Verizon

##### BPM DLD

##### (Draft - to be Integrated with the OMS Sections)

##### ONE-TALK

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# Table of Contents

[1. Table of Contents 2](#_Toc21384836)

[2. Document Revision History 4](#_Toc21384837)

[3. Introduction 5](#_Toc21384838)

[3.1 Overview 5](#_Overview)

[3.2 In Scope 5](#_In_Scope)

[3.3 Out of Scope 5](#_Toc21384841)

[3.4 Assumptions 6](#_Toc21384842)

[3.5 Dependencies 6](#_Toc21384843)

[3.6 Action Items 7](#_Toc21384844)

[3.7 Impacted APIs 7](#_Toc21384845)

[3.7.1 API 1 7](#_Toc21384846)

[3.7.2 API 2 7](#_Toc21384847)

[3.8 Clients 8](#_Toc21384848)

[3.9 New Tables 8](#_Toc21384849)

[3.10 Impacted Tables 9](#_Toc21384850)

[3.11 Current Flow 10](#_Toc21384851)

[3.12 Vision Backend Modules 10](#_Toc21384852)

[3.13 Contacts 11](#_Toc21384853)

[4. End – End Project Flow 12](#_Toc21384854)

[5. Functional Requirements 13](#_Toc21384855)

[5.1 Enhancement to Emulation 13](#_Toc21384856)

[5.2 Enhancement to Data Grid (PNO, CPF, OSU, Cassandra, etc.) 13](#_Toc21384857)

[5.3 Enhancement to DVS / Global Router 13](#_Toc21384858)

[5.4 Enhancement to OMS 13](#_Toc21384859)

[5.5 Enhancement to BPM 13](#_Toc21384860)

[5.6 Impacts to VISION Interface 13](#_Toc21384861)

[5.7 Impacts to ETNI Interface 13](#_Toc21384862)

[5.8 Impacts to MTAS Interface 13](#_Toc21384863)

[5.9 Impacts to PRE Interface 13](#_Toc21384864)

[5.10 Impacts to Order Manager GUI 13](#_Toc21384865)

[5.11 Impacts to Production Parallel 13](#_Toc21384866)

[5.12 Impacts to RPA 14](#_Toc21384867)

[5.13 Other Impacts 14](#_Toc21384868)

[6. Special Considerations 15](#_Toc21384869)

[6.1 T&Cs / Consent 15](#_Toc21384870)

[6.2 Provisioning 15](#_Toc21384871)

[6.2.1 Order Provisioning 15](#_Toc21384872)

[6.2.2 Vendor Provisioning 15](#_Toc21384873)

[6.3 Remarks 15](#_Toc21384874)

[6.4 Fees 15](#_Toc21384875)

[6.5 B2B 15](#_Toc21384876)

[6.6 OneMessage 15](#_Toc21384877)

[6.7 Security 15](#_Toc21384878)

[6.8 Interactions (HTTP/MQ) 15](#_Toc21384879)

[6.9 Post Order Record Processes 15](#_Toc21384880)

[6.10 Feeds/Pops/Reports/Batch 15](#_Toc21384881)

[6.11 Other Special Considerations 16](#_Toc21384882)

[7. Fall Out Process 17](#_Toc21384883)

[8. Testing Considerations 18](#_Toc21384884)

[9. Vendor Interfaces and System Impacts 19](#_Toc21384885)

[10. Mapping Matrix 20](#_Toc21384886)

[11. Appendix A – XML Schemas and/or Samples 21](#_Toc21384887)

[11.1 API name 21](#_Toc21384888)

[12. Appendix B – Backend Modules 22](#_Toc21384889)

[13. Appendix C – Database Tables 23](#_Toc21384890)

[13.1 Inserted/Deleted/Updated Tables 23](#_Toc21384891)

[14. Appendix H – Codes & Descriptions 24](#_Toc21384892)

[14.1 MTN Status Code 24](#_Toc21384893)

