMESTAMP** ,

reward\_event\_id **VARCHAR**( 100 ) ,

repeat\_config\_period **VARCHAR**( 100 ) ,

repeat\_config\_time\_between\_periods **VARCHAR**( 100 ) ,

repeat\_config\_rewards\_per\_period **INT** ,

repeat\_config\_reward\_earned\_after **INT** ,

**type** **VARCHAR**( 100 )

**INCENTIVES.sc\_incent\_member\_history**- keys history\_id, also contains program\_id, secure\_id (which is lookup for member), member\_program\_id, client\_id (3,983,150 current records, 1,541,868 are ANTHEM)

history\_id **VARCHAR**( 100 ) **NOT** **NULL** ,

history\_type **VARCHAR**( 100 ) ,

program\_id **VARCHAR**( 100 ) ,

secure\_id **VARCHAR**( 200 ) ,

member\_program\_id **VARCHAR**( 100 ) ,

last\_updated\_date **TIMESTAMP** ,

point\_balance **INT** ,

reward\_type **VARCHAR**( 1000 ) ,

reward\_member\_id **VARCHAR**( 100 ) ,

reward\_points **INT** ,

reward\_word **VARCHAR**( 100 ) ,

reward\_earned\_date **TIMESTAMP** ,

reward\_activity\_date **TIMESTAMP** ,

reward\_event\_id **VARCHAR**( 100 ) ,

redemption\_date **TIMESTAMP** ,

points\_redeemed **INT** ,

points\_word **VARCHAR**( 100 ) ,

event\_type **VARCHAR**( 100 ) ,

event\_description **VARCHAR**( 1000 ) ,

event\_identifier **VARCHAR**( 100 ) ,

client\_id **VARCHAR**( 100 )

**\*Valid history\_type(s):**

memberHistory**-**historyType**-**expired

memberHistory**-**historyType**-**earned, used for incentive

memberHistory**-**historyType**-**redemption, spent type

memberHistory**-**historyType**-**manual

memberHistory**-**historyType**-event**

**\*Event\_identifier** – there are 170 unique, but they don’t seem to match past incentive event numbers

**\*Event\_type(s)**

**/**incentive**/events/**program**-**points**-**earned –no records have this type

**/**coaching**/events/**callcompleted**/**tobaccocessation

**/**coaching**/events/**callcompleted**/**lm

**/**coaching**/events/**callcompleted**/**dm

**/**coaching**/events/**callcompleted**/**healthadvisor

**/**coaching**/events/**callcompleted

**/**health**-profile/**biometrics

**/**coaching**/call-**complete

**/**greenday**/**earned

health**-profile/**biometrics

**/**challenges**/**challengeGoalCompleted

**/**isobar**/**unembrace

**/**assessments**/**completed

**/**incentive**/external**

(**null**)

**/**assessments**/**complete

**\*event\_description(s) used by HP\_ANTHEM records:**

Complete Progress Check

Onsite Coaching

Create an Inspiration

Manual Credit Points

Manual Debit Points

Track your Personal Goal

Track Your Exercise

Post 2018 Steps Challenge Chatter

Update Lab Results Health Record

Rate Video/Audio Clip/Article

Track your Tobacco Usage

Update Lifestyle Profile

Post Steps Challenge Chatter - Fall 2016

Set up Wellbeing Plan

Tracking Bonus

Track Your Weight

Join 150 is Nifty Challenge - Q2 2018

Share 2018 Steps Challenge Profile

Update Biometric Health Record

Visit a Fitness Center

Track Your Steps

Post Chatter - 2017 Steps Challenge

Complete Journal Entry

Earn 3,000 Points on Healthy Lifestyles

Weight Tracker Bonus

Complete Lifestyle Management Coaching Call

Share 2018 Steps Challenge Success Story

Join 150 is Nifty Challenge – Q2 2017

Join the 2017 Steps Challenge

Track Your Food

Share Profile - 2017 Steps Challenge

Track Your Food Servings

Track Your Medication Adherence

Focus Area Group Event

2018 Steps Challenge Tracking Bonus

Complete Lifestyle Profile

Earn 5,000 points on Healthy Lifestyles

Join the 2018 Steps Challenge

Complete Well-Being Assessment

(null)

Complete 3 Tobacco Cessation Calls

Complete Action Item

Share Success Story - 2017 Steps Challenge

View/Listen/Read Resource (video/audio clip/article)

**\*values for reward\_word** –points and Points

**INCENTIVES.sc\_incent\_member\_history\_redemption\_product** – keys history\_id, product\_unique\_id (4 records)

**INCENTIVES.sc\_incent\_member\_event\_period\_dates** -keys member\_program\_id, event\_group\_id, event\_id,event\_period, event\_date; only contains key values

**INCENTIVES.sc\_incent\_member\_event\_periods** -keys member\_program\_id, event\_group\_id, event\_id, event\_period; there is a field for completed and out\_of which are integer, some records completed=out\_of; (111 current records) suggests a summary table.

