Update Customer Details [Async CRM - BRM]

Introduction

This document covers the specifications and details of the JMS based **UpdateCustomerDetails** API to be implemented at the DAG layer. This API provides a standardized mechanism for synchronizing / updating the customer details from Customer Information Management System (CRM) into the Billing System (BRM).

The current solution supports only Prepaid Scenarios.

Service Description

UpdateCustomerDetails implements a JMS based asynchronous pattern to synchronize data between CRM and BRM systems. The FUSE service consumes incoming message from an ActiveMQ, validates the request, enrich the data and invokes related services to synchronize updates to BRM system. The status of the request is published back to an ActiveMQ to sync the status of the request with CRM system.

This API is modelled against **TMF666 Account Management API REST Specification** (wherever possible).

Functional Details

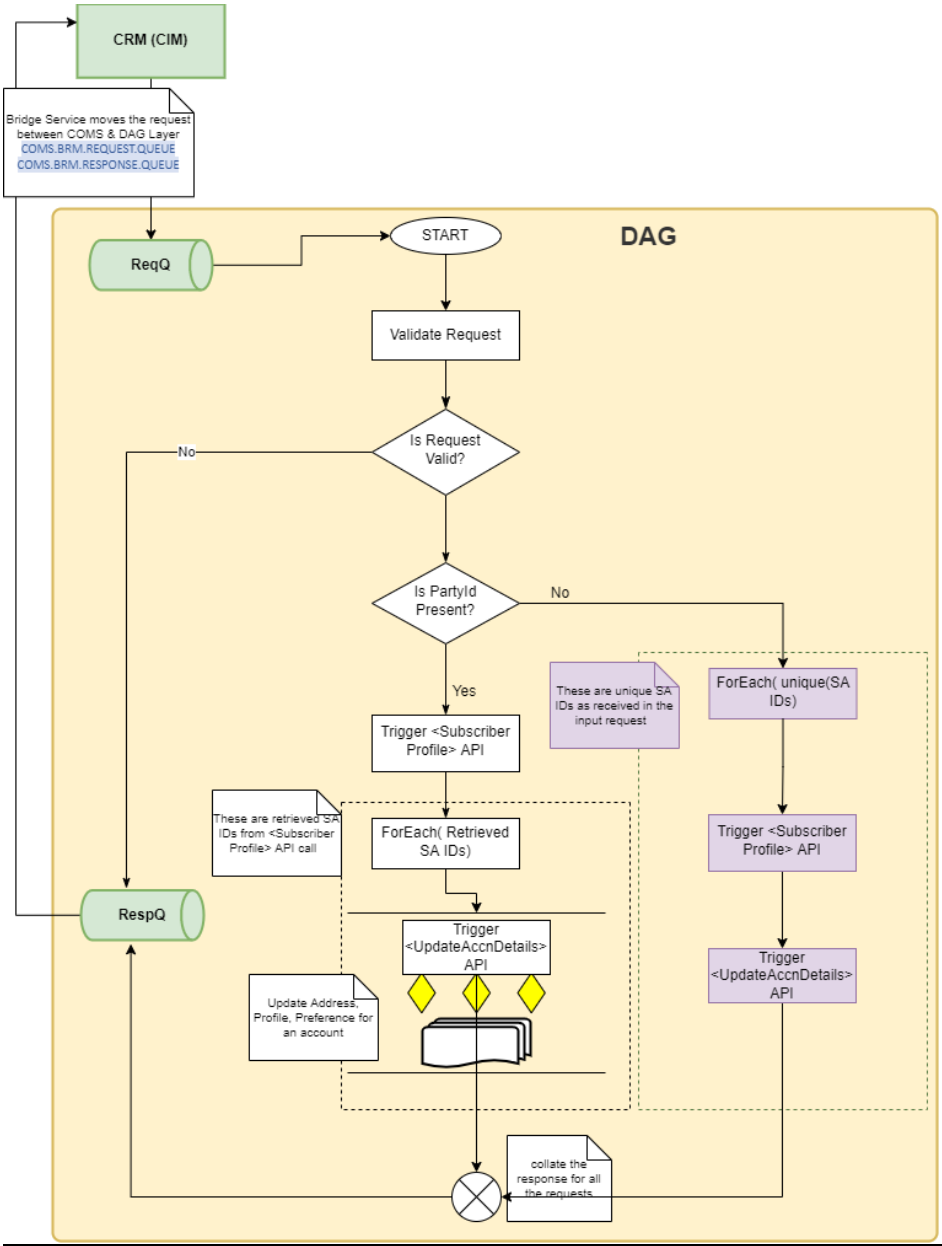
Service Name	Requester	Requester Service Interface	Provider	Provider Service Interface	Description
UpdateCustomerDetails	CRM (CIM)	JMS (JSON message)	DAG, CSG	Rest over HTTP	This service consumes the message from a JMS queue, does some enrichment, invokes related DAG / CSG APIs and finally post the updates back on a JMS queue.

Interface Details

Activity Diagram

Service Details

Service will be built in RedHat Fuse using JAVA DSL. The service will receive the request for Customer Details Update(s) from CRM in JSON format (ActiveMQ).