[14.2 Vision Line Level Errors 24](#_Toc21384894)

[15. Appendix K – Error Codes 25](#_Toc21384895)

[16. Appendix L – Terminology 26](#_Toc21384896)

[17. Appendix M - References 27](#_Toc21384897)

# Document Revision History

|  |  |  |  |
| --- | --- | --- | --- |
| **Date** | **Version** | **Description/Revision** | **Author** |
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# Introduction

## Overview

One Talk for Enterprise (Volte for Business) is a service offering from Verizon that enables Enterprise and Government customers to provide advanced communication capabilities to their employees, leveraging existing investments in fixed line Private Branch Exchange (PBX) infrastructure, while at the same time supporting the needs of an increasing mobile workforce.

Currently One Talk is supported in Vision and this project will rewire the one talk ordering and provisioning to OR.

 One Talk combines smartphones and desk phones into one number—and rings them both—so customer calls get answered. A single one-talk line number can be shared with a smart phone, two desk phones and OTT (similar to a soft phone app).

There are also other two variations of one-talk service, which exists alone on a one talk line. A line with AA and HG cannot be shared with a deskphone or smart phone or OTT.

1. **Auto Attendant** : The auto attendant one talk line is configured to answer incoming calls to your business and allows the caller to select which department or person they wish to speak with.  
     
   Incoming callers are presented with a greeting and options to choose from (press 1 for sales, etc.) and then routed to the selection they make. Different options can be made available depending on the schedule (Business Hours, After Hours and Holiday) using the One Talk portal.  
     
   Both One Talk and non-One Talk phone numbers can be utilized in the Automated Receptionist setup.
2. **Hunt Group:** The hunt group one talk line will be configured in a way that when the number is dialed, pre-selected one-talk Lines will ring.

All phone numbers must have One Talk service to be configured in the Hunt Group. A Hunt Group is configured via the One Talk portal.

There are various ways in which the various one-talk numbers can be configured in hunt group,

* simultaneous (calls rings for all the idle numbers till the first one is answered),
* circular (Incoming calls to the group start hunting with the user following the last user to receive a call),
* Regular (Incoming calls to the group start hunting on the first user on the list and hunt all the provisioned users sequentially)
* Uniform (Incoming calls to the group are presented to the user who has been idle the longest)

|  |  |
| --- | --- |
| One Talk Device | Device ID Typ |
| Desk Phone | MC4 |
| OTT | VRD (STKMA) |
| HUNT Group | VRD (STKHG) |
| Auto Attendant | VRD (STKAA) |

