AAD- Amex Acquiring Dragon

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**SOLUTION DELIVERY LIFE CYCLE (SDLC)**

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# Purpose

**A. Purpose**

This document describes the development of GAN Auth and GIG to support transactions for Dragon issuer.

The purpose of this document is to provide the reader with an understanding of the overall design changes done for Dragon Issuer.

**B. Updated SAD and/or SID are not required**

This project leverages an existing well-documented solution, and introduces no changes to the architecture or security of that solution. Updated SAD (Solution Architecture Document) and SID (Security Interaction Document) documents are not required for this project. Therefore, sign-off for the SAD and/or SID are not required.

The PFA Ivan Riol Jr is aligned and confirms that the existing SAD and/or SID documentation is complete and that the technical, data and application architecture and security have not changed for the application or applications associated with this project. The SDLC PMT SAR Compliance field for each application under this project has been entered as SAR Required = No, with a Governance Not Required Justification of ‘No architecture or security changes’.

Project, Crypt Performance Enhancement (AUTH/GIG) – PRJ00055HF produced the existing SID document, had them approved and stored them in the SDLC Repository.

Project, GAN DEV- CAS AAV API – Roadmap - PRJ000596B produced the existing SAD document, had them approved and stored them in the SDLC Repository.

Link to the SAD upon which the current project is based:

<https://sdlcdoc.tims.ipc.us.aexp.com/sites/PRJ000596B/Documents/Forms/AllItems.aspx?RootFolder=%2fsites%2fPRJ000596B%2fDocuments%2f02%2e%20Solution%20Architecture%20And%20Design&FolderCTID=0x01200039399D2FBD5A7E44A4C3562AAAD29755&View=%7bF991035C%2d0AAC%2d48FC%2dB679%2d9C6861FC0B44%7d>

Link to the SID upon which the current project is based:

<https://sdlcdoc.tims.ipc.us.aexp.com/sites/PRJ00055HF/Documents/Forms/AllItems.aspx?RootFolder=%2fsites%2fPRJ00055HF%2fDocuments%2f03%2e%20Solution%20Architecture%20And%20Design&FolderCTID=0x01200089E36138D6753B4A99D3ECF49D8FF083&View=%7bAECCD5FC%2d4C56%2d428C%2d8023%2dD29109051C88%7d>

# Design Decisions and Assumptions

| **No** | **Assumptions** |
| --- | --- |
| 1 | GAN Central site will receive the new XY binary file and will be receive along with VY and N6 feed. |
| 2 | 13992 - CAS MVS needs to include Dragon transactions in GAN Axiom Reports. GAN will not be having any changes for this requirement. |
| 3 | There is no change in VY and N6 feed. |
| 3 | No GIG side changes required for requirement 13993.05 since N6.csv will be created with Dragon issuer details in central site. |
| 4 | Dragon is not going to support Rewards transactions. |
| 5 | The DUAG specification defines Security Control Related Info to be 4 bytes. If the DUAG POS sends in 4 bytes for a Dragon CVV2 or CID, then there could be a space or other padding character in the field which would be sent to CAS or Dragon issuer. Dragon issuer may receive an invalid format in DF53 and cause them to decline the authorization. The DUAG specification may need to be changed.  There will be no changes in GAN for above change. |
| 6 | Amex Update and Amex Reversal Update lists present in Authorisation completion list for GNS Out Sourced Cards will be reused for Dragon cards. |
| 7 | The spec details will be added in system\_properties table. In future, an additional spec entry if required shall be included in the table. |
| 9 | A new PIN profile is added to support PIN Translation as part of Dragon. |
| 10 | XP binary file will be a parallel file of VY binary file. GAN may receive only N6 and VY binary files without XP binary file. So GAN will not throw any exception when XP file is not received.  If GAN receives only N6, XP and VY is not received then XP file won’t be get processed.  If GAN receives all N6, VY and XP files, first it will process N6 file and store the values in DB then VY and XP files processed one by one and the corresponding details stored in DB. |
| 11 | Existing N6VY job is modified to process to new XP binary file. |
| 12 | GAN will send Post Auth messages to CAS during AR scenario for Dragon issuers. |
| 13 | As per the mail from Lane, XP file format is different from VY. The format of XP file is as below:  Binrange - First 6 bytes  Function code – 2 bytes  Source center – 2 bytes  N6 Ordinal – 4 bytes  Filler – N/A.  A new config file named XPConfig.xml is created to parse the binary file present in above format. |
| 14 | TID identifier generation will be BAU. |

# Component Design

American Express operate Alaric’s authentic product as part of its GAN infrastructure. Functionality of GAN will be extended further to provide support transactions for Dragon Issuer.

The following section describes the list of changes to be applied

## 3.1 Central Site Changes

3.1.1 Flow Diagram



## 3.1.1 Action Change

### 3.1.1.1 BatchFileLoader

|  |  |
| --- | --- |
| **Action Details** | **Action Description** |
| **Name:** BatchFileLoader.java  **Class :**  **com.amex.wwgan.batchloads.read**  BatchFileLoader  **System Type:**  **Library:**  **List Type:**  **List Name :** | **Description:** class used to load the CAS files into central database. Existing job related details will be updated.  **Action :** This is abstract class process 6k , n6&vy , AU binary files received from CAS and generates corresponding CSV files after updating details in DB.  This action will be updated to process to new file which we are going to receive for this project.    **Pseudo code for the action:**  **Check job name () {**   1. **Rename the binary file** 2. **Delete the exixting records in inactive table** 3. **Parse the config file.** 4. **Parse the binary file and generate objects from that** 5. **Load the details in to inactive db and switch the inactive db as active.** 6. **Create xml file to transfer**   **}**  Below constant will be added as part of this project:  **public static final String FILE\_TYPE\_XP = "XP";** |