Service Name	UpdateCustomerDetails

MEP	Asynchronous request-response (JMS)
Service Type	Camel context
Route 1 JMS Queue (Request)	**updateaccountdetails.request**
Route 2 JMS Queue (Response)	**updateaccountdetails.response**
Input Message	UpdateCustomerDetails JSON Request
Output Message	UpdateCustomerDetails JSON Response
Service Implementation	Fuse, ActiveMQ

Integration Flow Details

- JAVA DSL will be used for consuming the messages from RedHat AMQ (**Route 1 JMS Queue**).
- After consuming the message, check for mandatory fields in the request message.
- **IF** element **$partyId** exists,
    - Transform the input request message to **SubscriberProfile API Request** format**.** Invoke the Target API**.**
- FOR-EACH [**unique**(SubscriberAccount & BillingAccount)],
    - Transform the request message to **UpdateAccountDetails API Request** format.
    - Invoke the Target API (suggested : **parallel processing**).
- Collate all the response messages. Transform to Target Response Format.
- Publish the message to Target ActiveMQ (**Route 2 JMS Queue**).

Interface Message Specification

Request Parameters

Parent Element	SubElement1	SubElement2	SubElement3	Type	M/O	Length	Remark
orderId				String	M	12	Master transactionId from the COMS to DAG.

partyId				String	O	24	Customer Id In case customer Id is sent, the service ignores billingAccount & serviceAccount objects.
billingAccount[n]				ArrayList	O		List of Billing Accounts
	id			String	M	24	Billing Account Id
serviceAccount[n]				ArrayList	O		List of Service Accounts
	id			String	M	24	Service Account Id

Response Parameters

Parent Element	SubElement	Type	M/O	Length	Remark
orderId		String	M	12	Master transactionId from the COMS to DAG.
partyId		String	O		Customer Id
code		Integer	M		• **0** - success otherwise specific error code would be sent
reason		String	O	200	reason for failure in case of error scenarios only.
message		String	O	100	• **success** otherwise error message would be sent in case of error scenarios.

billingAccount [n]		ArrayList	C		Holds list of billngAccounts and related status for the request sent. Present only if received in the input request or related partyId has associated accounts.
	id	String	M		Billing Account Id
	code	Integer	M		• **0** - success otherwise specific error code would be sent
	reason	String	O	200	reason for failure in case of error scenarios only.
	message	String	O	100	• **success** otherwise error message would be sent in case of error scenarios.
serviceAccount [n]		ArrayList	C		Holds list of serviceAccounts and related status for the request sent. Present only if received in the input request or related partyId has associated accounts.
	id	String	M		Billing Account Id
	code	Integer	M		• **0** - success otherwise specific error code would be sent
	reason	String	O	200	reason for failure in case of error scenarios only.
	message	String	O	100	• **success** otherwise error message would be sent in case of error scenarios.

Sample Request Message

```
JMS <>
Content-Type: application/XML
X-Correlation-Id: 2252-465a-924c-ef175429637e
X-Request-Id: CP20210617152114
```

```
X-Source-System-Id: CIM

{
  "orderId": "2424343434444",
  "partyId": "xxx",
  "billingAccount": [
    {
      "id": "74787"
    }
  ],
  "serviceAccount": [
    {
      "id": "7478734"
    }
  ]
}
```

Sample Response Message

```
JMS <>
{
  "orderId": "2424343434444",
  "partyId": "xxx",
  "code": "0",
  "message": "success",
  "billingAccount": [
    {
      "id": "74787",
      "code": "0",
      "message": "success"
    }
  ],
  "serviceAccount": [
    {
      "id": "7478735",
      "code": "0",
      "message": "success"
    },
    {
      "id": "7478734",
      "code": "CSG:00003",
      "reason": "Validation error. Exception happened while processing the
request",
      "message": "Mandatory Field msisdn missing. ESB:EX00003"
    }
  ]
}
```

Sample Error Message

```
JMS <>
{
  "orderId": "2424343434444",
  "partyId": "xxx",
```

```
  "code": "DAG:00003",
  "reason": "Validation error. Exception happened while processing the
request",
  "message": "Mandatory Field msisdn missing. ESB:EX00003"
}
```

Mapping Information

Please note that the below nomenclature is followed to define the mapping sheet.

{variable} : Process Variables

v: Request from consumer
x: Request to DAG (SubscriberProfile API)
y: Response from DAG (SubscriberProfile API)
z: Response to consumer

Mapping-SubscriberProfileRequestMessage

Below mandatory http headers needs to be passed while invoking the FUSE API.

Request Parameter

Input Request	**DAG SubscriberProfile API Request Message**	**Comment**
v.serviceAccount[n].id	x.id	GET URL Path Parameter.

Sample Request Message

```
GET /DAG/subscriberManagement/v1/subscriberProfile/{id}
Content-Type: application/json
X-Request-Id: 13231XXDDDDD32223456789
X-Source-System-Id: CIM
```

Response Parameter

DAG SubscriberProfile API Response Message	**Internal Variable**	**Comment**
y[n].id	**{varSubscriberList [n]}**	List of Subscriber IDs The details for these IDs need to be updated in BRM.

Mapping-UpdateAccountDetailsRequestMessage

Below mandatory http headers needs to be passed while invoking the CSG FUSE API.

Request Parameter

Path Param	y[n].id	{id}	Mandatory for all requests.
Query Param	y[n].msisdn	msisdn	From SubscriberProfile Response Output Variable Mandatory, only if request is for **subscription** details modification

Sample Request Message

```
PATCH /CSG/accountManagement/v4/subscriberAccount/1234561234
PATCH /CSG/accountManagement/v4/billingAccount/1234561234

Content-Type: application/json
```

Sample Response Message

```
204 Success

Content-Type: application/json
```

Sample Error Response Message

```
400 Bad Request

{
        "code": "CSG:XXXXX",
        "reason": "Validation error",
        "message": "msisdn is mandatory, cannot be null or empty, ESB:EX***-*"

}
```