## In Scope

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Scenario | API | Vision Modules | Scope | Comments |
| Onboarding of the ECPD id and V4B Id | volteForBusinessMaintenance/ volteForBusinessOnBoard | FCST895 | Ph. 6 | Few subservices are already rewired as read APIs |
| **Activation of new one talk line**   1. New one talk line with either a smart phone or desk phone or OTT 2. New one talk line with auto attendant 3. New One talk line with hunt group | [MultiLineMixedOrder](http://dvsnonprodregistry.ebiz.verizon.com:23280/GSBRepositoryAppWeb/registry/subserviceinfo.do?service=193)/ None | FCST304c | Ph. 6 | * Can be a new or existing customer * Onboarding should have been established already * Only one device can be added in the activation, though one one-talk line can have a smart phone, 2 desk phones and OTT * Auto-attendant and Hunt group exists on the line by themselves. Cannot be combined with smart phone/desk phone or OTT |
| Addition of end point   * Addition of smart phone to existing one-Talk line * Addition of a desk phone to one-talk line * Addition of OTT to the one talk line | [MultiLineMixedOrder](http://dvsnonprodregistry.ebiz.verizon.com:23280/GSBRepositoryAppWeb/registry/subserviceinfo.do?service=193)/ volteForBusinessEndPoint Add | FCST304c | Ph. 6 |  |
| Addition of one talk feature to an existing smart phone line | [MultiLineMixedOrder](http://dvsnonprodregistry.ebiz.verizon.com:23280/GSBRepositoryAppWeb/registry/subserviceinfo.do?service=193)/ volteForBusinessEndPoint Add | FCST304c | Ph. 6 | Can achieved by adding end point scenario |
| Removal of end points from an existing one-talk line   1. Removing a desk phone from existing one-talk line 2. Removing a smart phone from existing one-talk line 3. Removing the OTT from existing one talk line | [MultiLineMixedOrder](http://dvsnonprodregistry.ebiz.verizon.com:23280/GSBRepositoryAppWeb/registry/subserviceinfo.do?service=193)/ volteForBusinessEndPointRemove | FCST304c | Ph. 6 |  |
| Adding a bridge number | volteForBusinessDeskPhoneMaintenance/bridge |  | Ph. 6 | New service + New sub service |
| Removing a Bridge number | volteForBusinessDeskPhoneMaintenance/unbridge |  | Ph. 6 |  |
| Disconnecting the one-talk line   1. Disconnecting the existing one talk line with smart phone and / or desk phone and/or OTT 2. Disconnect the existing Auto attendant line 3. Disconnecting the hunt group line |  |  |  | 1. Additional validation to ensure that hunt group is not alone under the ECPD |
| Updating the E911 address for the desk phone | volteForBusinessDeskPhone911Address/update | FCST496 (3471), 065 | Ph. 6 |  |
| Retrieve the E911 address on the desk phone | volteForBusinessDeskPhone911Address/retrieve |  | NA | Already rewired |

## Out of Scope

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Scenario | API | | Vision Modules | Scope | Comments |
| Retrieve the E911 address on the desk phone | volteForBusinessDeskPhone911Address/retrieve | |  | NA | Already rewired |
|  | | **One-Talk Maintenance scenarios wrt to group ID**  **Service –** volteForBusinessMaintenance | | | |
| Add Group Id | addGroupID | |  | Future |  |
| Modify Group Id | modifyGroupID | |  | Future |  |
| Remove Group Id | removeGroupID | |  | Future |  |
| Move MTN to different group id | moveMtnToGroupID | |  | Future |  |
| Add ECPD Id to Group | addEcpdIdToVolteForBusiness | | FCST895c | Future |  |
| Remove ECPD Id to Group | removeEcpdIdFromVolteForBusiness | | FCST895c | Future |  |
| Fetch all Group ID under ECPD | retrieveGroupIdInfo | |  | Future | Read API |
| Fetch all MTN under Group ID | retrieveMtnInfo | |  | Future | Read API |
| Fetch all MTN under ECPD Id | retrieveMtnInfoByEcpd | |  | Future | Read API |
| Fetch the bridged MTN based on MAC ID | retrieveBridgedMtnByMacId | |  | Future | Read API  Already rewired |
| Fetch the number of devices by ECPD ID | retrieveDeviceCountByEcpd | |  | Future | Read API  Already rewired |
| Hunt Group Validation | validateOnetalkOrderForHG | |  | Future | Read API |

## Assumptions

|  |  |
| --- | --- |
| **No.** | **Assumption/Dependencies** |
| 1 | For HG activation – FE calls a API to see if the HG can be activated on the specific ECPD. It will continue the same way and won’t be rewired into OR |
| **Onboarding** |  |
| 2 | * + 1. VOLTE\_BSNS\_TRANS     2. XML\_TRANS\_LOG     3. ERR\_LOG   These are temporary tables in Vision and won’t be created in Cassandra. OR will handle these as per their logging/ error handling architecture (Confirmed with SMEs in war room) |
| 3 | OR will not support the ECPD nightly feed right now. It will continue in Vision and data will get data popped to Cassandra  (ECPD\_Profile table in the Vision is based on the feed from ECPD. Currently Vision has a nightly feed to get the new ECPD details which updates the ECPD profile tables in vision. This is also data popped to Cassandra) |
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| 11 |  |
| 12 |  |