### 3.1.1.2. FileReadN6VY

|  |  |
| --- | --- |
| **Action Details** | **Action Description** |
| **Name:** FileReadN6VY.java  **Class :** com.amex.wwgan.batchloads.read  FileReadN6VY.java  **System Type:**  **Library:**  **List Type:**  **List Name :** | **Description :** This Class is used to read the N6 and VY files from CAS. This class will be updated to process XP file from CAS.  **Action :** This action is extends above batchfile loader class.  This methods present in BatchFileLoaderaction is extended with N6,VY and XP file details.  The above action will be updated to process the new binary file XP.    **Pseudo code :**  Below methods will be updated to process XP file.   1. **getNumberofFiles():**  This method finds number of files needs to be processed by the job. In this method XP binary file details will be added. If MIS receives only VY and N6 then it will check the backup location whether we have any XP feed , if not , then process the job , if yes then abort the job.   Change made: s.add(FILE\_TYPE\_XP);   1. **getConfigList():** This method parses the config file and create its instance. This method will be updated with XP file details like below:   elseif(file type is not null and equls XP)  {  Parse XP config file and and create its instance }   1. **getinboundfile():** This method gets file names from scheduler.properties file. This method will be updated with new XP binary file details like below.   Else if (file type is not null and equals XP)  {  String inbound\_folder\_file = ‘XP binary file name mentioned in scheduler.properties’  }     1. **getBatchLoadVOs()**: This method parses binary file and creates bean objects from that. This method will updated with new XP binary file processing like below   If(filetype is not null and equals XP)  {  If (file contains no data)  {  Raise event and throw exception  }  If (data is invalid)  {  Raise event and throw exception  }  If (trailer validation flag is enabled)  {  Trailer validation is done.  }  Binary file is parsed and stored in bean object.  If (trailer validation is wrong)  {  Raise event and throw exception  }  }   1. **populateDB ()** : This method inserts N6 and VY records in to db from bean objects. This method will be updated with XP file details like below:   If(filetype is not null and equals XP)  {  InsertXP file details from bean object to Vy related tables  } |

### 3.1.1.3. CreateFile

|  |  |
| --- | --- |
| **Action Details** | **Action Description** |
| **Name:** CreateFile.java  **Class :**  **com.amex.wwgan.batchloads.createFiles**  BatchFileLoader  **System Type:**  **Library:**  **List Type:**  **List Name :** | **Description:** This is the utility class for file related activities. This will be updated with XP file changes.  **Action :** This action handles all file related activities like checking file availability, renaming, creating Config file and CSV file.  In this action isFilePresent() method checks the availability of binary file. This method will be updated to send true eventhough XP binary file is not present.    **Pseudo code for the action:**  isFilePresent()  {  If (filename is not equal to xp binary file)  {  If (file present)  {  Return true;  }  }  } |

### 3.1.1.4. BatchloadConstants.java

Below entries needs to be added

1. public static final String INBOUND\_FOLDER\_FILE\_XP = "com.amex.wwgan.batchloads.XPInboundFile";
2. public static final String INBOUND\_FOLDER\_FILE\_DEFAULT\_XP = "src/main/inbound/XPBinaryfilename";
3. public static final String FILE\_TYPE\_XP = "XP";
4. public static final String CONFIG\_FILE\_XP = "com.amex.wwgan.batchloads.XpConfigFile";
5. public static final String INBOUND\_XP\_FILE = "mvs\_xp\_file";

## 3.1.2. DML and property file Changes:

### 3.1.2.1. Scheduler.properties:

Below entries needs to be added.

1. com.amex.wwgan.batchloads.XPInboundFile =/home/env/scheduled\_tasks/inbound/XPBinaryfilename
2. com.amex.wwgan.batchloads.XpConfigFile = /home/envXX\_XX/scheduled\_tasks/config/XPConfig.xml

### 3.1.2.2. XP binary file layout:

Binrange - Firtst 6 bytes

Function code – 2 bytes

Source center – 2 bytes

N6 Ordinal – 4 bytes

Filler – N/A.

Example :

62550062559912CP001200

625500625599 – Binrange

12 – Function code

CP – Source center

0012 – N6 ordinal

A new config will be created to parse the XP binary file. Please find the config file attached below.

**XPConfig.xml**



## 3.2 GAN Auth changes

## 3.2.1 Action Change – Existing actions

### 3.2.1.1 ValidateCurrencyCode

|  |  |
| --- | --- |
| **Action Details** | **Action Description** |
| **Name:** Validate Currency  **Class:**.com.authentic.amex.authorisation.action  **List Type:** Authorisation  **List Name :** DragonEDCOnlineRefundValidation | **Description :** This action validates the currency code against the given merchant.  **Action :**    **Pseudo code :**  If ( Msg Has currency code)  {  If (input currecy code is invalid)  {  Return error code 183 i-e invalid currency code.  }  } |

### 3.2.1.2 ChkMerchantCancelIndicator

|  |  |
| --- | --- |
| **Action Details** | **Action Description** |
| **Name:** ChkMerchantCancelIndicator  **Class:**.com.authentic.amex.authorisation.action  **List Type:** Authorisation  **List Name :** DragonEDCOnlineRefundValidation | **Description :**  This action validates the merchant cancel indicator and if it true then it will return response code 107 (Please Call Issuer if merchant cancel indicator is on).  **Action :** This action supports only for EDC Authorisation transactions. This enhanced to support online refund transactions.    **Pseudo code :**  If ( Origin interchanges is EDC Auth interchange)  {  If (input request is Authorisation or Online refund)  {  If (merchant cancel indicator is on)  {  Return 107 - Please Call Issuer  }  }  } |

### 3.2.1.3. SetDF34InResponse - 13991.05 (06)

|  |  |
| --- | --- |
| **Action Details** | **Action Description** |
| **Name: SetDF34InResponse**  **Class: com.authentic.amex.network.mm2.action**.  **SetDF34InResponse**  **System Type:** AXCore  **Library:** Auth  **List Type:** Outgoing PreMapping  **List Name :**  1.US\_ISO Outgoing Pre Mapping  2.GCAG XML Outgoing Pre Mapping | **Description :**  This class generates DF34 in response based on card and function code.  **Action :**  This action will be updated to generate DF34 for Dragon cards also.  **Pseudo code :**  If ( Transaction is received from AR )  {  If (Issuer is GNS out sourced or Dragon)  {  If (DF34 is received from Issuer)  {  DF34 will be sent in response.  }  Else  {  Copy DF02 to DF34  }  }  } |