**INCENTIVES.sc\_incent\_member\_event\_group\_locked\_rewards**- keys member\_program\_id, event\_group\_id, member\_reward\_id; there is an event\_id field; (25 current records)

**INCENTIVES.sc\_incent\_member\_event\_group\_locks\_remaining** -keys member\_program\_id, event\_group\_id, lock\_event\_type; appears to be a reason table for a lock (81 current records)

**Solution Objects**

**Tables: (currently located on QA-D1FB54EE.Extract\_Sandbox (wilma)**

**XA\_sc\_incent\_member\_history\_temp – copy of Vertica.SCP. sc\_incent\_member\_history (incentive history) step 1 (collected at runtime by reward\_earned\_date) (see above for table definition.)**

**XA\_ANTHEM\_TEMPLATE -collection table of potential incentives to process, validation rules are applied here Step 2**

INDV\_INCENTIVE\_EVENT\_ID], --unique sequencing key

[INCENTIVE\_EVENT\_VALUE\_ID], --old compatibility field

[HISTORY\_ID], --sc\_incent\_member\_history\_temp

[MEMBERSHIP\_ID], --old compatibility field

[MEMBERSHIP\_IDENTITY], --membership UDF

[ORG\_UNIT\_DETERMINANT\_1], --membership UDF

[VENDOR\_PROGRAM\_ID], --linked to event

[VENDOR\_MILESTONE\_ID], --linked to event

[VENDOR\_ACTIVITY\_ID], --linked to event

[EVENT\_COMPLETED\_DATE], --sc\_incent\_member\_history\_temp.reward\_earned\_date

[BATCH\_ID], --unique sequencing to each run

[CREATED\_DATE], --record creation date

[verified], --only value 1 are processed as incentives, other error codes

[errortext], --description of error reason

[batch\_count] --total record count in batch

**XA\_ANTHEM\_OUTPUT\_TEMPLATE -final table used to create export format Step 3**

[ROWVALUE], --stores the export string

[COL\_ORDER] --sequences header, detail, and footer rows

**XA\_MEMBER\_MAP – populated with member information from SCP (collected at runtime)**

[secure\_id], --needed for some SCP table links

[guid], --needed for membership table links

[membership\_identity], --exported value, MISC100 field

[Misc100\_Desc], --turned out to be all nulls

[ouid], --org unit value

[org\_unit\_determinant\_1], --exported value, UDF

[eligibility\_start\_date], --not used, future

[eligibility\_end\_date] --not used, future

**XA\_INCENTIVE\_EVENT\_MAP -used to determine incentive Event Codes to be processed**

,[event\_description]

,[milestone\_id]

,[included]

,[program\_id]

,[activity\_id]