## Dependencies

|  |  |  |
| --- | --- | --- |
| **No.** | **Dependencies** | **Transaction Details** |
| 1 |  |  |
| 2 |  |  |
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## Action Items

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **No.** | **Issue / Question** | | | **Owner** | | **O/C** | **Closed Date** | | | **Comments / Resolution** |
| 1 | | For one talk activation with port in --- DVS stores and sends upto 5 emails to customer when the port in complete. Check with Ajay Mellachervu | Bala | |  | | |  |  | |
| Onboarding Issues | | | | | | | | | | |
| 1 | | Need to discuss with Read API team on whether to implement the onboarding subservice along with exiting rewired read API or to build it as a separate item | Ila/ Venkat | | O | | |  |  | |
| 2 | | For onboarding need to finalise whether the existing Cassandra read tables will be used or new tables in Cassandra write | Ila/ Sunil | | C | | |  | The direction from Sunil is to use the order write schema for all write APIs and also follow data pop sync up from vision to read schema | |
| 3 | | For Onboarding flow do we need to engage BPM for sending the transaction to MTAS or can the OR MS do it | Ila/ Chris | |  | | |  |  | |
| Bridging issues | | | | | | | | | | |
| 1 | | Why should we use ORD\_LN\_4G\_Info table for saving the bridge req. Can we use the ord ln pending item itself | Ila/ Sunil | | C | | |  | Ord\_ln\_item\_pending is the corresponding write table to be used. It is being used in MLMO flow already | |
| E911 Deskphone address | | | | | | | | | | |
| 1 | | Can we have the E911 address update for desk phone and homephone connect as a single flow in OR | Joseph/ Ila | |  | | |  | As per Igor, it should be combined as a single flow and optimize in OR | |
|  | |  |  | |  | | |  |  | |
|  |  | | |  | |  |  | | |  |
|  |  | | |  | |  |  | | |  |

*O = Open, C = Closed*

## Impacted APIs

### API 1

#### Inputs

Please refer to [Appendix](#_Appendix_A_–_1) below for sample XML request.

#### Outputs

Please refer to [Appendix](#_Appendix_A_–_1) below for sample XML request.

#### Errors

Please refer to [Appendix](#_Appendix_E_–) E below for sample XML request.

### API 2

#### Inputs

Please refer to [Appendix](#_Appendix_A_–_1) below for sample XML request.

#### Outputs

Please refer to [Appendix](#_Appendix_A_–_1) below for sample XML request.

#### Errors

Please refer to [Appendix](#_Appendix_E_–) E below for sample XML request.

## Clients

## New Tables

|  |  |  |
| --- | --- | --- |
| SNo | Schema | Table Name |
|  |  |  |
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## Impacted Tables

Please see Sec. 5.2 Enhancement to Data Grid (PNO, CPF, OSU, Cassandra, etc.) below.

## Current Flow

## Vision Backend Modules

Refer Appendix B

## Contacts

|  |  |
| --- | --- |
| **Team** | **Contact Name** |
| E2E Architect |  |
| E2E SMEs |  |
| OMS Architect |  |
| BPM Architect |  |
|  |  |
|  |  |

# End – End Project Flow

# Functional Requirements

## Enhancement to Emulation

## Enhancement to Data Grid (PNO, CPF, OSU, Cassandra, etc.)

The following are the various tables involved in the following scenarios. All the below tables are available in Cassandra read, as of now no new tables will be required in Cassandra