### 3.2.1.4. RouteIfNeedReasonAndDestNoTimeout

|  |  |
| --- | --- |
| **Action Details** | **Action Description** |
| **Name: RouteIfNeedReasonAndDestNoTimeout**  **Class:** com.authentic.amex.authorisation.rr.RouteIfNeedReasonAndDestNoTimeout  **Routing reason configured at :**  Travellers Cheques | **Description :**    If Aliasto PAN certification is false for GNS out soruced cards then it will not be routed.  **Action:**  This action will be updated to check Alias to Pan certification check for Dragon cards also.  **Pseude code :**  If (Issuer is not null and (Issuer is GNS Outsourced or Dragon)  {  If (Issuer is not certified for Alias to PAN)  {  Return false; //Transaction will not be routed.  }  } |

### 3.2.1.5. RouteIfnotGNScardforBarcodecheck

|  |  |
| --- | --- |
| **Action Details** | **Action Description** |
| **Name: RouteIfnotGNScardforBarcodecheck**  **Class:** com.authentic.amex.authorisation.rr.RouteIfnotGNScardforBarcodecheck  Routing type : Merchant Reversal | **Description :**  This route action will not route the online 1420 to CAS if the Card is GNS Out Sourced and transaction type is barcode.  **Action:**  1420 Reversal notifications for Barcode transactions will not route to CAS for Dragon cards and for other transactions 1420 reversal notifications will be routed.  **Pseudo code :**  If (GAN StandIn and reason is late response )  {  If ((Issuer is GNS Out Sourced or Dragon) and transaction code is merchant initiated)  {  If (Transaction type is Barcode)  {  Retun false ; //don’t initiate reversal message  }  Else  {  Return true; // initiate reversal message.  }  }  } |

### 3.2.1.7. ICCSysRelatedDataResponse

|  |  |
| --- | --- |
| **Action Details** | **Action Description** |
| **Name: ICCSysRelatedDataResponse**  **Class: com.authentic.amex.authorisation.action**  **System Type:** AXCore  **Library:** Auth  **List Type:** Outgoing Post Mapping  **List Name :**  US\_ISO Outgoing Post Mapping | **Description :**  This action sets the filed 55 value in the response message based on the type of issuer, authorization response code and as per the transaction flow(stand-in or host available).  **Action :**  GAN Auth will set ICC header in the response if ICC data is present in the request and not present in the response. GAN Auth will not set the ICC data in the response if it is a JCB card or non -approved transactions.  **Pseudo code :**  If ( Transaction is authorised from AR )  {  If (Service is USISO)  {  If (Issuer is Dragon)  {  If ( acquirer did not send the field 55 and the issuer has sent in the response message the field)  {  Set DF 55 to null and send to the Acquirer  }  Else if(Field 55 not present in the response from the  issuer and acquirer has sent the field 55)  {  Set ICC header in the response  }  }  }  }  If (StandIn Scenario)  {  If (JCB card or non – approved Transaction)  {  GAN Auth will not set the ICC data in the response  }  } |

### 3.2.1.8. GCAGXMLICCSysRelatedDataResponse

|  |  |
| --- | --- |
| **Action Details** | **Action Description** |
| **Name: GCAGXMLICCSysRelatedDataResponse**  **Class: com.authentic.amex.authorisation.action**  **System Type:** AXCore  **Library:** Auth  **List Type:** Outgoing Post Mapping  **List Name :**  GCAG XML Outbound Mapping | **Description :**  This action sets the filed 55 value in the response message based on the type of issuer, authorization response code and as per the transaction flow(stand-in or host available).  **Action :**  GAN Auth will set ICC header in the response if ICC data is present in the request and not present in the response. GAN Auth will not set the ICC data in the response if it is a JCB card or non -approved transactions.  **Pseudo code :**  If ( Transaction is authorised from AR )  {  If (Service is GCAGXML)  {  If (Issuer is Dragon)  {  If ( acquirer did not send the field 55 and the issuer has sent in the response message the field)  {  Set DF 55 to null and send to the Acquirer  }  Else if(Field 55 not present in the response from the  issuer and acquirer has sent the field 55)  {  Set ICC header in the response  }  }  }  }  If (StandIn Scenario)  {  If (JCB card or non – approved Transaction)  {  GAN Auth will not set the ICC data in the response  }  } |

### 3.2.1.9. RevTxnBarcodeCheck

|  |  |
| --- | --- |
| **Action Details** | **Action Description** |
| **Name: RevTxnBarcodeCheck**  **Class: com.authentic.amex.authorisation.action**  **System Type:** AXCore  **Library:** Auth  **List Type:** Authorisation  **List Name :**  Amex Reversal Update | **Description :**  For all GNS Outsourced and JCB cards, if it is a Barcode transaction, setDisableNotificationRouting flag will be set to true. So the PAA will not sent to CAS.  **Action :**  setDisableNotificationRouting flag will be enabled for Dragon issuers also for Barcode transaction.  **Pseudo code :**  If ( Df 22 postion 7 is not null and it is 3 )  {  If (Issuer is JCB or GNS Out Sourced or Dragon)  {  setDisableNotificationRouting flag is enabled.  }  } |

### 3.2.1.10. ApplyARMsgHeader

|  |  |
| --- | --- |
| **Action Details** | **Action Description** |
| **Name: ApplyARMsgHeader**  **Class: com.authentic.amex.authorisation.action**  **System Type:** AXCore  **Library:** Auth  **List Type:** Outgoing Post Mapping  **List Name :**  ARValidationList  GNSConstructTraceHeaderLst  ARConstructHeader | **Description :**  During AR, before the transaction is being sent to GIG, trace header and message header is set. While setting the header if the Issuer is GNS Outsourced card, we append "Y" and if it is any other card we will append "N".  **Action :**  Message Header will be appended as Y for Dragon issuers also.  **Pseudo code :**  If ( Issuer is not null )  {  If (Issuer is GNS Out Sourced or Dragon)  {  Append Message header as Y  }  Else  {  Append Message header as N.  }  } |