**XA\_SCP\_ORG\_UNITS -populated with new to old organization units (Anthem incentive only)**

[ouid], --new org unit ID

[ouname], --org unit name

[top\_ouid],

[contract\_id],

[contract],

[ou\_level],

[ou\_active\_flag],

[customer\_name],

[contract\_start],

[contract\_end],

[company\_id],

[contract\_active\_flag], --set to Y for 30 org units

[old\_org\_unit], --EVolap org\_unit

[org\_unit\_determinant\_1] --not used, many to one link

**XA\_ANTHEM\_TEMPLATE\_HIST -archive of submission history details**

**XA\_INCENTIVE\_REWARD\_VENDOR– copy of old incentive event mapping table (reference)**

**XA\_VENDOR\_INCENTIVE\_HIST -old submitted incentive history (possibly new) (used in dupe check)**

[VENDOR\_INCENTIVE\_ID], --unique key in old table

[INCENTIVE\_EVENT\_VALUE\_ID],

[INDV\_INCENTIVE\_EVENT\_ID], --submitted unique key

[INDIVIDUAL\_ID],

[MEMBER\_PROGRAM\_ID],

[EVENT\_GROUP\_ID],

[EVENT\_ID],

[VENDOR\_ID],

[BATCH\_ID], --unique per submission

[EVENT\_TYPE],

[EVENT\_COMPLETED\_DATE], --reward\_earned\_date

[REWARD\_EVENT\_ID],

[TYPE1],

[MEMBERSHIP\_ID],

[MEMBER\_IDENTITY], --submitted

[ORG\_UNIT\_DETERMINANT\_1], --submitted

[CONTRACT\_ID],

[VENDOR\_PROGRAM\_ID], --submitted

[VENDOR\_MILESTONE\_ID], --submitted

[VENDOR\_ACTIVITY\_ID], --submitted

[PROCESS\_STEP],

[STATUS\_CODE],

[RECORD\_STATUS\_ID],

[RECORD\_STATUS\_DATE],

[STATUS\_TEXT],

[CREATE\_DATE], --submission date

[CREATED\_BY\_USER\_ID],

[UPDATE\_DATE],

[UPDATED\_BY\_USER\_ID],

[org\_unit\_id]

**SSIS Package Processing -Anthem Incentives**

**Collect Data (Step 1)**

1. Vertica.Incentive.sc\_incent\_member\_history (creates XA\_sc\_incent\_member\_history\_temp)
2. The process is using startdate and enddate as BETWEEN values for reward\_earned\_date. The old process looked backwards 30 days; meaning to enddate-30 is startdate, enddate=rundate.
3. Vertica.SCP -various member tables combined with SC\_SECURE (creates XA\_MEMBER\_MAP)

Knowing which org\_unit a member belongs to, we can map many UDF’s and know which programs the member qualifies for. Because the member info must be crosswalked, we don’t know the member info before pulling all HP\_ANTHEM incentives and valid incentive org units.

1. Other tables must be populated already:

XA\_INCENTIVE\_EVENT\_MAP maps EVENTID’s and EVENTNAMES to programs for udf’s. An event must me marked as included=1 to be used in the incentive data.

XA\_SCP\_ORG\_UNITS maps ouid to old\_org\_unit value and sets the vendor\_program\_id which links the org\_unit to the xa\_incentive\_event\_map.

XA\_VENDOR\_INCENTIVE\_HIST contains old incentive history for reference.

XA\_ANTHEM\_TEMPLATE\_HIST contains converted xa\_vendor\_incentive\_hist and is used for duplicate record checking.

**Stage (Step 2)**

1. Records are written to extract\_sandbox.dbo.XA\_sc\_incent\_member\_history\_temp
2. Valid records are written to extract\_sandbox.dbo.XA\_ANTHEM\_TEMPLATE, records are qualified by valid org\_unit ID
3. Records are then updated for fields needed for output file; mostly UDF’s and member information

**Apply Incentive Rules (Step 3)**

1. Incomplete Data -If any export column is null (verified=2)
2. Duplicate submission (verified=3)
3. tbd

**Export File (Step 4-6)**

1. Verified=1. Records are written to extract\_sandbox.dbo.XA\_ANTHEM\_OUTPUT\_TEMPLATE the records contain a header, details, and trailer. The record count in trailer is the total detail lines.
2. Records are exported to output file
3. Working tables are archived. (XA\_ANTHEM\_TEMPLATE\_HIST)

**KNOWN INFO AND GAPS:**

1. No eligibility checking is being done.
2. Are there data reporting needs?
3. There is a chance, that periodically, the past dates may need checking for data fixes not reported from incentive personnel but resulting in missed incentive records? Answer was likely. So, there are parameters built into the ssis; there are also solution command files. When the startdate and enddate are > ‘2018-01-01’ as inputs, the ssis package will use the input dates.
4. To remove a batch run, execute the following and delete the output file.

--the submission process is 1 day behind the earn process

select \*

from [dbo].[XA\_ANTHEM\_TEMPLATE\_HIST]

where batch\_id in(

select max(batch\_id) as event\_completed\_date from [dbo].[XA\_ANTHEM\_TEMPLATE\_HIST] where verified=1)

and verified=1

--after verification, delete

delete [dbo].[XA\_ANTHEM\_TEMPLATE\_HIST]

where batch\_id in(

select max(batch\_id) as event\_completed\_date from [dbo].[XA\_ANTHEM\_TEMPLATE\_HIST] where verified=1)

and verified=1