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Module Name** | **Table name** | **CRUD** | **Cassandra Write Table** | **Cassandra Read Table** | **Alternate/Replacement Table** | **Comments** |
| FCST895C | VOLTE\_BSNS\_TRANS | Insert, Select | Not required | Not required |  | Temporary table in Vision to store the transactions. |
|  | ECPD\_PROFILE | update, |  | ecpd\_profile |  |  |
| FCST895C | VOLTE\_BSNS\_GROUP\_INFO | Select |  | volte\_bsns\_group\_info |  |  |
| FCST896Q | insert, update, delete |  |  |
| FCST895C | VOLTE\_BSNS\_LN\_GRP\_XREF | Select |  | volte\_bsns\_ln\_grp\_xref |  |  |
| FCST895C | VOLTE\_BSNS\_GRP\_ID\_XREF | Select |  | volte\_bsns\_grp\_id\_xref |  |  |
| FCST896Q | insert, update, select |  |  |
| FCST895C | XML\_Trans\_Log | Insert | Not required | Not required |  | Table to store the XML sent to other systems. Mainly used in trouble shooting |
| FCST896Q | VOLTE\_FOR\_BSNS\_INFO | Insert, Delete |  | volte\_for\_bsns\_info |  |  |
| FCST901C | ORDER\_EVENT\_LOG | Insert |  | NON\_REFERENCE\_XREF |  |  |
| FCST901c/ 903c | ORD\_LN\_ITEM | insert,select,update |  | ord\_ln\_item\_pending |  |  |
|  | ORD\_LN\_4G\_INFO | insert |  | ORD\_LN\_ITEM\_ORD\_NO /ORD\_LN\_ITEM\_BY\_CUST\_ID |  | Already dropped |
|  | LN\_ADDL\_DVC\_INFO | select,update |  | ln\_addl\_dvc\_info |  |  |
|  | ECPD\_PROFILE\_CUST | select |  | ecpd\_profile\_cust |  |  |
|  | SF\_OFFR\_MPS\_XREF | select |  |  |  |  |
|  | DMD\_MAKE\_MODEL | select |  | dmd\_make\_model |  |  |
|  | DMD\_DEVICE\_ID\_INFO | Select |  | dmd\_device\_id\_info |  |  |
|  | LN\_PRIM\_ID\_MDN | select |  | ln\_prim\_id\_mdn |  |  |
| FCST903C | ORD\_LN\_ITEM | select,insert,update |  | ord\_ln\_item |  |  |
|  | BL\_ACCT\_CUST\_MTN | select |  | bl\_acct\_customer\_mtn |  |  |
|  | ORDER\_EVENT\_LOG | insert |  | Repeat |  |  |
|  | LN\_PRIM\_ID\_MDN | select |  | ln\_prim\_id\_mdn |  |  |
|  | LN\_MULTI\_DVC\_ADDR | select |  | ln\_multi\_dvc\_addr |  |  |
|  | LN\_ADDL\_DVC\_INFO | select |  | ln\_addl\_dvc\_info |  |  |
|  | ADDR\_REPOS | select |  | Contact\_REPOS |  |  |
|  | ORD\_LN\_ADDL\_INFO | insert |  | ord\_ln\_addl\_info |  |  |
|  | ORD\_LN\_ADDR | insert |  | ord\_ln\_addr |  |  |
| FCST305C | ORD\_LN\_4G\_INFO | insert |  | Repeat |  |  |
|  | ORD\_LN\_ADDR | insert,select |  | ord\_ln\_addr |  |  |
| FCST304C | IMSI\_MDN | select |  | imsi\_mdn |  |  |
|  | LN\_ADDL\_DVC\_INFO | select |  | ln\_addl\_dvc\_info |  |  |
|  | LN\_PRIM\_ID\_MDN | select |  | ln\_prim\_id\_mdn |  |  |
|  | CUST\_DVC\_PROV\_INFO | select |  | cust\_dvc\_prov\_info |  |  |
|  | CUST\_DVC\_EQP\_TRANS | select |  | cust\_device\_eqp\_trans |  |  |