### 3.2.1.11. ContactlessCheck

|  |  |
| --- | --- |
| **Action Details** | **Action Description** |
| **Name: ContactlessCheck**  **Class: com.authentic.amex.authorisation.action**  **System Type:** AXCore  **Library:** Auth  **List Type:** Authorization  **List Name :** Amex Update | **Description :**  During Stand-in, only for GNS Outsourced cards, sets the Field 22 position 6 as "X" in response and also in the post auth message sent to CAS.  **Action :**  Dragon cards also set the Field 22 position 6 as "X" in response and also in the post auth message sent to CAS.  **Pseudo code :**  isInScopeContactless () isInScopeMobile() methods will be updated to support GNS Issuers.  If (Issuer is not null and (Issuer is GNS Outsourced or GNS Insourced or Dragon))  {  Field 22 position 6 as "X" in response.  } |

## New Action:

## 3.2.1.12. DragonCardStandIn

|  |  |
| --- | --- |
| **Action Details** | **Action Description** |
| **Name:** DragonCardStandIn  **Class:**.com.authentic.amex.authorisation.action  **List Type:** Authorisation (StandIn Authorisation list)  **List Name :** DragonStandinAuthorisation | **Description :** During StandIn scenario, GAN will block Dragon transactions with action code zero.  **Action :** During StandIn scenario, GAN will check whether the issuer is dragon then it will block.  **Pseudo code :**  If ( (Issuer != null )and (Issuer == Dragon))  {  Block transaction and send response code as 100.  Set the stand in reason with” Dragon cards will be declined during stand in”  } |

## 3.2.1.13.DragonSpecCheck

|  |  |
| --- | --- |
| **Action Details** | **Action Description** |
| **Name:** DragonCardStandIn  **Class:**.com.authentic.amex.authorisation.action  **List Type:** Authorisation (Initial Authorisation list)  **List Name :** DragonInitialAuthorisation | **Description :** During StandIn scenario, GAN will block Dragon transactions, If it is apart from GCAG ISO, XML, EDC Auth and Duag.  **Action :** During StandIn scenario, GAN will check the service type. If it is apart from GCAG ISO, XML, EDC auth and duag then the transaction will blocked.    **Pseudo code :**  If ( (Issuer != null )and (Issuer == Dragon))  {  If (service is NOT EQUAL TO GCAG ISO or XML or EDC Auth or DUAG)  {  Continue;  }  Else  {  Block transaction and response code as 111 as invalid card.  }  } |

## 3.2.2 DML Changes:

1) An entry needs to be added in bin\_definition\_input table for the new bin range (13991.01). While inserting the binrange, bnd\_check\_digit\_routine must be ‘0’ to avoid check digit validation for that bin range.

2) The spec details will be added in system\_properties table. In future, an additional spec entry if required shall be included in the table.

3) A new issuer group will be created for Dragon Issuer. While creating issuer group for dragon we have to make sure that ISR\_ADD\_FT\_PERIOD should be ‘5’ .

4) New authoriser will be created for Dragon Issuer.

5) A new list will be created named Amex Dragon StandIn in Authorisation list type. And below actions will be configured under that to decline the txn.

DragonCardStandIn

6) A new list will be created named DragonStandinAuthorisation in Authorisation list type under StandIn Authorisation list and below action will be configured under that.

1)DragonCardStandIn

7) A new list will be created named DragonInitialAuthorisation in Authorisation list type under Initial Authorisation list and below action will be configured under that.

1. Update Authentic Field

2. Check valid Spec Dragon

8)A new list named DragonEDCOnlineRefundValidation needs to be created under Authorisation completion list for online efund transaction types. Below existing actions needs to be added in that.

1. ValidateCurrency

2. ChkMerchantCancelIndicator

9) Authoriser list details configured for GNSOutSourced Cards (Amex NOT ON US):

|  |  |  |
| --- | --- | --- |
| Sl No | Transaction code &qualifier | Txns in Authosier list screen (Amex Not ON US) |
| 1 | Goods and Service & Authorisation - 0 & A | Goods and Service Authorisation |
| 2 | Goods and Service & Reversal - 0 & R | Goods and Service Reversal |
| 3 | Goods and Service & Financial Notification - 0 & FN | Goods and Service Financial notifcation |
| 4 | Address Verification & Authorisation - 92 & A | Address Verification (Authorisation) |
| 5 | Cheque Deposit Guarantee & Authorisation - 23 & A | Cheque Deposit Guarantee (Authorisation) |
| 6 | Cheque Deposit Guarantee & Reversal - 23 & R | Cheque Deposit Guarantee (Reversal) |
| 7 | Cheque Guarantee (Funds Guaranteed)& Authorisation- 3 &A | Cheque Guarantee (funds granteed) (Authorisation) |
| 8 | Cheque Guarantee (Funds Guaranteed) & Reversal -3 & R | Cheque Guarantee (funds granteed) (Reversal) |
| 9 | Cheque Verification (Funds avail but not guaranteed) & Authorisation (4 &A) | Cheque Verification (Funds avail but not guaranteed) (Authorisation) |
| 10 | Cheque Verification (Funds avail but not guaranteed) & Reversal - 4 & R | Cheque Verification (Funds avail but not guaranteed) (Reversal) |
| 11 | Credit Adjustment & Authorisation (22 - A) | Credit Adjustment (Authorisation ) |
| 12 | Debit Adjustment & Reversal ( 2 & R) | Debit adjustment (Reversal) |
| 13 | Traveller Cheque &Authorisation - 6 & A | Traveller Cheque (Authorisation) |
| 14 | Traveller Cheque & Reversal - 6 & R | Traveller Cheque (Reversal) |
| 15 | Refunds & Authorisation - 106 & A | Refunds (Authorisation) |
| 16 | Refunds & Notification - 106 & N | Credit Adjustment (Notification ) |
| 17 | Cash & Authorisatin - 1 & A | Cash (Authorisation) |
| 18 | Cash & Reversal - 1 & R | Cash (Reversal) |