## Enhancement to DVS / Global Router

* + - 1. DVS should send the following API orders to OR,

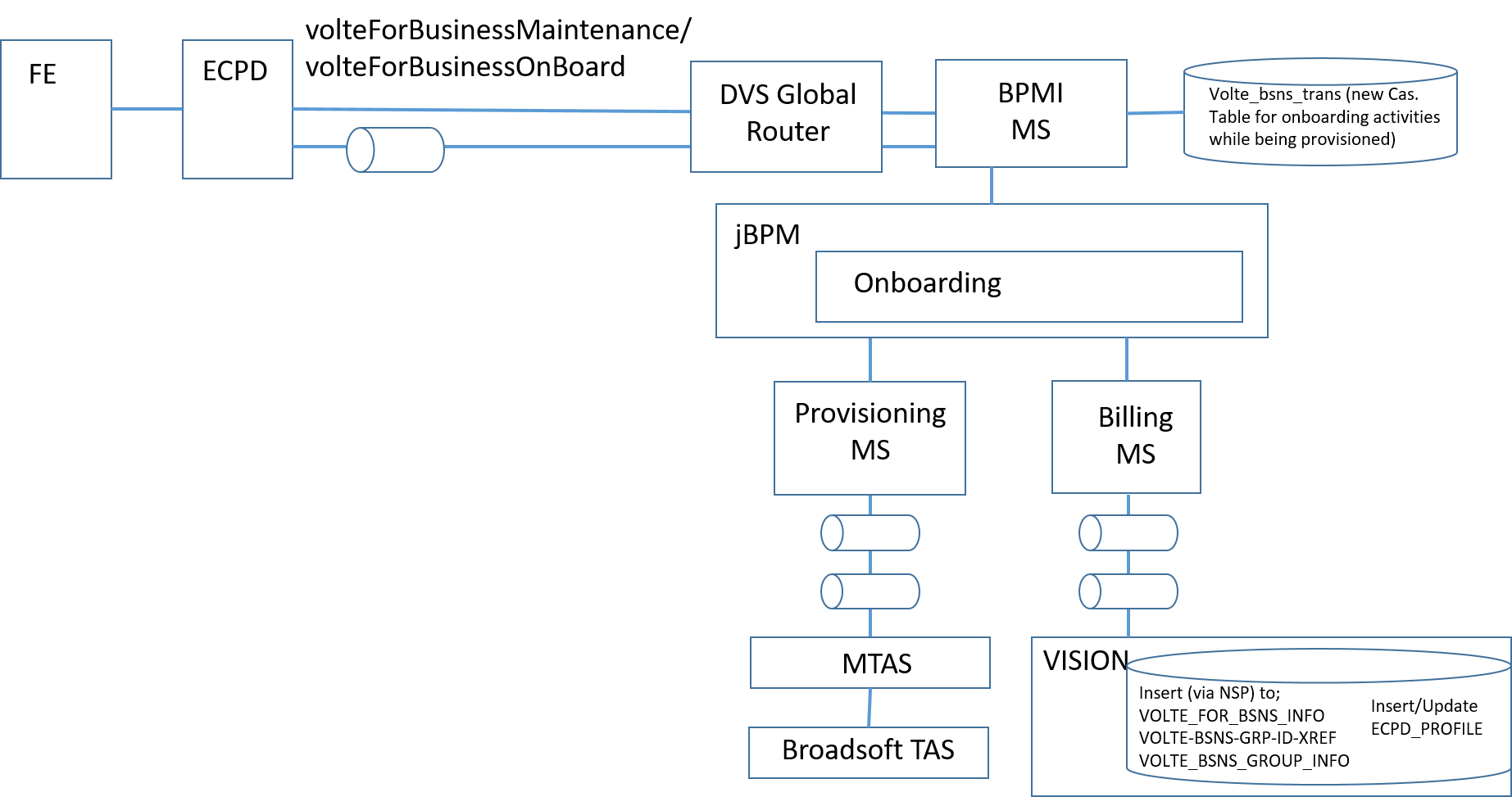
1. [MultiLineMixedOrder](http://dvsnonprodregistry.ebiz.verizon.com:23280/GSBRepositoryAppWeb/registry/subserviceinfo.do?service=193)/ volteForBusinessEndPoint Add
2. [MultiLineMixedOrder](http://dvsnonprodregistry.ebiz.verizon.com:23280/GSBRepositoryAppWeb/registry/subserviceinfo.do?service=193)/ volteForBusinessEndPoint Remove
3. volteForBusinessMaintenance/ volteForBusinessOnBoard
4. volteForBusinessDeskPhoneMaintenance/bridge
5. volteForBusinessDeskPhoneMaintenance/unbridge
6. volteForBusinessDeskPhone911Address/update

## Enhancement to OMS

## 

## Enhancement to BPM

1. Onboarding



Note: Throughout the pre-XML generation validation:

* + Technical errors will trigger Self-heal to VISION (See Separate Section for Self-Heal details).
  + Business/Functional Errors will send the appropriate error-message to ECPD.

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| * 1. ECPD sends the sync request to BPMI MS (emulator is configured to route to BPMI MS).   Request XML (Sample);  <?xml version="1.0"?>  <service>  <serviceHeader>  <billingSys>VISION</billingSys>  <clientId>VZW-ECPD</clientId>  <userId>POSTST01</userId>  <password/>  <serviceName>volteForBusinessMaintenance</serviceName>  </serviceHeader>  <serviceBody>  <serviceRequest>  <subServiceName>volteForBusinessOnBoard</subServiceName>  <transactionId>986</transactionId>  <volteForBusinessId>V4BTC02</volteForBusinessId>  <broadSoftProvisionInstance>EAST</broadSoftProvisionInstance>  <groupIdList>  <groupIdItem>  <groupId>GROUP0BBBBBAAAA2BBBBBBBBB3</groupId>  <ecpdIdList>  <ecpdIdItem>  <ecpdId>630574</ecpdId>  </ecpdIdItem>  </ecpdIdList>  </groupIdItem>  </groupIdList>  </serviceRequest>  </serviceBody>  </service>  DVS will respond with the following XML (Sample). This is for information only as OR is not involved in this response.  <?xml version="1.0"?>  <service>  <serviceHeader>  <billingSys>VISION\_B2B</billingSys>  <clientId>VZW-ECPD</clientId>  <userId>SCRUBBED</userId>  <password>SCRUBBED</password>  <serviceName>volteForBusinessMaintenance</serviceName>  **<statusCode>00</statusCode>**  **<errorCode>00</errorCode>**  <errorMsg/>  <cicsErrorCode>00</cicsErrorCode>  <serverName>gsbdev3north</serverName>  <correlationId>2fb32470c33a7fc1:3a43d9cd:150c7e8a3ce:-7fde:gsbdev3north:GlobalRouter:gsbdev3north:DVSCOMMON</correlationId>  </serviceHeader>  <serviceBody>  <serviceRequest>  <subServiceName>volteForBusinessOnBoard</subServiceName>  <transactionId>986</transactionId>  <volteForBusinessId>V4BTC02</volteForBusinessId>  <broadSoftProvisionInstance>EAST</broadSoftProvisionInstance>  <groupIdList>  <groupIdItem>  <groupId>GROUP0BBBBBAAAA2BBBBBBBBB3</groupId>  <ecpdIdList>  <ecpdIdItem>  <ecpdId>630574</ecpdId>  </ecpdIdItem>  </ecpdIdList>  </groupIdItem>  </groupIdList>  </serviceRequest>  </serviceBody>  </service>   * 1. BPMI validates the request according to the following criteria and replies to ECPD accordingly:  |  |  |  | | --- | --- | --- | | Validation | Error Condition | Error message | | Is subServiceName volteForBusinessOnBoard? | subServiceName is not volteForBusinessOnBoard | ’Onboarding flag should be “O”’ | | 0 > transactionId <= 2147483647 | transactionId is out of range | “8004 - INVALID TRANSACTION CODE”. | | V4BID in <volteForBusinessId> is non-empty. | V4BID is empty. | "103 - V4BID is required” | | TAS-INSTANCE (<broadSoftProvisionInstance>) is not