11) Lists configured for Dragon cards:

|  |  |  |
| --- | --- | --- |
| Dragon Cards | | |
| Initial Authorisation list | DragonInitialAuthorisation | 1. Update Authentic Field |
| 2. Check valid Spec Dragon |
| StandIn Authorisation list | DragonStandinAuthorisation | 1. DragonCardStandIn |
| Authorisation completion list | 1. Amex Update | 1. SetAdditionalRespLoggingData |
| 2. Contactless Check |
| 3. Transaction Log Insert (TxnLogInsert) |
| 2. Amex Reversal Update | 1. SetAdditionalRespLoggingData |
| 2. Transaction Log Insert (TxnLogInsert) |
| 3. RevTxnBarcodeCheck |
| 3.DragonEDCOnlineRefundValidation | 1. ChkMerchantCancelIndicator |
| 2. Validate Currency |

12) Table details are given below.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Sl No** | **TABLE** | **TABLE DESC** |  | **CHANGES** |
| 1 | BIN\_DEFINITION\_INPUT, BIN\_DEFINITION\_A,  BIN\_DEFINTION\_B | BND\_ID  BND\_ISR\_ID  BND\_CTY\_ID  BND\_ARC\_ID  BND\_TERM\_CATEGORY  BND\_LENGTH  BND\_START  BND\_END  BND\_PAN\_LENGTH  BND\_CLEARING\_MEMBER  BND\_CHECK\_DIGIT\_ROUTINE  BND\_PROCESSING\_CLASS  BND\_ACCEPTANCE\_BRAND  BND\_ACCEPTANCE\_DOMAIN  BND\_PRODUCT\_TYPE  BND\_CUSTOM\_DATA  BND\_VALIDATION\_DATA | bnd\_id  800  840  Null  \*  6  bnd\_id  bnd\_id  15  Null  0  Null  Null  Null  Null  Null  Null | An entry needs to be added in bin\_definition\_input table for the new bin range. While inserting the binrange, bnd\_check\_digit\_routine must be ‘0’ to avoid check digit validation for that bin range. |
| 2 | ISSUER\_GROUP | ISR\_ID  ISR\_VER\_ID  ISR\_CDT\_ID  ISR\_NAME  ISR\_ON\_US\_FLAG  ISR\_SOURCE  ISR\_AUT\_ID  ISR\_CARD\_TRACK\_GRP\_CTG\_ID  ISR\_VELOCITY\_LIMT\_GRP\_VLG\_ID  ISR\_CUSTM\_RESULT\_GRP\_CRG\_ID  ISR\_STATUS\_CODE\_GRP\_SCG\_ID  ISR\_CREDIT\_LIMT\_GRP\_CLG\_ID  ISR\_ROUTE\_GROUP\_RUG\_ID  ISR\_CARD\_VERIF\_PARAMS\_CVP\_ID  ISR\_STANDIN\_VLG\_ID  ISR\_ADD\_FT\_PERIOD  ISR\_CVP\_NAME  ISR\_ORG\_NAME  ISR\_ERG\_NAME  ISR\_ATG\_NAME | 800  89  250  Dragon  N  A  800  Null  1534  Null  Null  Null  696  Null  Null  5  Null  Null  Null  Null | A new issuer group (Dragon) will be created for Dragon Issuer. While creating issuer group for dragon we have to make sure that ISR\_ADD\_FT\_PERIOD should be ‘5’ . |
| 3 | AUTHORISER | AUT\_ID  AUT\_VER\_ID  AUT\_NAME | 800  89  Dragon | New authoriser will be created for Dragon Issuer. |
| 4 | LIST | LST\_ID  LST\_VER\_ID  LST\_STY\_ID  LST\_NAME  LST\_LTY\_NAME |  | below lists will be created  List Name : DragonInitialAuthorisation , DragonStandinAuthorisation, DragonEDCOnline, RefundValidation. |
| 5 | ACTION | ACT\_ID  ACT\_VER\_ID  ACT\_NAME  ACT\_CLASS  ACT\_STY\_ID  ACT\_DEACTIVATE\_FLAG |  | Below new action will be created.  Action name : DragonCardStandIn  Check valid Spec Dragon |
| 6 | LIST\_ACTION | LAT\_LST\_ID  LAT\_ACT\_ID  LAT\_RESULT\_CODE  LAT\_VER\_ID  LAT\_NXT\_ACT\_ID  LAT\_SEQN |  | \* DragonCardStandIn action will be configured under Dragon StandIn list.  \* ValidateCurrencyCode,  ChkMerchantCancelIndicator actions will be configured under  DragonEDCOnline RefundValidation list. |

## 3.3 GIG Changes

### 3.3.1Action Changes

### 3.3.1.1 SetAmountReconn

|  |  |
| --- | --- |
| **Action Details** | **Action Description** |
| **Name:** SetAmountReconn.java  **Class:** com.authentic.amex.authorisation.ar.action  **List Name:**  **List Type:** | **Description :** Class to Populate Amount Reconciliation field.  **Action:** formula used for converting Data Field 4 (Amount Reconciliation) for GNS Outsourced Issuers and Dragon transactions will be updated as below.  **Pseudo Code:**  Converted Amount(Data Field 5)   =   (Acquirer Field 4 \*Acquirer Currency BUY rate) /  Issuer currency SELL rate |

#### 3.3.1.2 SetAmountOriginal

|  |  |
| --- | --- |
| **Action Details** | **Action Description** |
| **Name:** SetAmountOriginal.java  **Class:** com.authentic.amex.authorisation.ar.action  **List Name:**  **List Type:** | **Description :** Class to Populate Amount Originals field.  **Action:** formula used for converting Data Field 30 (Amount Original) for GNS Outsourced Issuers and Dragon transactions will be updated as below.  **Pseudo Code:**  Converted Amount(Data Field 30) = (Acquirer Field 30 \*Acquirer Currency BUY rate) / Issuer currency SELL rate |

### 3.3.2 DML Changes:

As part of requirement **13393.02** - **Issuer Setup on GIG**

A brand new Dragon issuer is defined. The following are the tables with Dragon entries

|  |  |  |  |
| --- | --- | --- | --- |
| **Table** | **Table description** | **Column description** | **Purpose of change** |
| 1. INTERCHANGE\_ACCESS\_POINT | 1. IAP\_NAME 2. IAP\_VER\_ID 3. IAP\_ICH\_NAME 4. IAP\_IPS\_NAME 5. IAP\_STG\_NAME 6. IAP\_NCS\_NAME 7. IAP\_MIN\_CONNECTIONS 8. IAP\_ACTIVE\_FLAG 9. IAP\_ACTIVATE\_DATE 10. IAP\_LAST\_UPDATE 11. IAP\_TGP\_NAME 12. IAP\_PTS\_NAME 13. IAP\_REFERENCE 14. IAP\_TYPE 15. IAP\_PARENT\_IAP\_NAME 16. IAP\_SVC\_ID 17. IAP\_EDC\_REGISTERED 18. IAP\_EDC\_AUTO\_CLOSE\_PERMITTED 19. IAP\_EDC\_AUTO\_CLOSE\_DAYS 20. IAP\_HKS\_NAME 21. IAP\_SHUTDOWN\_LST\_ID | VARCHAR2(50 BYTE)  NUMBER(38,0)  VARCHAR2(50 BYTE)  VARCHAR2(50 BYTE)  VARCHAR2(50 BYTE)  VARCHAR2(50 BYTE)  NUMBER(38,0)  VARCHAR2(1 BYTE)  TIMESTAMP(6)  TIMESTAMP(6)  VARCHAR2(50 BYTE)  VARCHAR2(50 BYTE)  VARCHAR2(20 BYTE)  VARCHAR2(10 BYTE)  VARCHAR2(50 BYTE)  VARCHAR2(30 BYTE)  VARCHAR2(1 BYTE)  VARCHAR2(1 BYTE)  NUMBER  VARCHAR2(50 BYTE)  NUMBER(38,0) | IAP for Dragon defined |
| PROPERTY\_SET | 1. PTS\_NAME 2. PTS\_DESC 3. PTS\_VER\_ID 4. PTS\_ORG\_NAME 5. PTS\_TYPE | 1. VARCHAR2(50 BYTE) 2. VARCHAR2(255 BYTE) 3. NUMBER 4. VARCHAR2(50 BYTE) 5. VARCHAR2(30 BYTE) | 1. Need to get confirmed. |
| 1. SOCKET\_CONNECTION | 1. SCN\_NAME 2. SCN\_TYPE 3. SCN\_ADDRESS 4. SCN\_BLOCK\_ON\_READ 5. SCN\_TCP\_NODELAY 6. SCN\_TCP\_KEEPALIVE 7. SCN\_TGP\_NAME 8. SCN\_MLI\_NAME 9. SCN\_PTS\_NAME 10. SCN\_LAST\_UPDATE 11. SCN\_PROTOCOL\_HDR\_CLASS 12. SCN\_MIN\_MSG\_SIZE 13. SCN\_MAX\_MSG\_SIZE 14. SCN\_VER\_ID 15. SCN\_PORT 16. SCN\_RETRY\_COUNT 17. SCN\_RETRY\_TIMER\_SECS 18. SCN\_TCP\_LINGER | VARCHAR2(50 BYTE)  VARCHAR2(6 BYTE)  VARCHAR2(255 BYTE)  VARCHAR2(1 BYTE)  VARCHAR2(1 BYTE)  VARCHAR2(1 BYTE)  VARCHAR2(50 BYTE)  VARCHAR2(50 BYTE)  VARCHAR2(50 BYTE)  TIMESTAMP(6)  VARCHAR2(255 BYTE)  NUMBER(38,0)  NUMBER(38,0)  NUMBER(38,0)  NUMBER(38,0)  NUMBER(38,0)  NUMBER(38,0)  NUMBER(38,0) | New socket port defined for Dragon |
| 1. NETWORK\_CONNECTION | 1. NTC\_SCN\_NAME 2. NTC\_IAP\_NAME 3. NTC\_VER\_ID 4. NTC\_NAME 5. NTC\_STG\_NAME 6. NTC\_STORE\_FORWARD 7. NTC\_MAX\_CONNECTION 8. NTC\_ACQUIRER 9. NTC\_ISSUER 10. NTC\_SIGNON 11. NTC\_SIGNOFF 12. NTC\_DIRECTION 13. NTC\_PRIORITY 14. NTC\_PHY\_CONN\_UP\_EVENT 15. NTC\_PHY\_CONN\_DOWN\_EVENT 16. NTC\_LOG\_CONN\_UP\_EVENT 17. NTC\_LOG\_CONN\_DOWN\_EVENT 18. NTC\_SAF\_CHANNEL\_INDEX 19. NTC\_SNDRCV\_PAIR\_SCN\_NAME 20. NTC\_PTS\_NAME 21. NTC\_LAST\_UPDATE 22. NTC\_MESSAGE\_PROCESSOR\_CLASS 23. NTC\_MESSAGE\_DISPATCHER\_CLASS 24. NTC\_PARENT\_NTC\_NAME 25. NTC\_JCN\_NAME 26. NTC\_MQC\_NAME 27. NTC\_SNDRCV\_PAIR\_NTC\_NAME 28. NTC\_HKS\_NAME 29. NTC\_COMMS\_DOWN\_LST\_NAME 30. NTC\_COMMS\_UP\_LST\_NAME 31. NTC\_TGP\_NAME | 1. VARCHAR2(50 BYTE) 2. VARCHAR2(50 BYTE) 3. NUMBER(38,0) 4. VARCHAR2(50 BYTE) 5. VARCHAR2(50 BYTE) 6. VARCHAR2(1 BYTE) 7. NUMBER 8. VARCHAR2(1 BYTE) 9. VARCHAR2(1 BYTE) 10. VARCHAR2(1 BYTE) 11. VARCHAR2(1 BYTE) 12. VARCHAR2(1 BYTE) 13. NUMBER 14. VARCHAR2(1 BYTE) 15. VARCHAR2(1 BYTE) 16. VARCHAR2(1 BYTE) 17. VARCHAR2(1 BYTE) 18. NUMBER 19. VARCHAR2(50 BYTE) 20. VARCHAR2(50 BYTE) 21. TIMESTAMP(6) 22. VARCHAR2(150 BYTE) 23. VARCHAR2(255 BYTE) 24. VARCHAR2(50 BYTE) 25. VARCHAR2(50 BYTE) 26. VARCHAR2(50 BYTE) 27. VARCHAR2(50 BYTE) 28. VARCHAR2(50 BYTE) 29. VARCHAR2(50 BYTE) 30. VARCHAR2(50 BYTE) 31. VARCHAR2(50 BYTE) | 1. Dragon connection defined. |
| NETWORK\_CONSTRAINTS | 1. NCS\_NAME 2. NCS\_VER\_ID 3. NCS\_FRWD\_INST\_IDENT\_CODE 4. NCS\_RECEIVING\_INST\_IDENT\_CODE 5. NCS\_PIN\_BLOCK\_FORMAT 6. NCS\_SAF\_WAKEUP\_PERIOD\_SECS 7. NCS\_SAF\_EXPIRY\_PERIOD\_HOURS 8. NCS\_SAF\_RETRY\_COUNT 9. NCS\_SAF\_DELAY\_SECS 10. NCS\_SAF\_RETAIN\_FAILED\_TXNS 11. NCS\_ACQ\_ID 12. NCS\_NETWORK\_TYPE 13. NCS\_LAST\_UPDATE | 1. VARCHAR2(50 BYTE) 2. NUMBER 3. VARCHAR2(30 BYTE) 4. VARCHAR2(30 BYTE) 5. VARCHAR2(10 BYTE) 6. NUMBER 7. NUMBER 8. NUMBER 9. NUMBER 10. VARCHAR2(1 BYTE) 11. NUMBER 12. VARCHAR2(20 BYTE) 13. TIMESTAMP(6) |  |
| 1. ACCESS\_CODE\_ROUTING | 1. ACR\_VER\_ID 2. ACR\_ACCESS\_CODE 3. ACR\_IAP\_NAME | 1. NUMBER 2. VARCHAR2(20 BYTE) 3. VARCHAR2(50 BYTE) | 1. New access code defined for Dragon |
| 1. ACCESS\_CODE | 1. ACD\_REFERENCE 2. ACD\_VER\_ID 3. ACD\_HAT\_NAME 4. ACD\_IAP\_NAME 5. ACD\_LAST\_UPDATE | 1. VARCHAR2(10 BYTE) 2. NUMBER(38,0) 3. VARCHAR2(50 BYTE) 4. VARCHAR2(50 BYTE) 5. TIMESTAMP(6) | 1. New access code defined for Dragon |

**Network Management entries for Dragon issuer**

|  |  |  |  |
| --- | --- | --- | --- |
| **Table** | **Table description** | **Column details** | **Purpose of change** |
| NET\_MAN\_ACQR | 1. ACQR\_ID 2. NET\_STATE\_TRNST\_GRP\_CD 3. ACQR\_PRIM\_SITE\_CD 4. ACQR\_SCND\_SITE\_CD 5. ACQR\_NM 6. ACSS\_CD | 1. NUMBER 2. CHAR(10 BYTE) 3. CHAR(3 BYTE) 4. CHAR(3 BYTE) 5. VARCHAR2(50 BYTE) 6. VARCHAR2(20 BYTE) | 1. Dragon acquirer defined in this table |
| NET\_MAN\_ACQR\_PORT | 1. ACQR\_ID 2. ACQR\_PORT\_NO 3. SESS\_CT | 1. NUMBER 2. VARCHAR2(5 BYTE) 3. NUMBER(38,0) | 1. Dragon port defined based on the acquirer id |
| ACQR\_NET\_MAN\_PROP | 1. ACQR\_ID 2. NET\_MAN\_PROP\_ID 3. NET\_MAN\_PROP\_VAL\_TX 4. LST\_UPDT\_TS | NUMBER  NUMBER  VARCHAR2(20 BYTE) | Dragon Issuer property defined in this table |

**Cryptography setup for PIN translation**

New entry added to support PIN Translation for Dragon

**Auth Side:**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **SL NO** | **TABLE** | **TABLE DESC** | **COLUMN DESCRIPTION** | **CHANGES** |
| 1 | ACQR\_CRPTG\_PRFL | CRPTG\_PRFL\_ID  CRPTG\_PRFL\_SLCT\_COND\_TX  ACQ\_ID  ACQ\_VER\_ID | CHAR(25 BYTE)  CHAR(20 BYTE)  NUMBER  NUMBER |  |
| 2 | ACQR\_SPEC\_ISS\_HOST\_CRPTG\_PRFL | ACQR\_CRPTG\_PRFL\_ID  IAP\_NAME  IAP\_VER\_ID  ISS\_ID  DEST\_CRPTG\_PRFL\_ID | CHAR(25 BYTE)  VARCHAR2(50 BYTE)  NUMBER  NUMBER(38,0)  CHAR(25 BYTE) | New crypt profile added as part of Dragon on Auth |

**Issuer Side**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **SL NO** | **TABLE** | **TABLE DESC** | **COLUMN DESCRIPTION** | **CHANGES** |
| 1 | ACQR\_SPEC\_ISS\_HOST\_CRPTG\_PRFL | ACQR\_CRPTG\_PRFL\_ID  IAP\_NAME  IAP\_VER\_ID  ISS\_ID  DEST\_CRPTG\_PRFL\_ID | CHAR(25 BYTE)  VARCHAR2(50 BYTE)  NUMBER  NUMBER(38,0)  CHAR(25 BYTE) | New crypt profile added as part of Dragon on Auth |

**Cytpt side:**

|  |  |  |  |
| --- | --- | --- | --- |
| **TABLE** | **TABLE DESCRIPTION** | **COLUMN DESCRIPTION** | **PURPOSE OF CHANGE** |
| 1. CRPTG\_KEY\_DTL | 1. CRPTG\_KEY\_ID 2. CRPTG\_KEY\_TYPE\_CD 3. CRPTG\_KEY\_SIZE\_CD 4. CRPTG\_DEVICE\_CONFIG\_ID 5. ORIG\_UPDT\_TS 6. CREAT\_USER\_ID 7. CREAT\_TS 8. LST\_UPDT\_BY\_USER\_ID 9. LST\_UPDT\_TS 10. UNIV\_KEY\_ID | CHAR(30 BYTE)  CHAR(3 BYTE)  CHAR(12 BYTE)  NUMBER(38,0)  TIMESTAMP(6)  CHAR(12 BYTE)  TIMESTAMP(6)  CHAR(12 BYTE)  TIMESTAMP(6)  VARCHAR2(100 BYTE) | New crypt profile added as part of Dragon on Crypt |
| CRPTG\_KEY\_SET | 1. CRPTG\_KEY\_SET\_ID 2. CRPTG\_KEY\_SET\_DS 3. LST\_UPDT\_TS | 1. CHAR(20 BYTE) 2. VARCHAR2(100 BYTE) 3. TIMESTAMP(6) |
| 1. CRPTG\_KEY\_SET\_ENTRY | 1. CRPTG\_KEY\_SET\_ID 2. CRPTG\_KEY\_IDX\_NO 3. CRPTG\_KEY\_USE\_DRCT\_CD 4. CRPTG\_KEY\_ID 5. LST\_UPDT\_TS | CHAR(20 BYTE)  NUMBER(38,0)  CHAR(3 BYTE)  CHAR(30 BYTE)  TIMESTAMP(6) |
| 1. MAC\_PRFL | 1. MAC\_PRFL\_ID 2. MAC\_PRFL\_DS 3. CRPTG\_KEY\_SET\_ID 4. CRPTG\_FUNC\_NM 5. PADDING\_SCHM\_ID | 1. CHAR(25 BYTE) 2. VARCHAR2(100 BYTE) 3. CHAR(20 BYTE) 4. CHAR(20 BYTE) 5. NUMBER(38,0) |
| PIN\_PRFL | 1. PIN\_PRFL\_ID 2. PIN\_BLK\_FORM\_ID 3. CRPTG\_KEY\_SET\_ID 4. CRPTG\_FUNC\_NM 5. PIN\_PRFL\_DS 6. LST\_UPDT\_TS | 1. CHAR(25 BYTE) 2. NUMBER(38,0) 3. CHAR(20 BYTE) 4. CHAR(20 BYTE) 5. VARCHAR2(100 BYTE) 6. TIMESTAMP(6) |
| 1. CRPTG\_PRFL | 1. CRPTG\_PRFL\_ID 2. PIN\_PRFL\_ID 3. MAC\_PRFL\_ID 4. POE\_PRFL\_ID 5. KEY\_EXPORT\_PRFL\_ID 6. KEY\_IMPORT\_PRFL\_ID 7. ZONE\_KEY\_PRFL\_ID 8. PRFL\_DS 9. TRNSPT\_KEY\_PRFL\_ID 10. APPL\_PROP\_SET\_ID 11. LST\_UPDT\_TS 12. DA\_PRFL\_ID 13. BDK\_PRFL\_ID | 1. CHAR(25 BYTE) 2. CHAR(25 BYTE) 3. CHAR(25 BYTE) 4. CHAR(25 BYTE) 5. CHAR(25 BYTE) 6. CHAR(25 BYTE) 7. CHAR(25 BYTE) 8. VARCHAR2(100 BYTE) 9. CHAR(25 BYTE) 10. NUMBER(38,0) 11. TIMESTAMP(6) 12. CHAR(25 BYTE) 13. CHAR(25 BYTE) |
| 1. CRPTG\_KEY\_STATE\_VAL | 1. CRPTG\_KEY\_ID 2. CRPTG\_KEY\_STATE\_CD 3. ZMK\_ENCRPT\_VAL\_TX 4. LMK\_ENCRPT\_VAL\_TX 5. CRPTG\_KEY\_CFM\_VAL\_TX 6. ADD\_KEY\_DATA\_TX 7. LST\_UPDT\_TS | 1. CHAR(30 BYTE) 2. CHAR(4 BYTE) 3. VARCHAR2(256 BYTE) 4. VARCHAR2(256 BYTE) 5. VARCHAR2(20 BYTE) 6. VARCHAR2(500 BYTE) 7. TIMESTAMP(6) |

### 3.3.3. Acquirer and Host side changes

#### Host side changes:

1. **Interface Field Set changes**
2. **Segment Definitions**

#### Acquirer side changes:

1. **Segment Definitions**
2. **Mapping**

# SOA-Enabled Service Interface Design

This section is not applicable as there are no SOA- Enabled Service Interface

Design.

# 5. External Interface Design

This section is not applicable as there are no External interface changes.

# User Interface Design

This section is not applicable as there are no User interface Design changes.

# Physical Database Design

This section is not applicable as there are no changes to Physical Database Design.

# Error Handling

Existing error handling techniques will be reused.

# Data Migration

No Data Migration is required for this requirement.

# Appendix

## A. Definitions and Acronyms

| **Glossary / Acronym** | **Description** |
| --- | --- |
| Acquirer | An American Express entity or person authorized by an American Express entity to enter into a contract with an SE pursuant to which  (i) a Card member is entitled to charge purchases of goods or services at such S/E by means of a Card and  (ii) the SE agrees to transfer such Charges to an Acquirer. |
| CAS | Credit Authorization Systems |
| GAN | Global Authorization Network |
| GCAG | Global Credit Authorization Guide |
| MTI | Message Type Identifier |
| N/A | Not Applicable |
| PAN | Primary Account Number |
| POS | Point-of-Sale |

## B. References

|  |  |  |
| --- | --- | --- |
| **No** | **Document Name** | **Location** |
| 1 |  |  |
| 2 |  |  |
| 3. |  |  |