empty | TAS-INSTANCE is empty | “103 -TAS-INSTANCE is required” | | no of group id flag (<groupId>) is not equal to zero or spaces | no of group id flag is = zero or spaces | “103 - group 1 is required”. |  * 1. Check if the input ECPD profile id exists using a SELECT query on VOLTE\_FOR\_BSNS\_ID from ecpd\_profile (PNO call from Cassandra read). Proceed as following: * If Present in the ecpd\_profile table – do nothing. * If not present in the ecpd\_profile table, attempt to get the ECPD root profile and update the ECPD profile. If still not found, generate an error message: “2580 - ECPD PROFILE NOT IN ECPD AND NOT IN BILLING SYSTEM”. The OR implementation of the VISION/FCST805C (to get the ECPD root profile and update the ECPD profile) will be inserted here following RE of FCST805C and any other relevant VISION modules. MAKE SURE TECHNICAL AND BUSINESS ERROR CONDITIONS AND RESPECTIVE ACTION IS TAKEN (SELF-HEAL for TECHNICAL and ERROR BACK TO ECPD FOR BUSINESS ERROR).   1. A Cassandra table volte\_bsns\_trans (equivalent to VISION’s VOLTE\_BSNS\_TRANS) storing every request to onboard or V4BID actions will be created in CASSANDRA Write (CHECK WITH THE DATA MODELLING TEAM). It will hold onboarding activities temporarily while being provisioned. Include a STATUS column.   Check if V4BID trans ID already exists in volte\_bsns\_trans.  - YES (Present in the Table) – set the flag V4BID-Transaction-Id to TRUE and generate an error message: “106 - V4BID already exists”.  - No (Not Present in the Table) – set the flag V4BID-Transaction-Id to FALSE.   * 1. Check the VOLTE\_FOR\_BSNS\_INFO table, for V4BID existence. * YES (Present in the Table) – set the flag V4B-FOR-OB-EXISTS to TRUE, and generate error message: “107- V4BID already exists”. * No (Not present in the Table) – set the flag V4B-FOR-OB-EXISTS to FALSE   1. If both V4BID-Transaction-Id and V4B-FOR-OB-EXISTS are FALSE then proceed with on boarding logic by inserting the following details into volte\_bsns\_trans.  |  |  |  | | --- | --- | --- | | Column | From Input | From BPMI MS | | VOLTE\_BSNS\_TRAN\_ID | TRANSACTION-CD |  | | VOLTE\_BSNS\_TRAN\_TYP |  | “O” | | VOLTE\_BSNS\_TRAN\_TS |  | Current Date and time stamp | | VOLTE\_FOR\_BSNS\_ID | **V4BID** |  | | VOLTE\_BSNS\_GROUP\_ID | GroupId |  | | ECPD\_PROFILE\_ID | ECPD Profile Id |  | | NETWK\_INSTANCE\_CD |  | EAST | | DB\_USERID | Network Instance Code |  | | DB\_TMSTAMP |  | Current Date and timestamp | | VOLTE\_BSNS\_GROUP\_NME |  | GROUP1 | | VOLTE\_BSNS\_GRP\_TMZ |  | EASTERN |  * 1. If Technical Error occurs (e.g. PNO) - self-heal to VISION.   2. BPMI MS updates volte\_bsns\_trans with the status of this V4BID (“SENT TO PROVISIONING”) and launches jBPM One-Talk Onboarding Flow.   The Onboarding Workflow will be called once per Onboarding request:  BPMI Endpoint:  http://{hostname}:{port}/bpmi/order/send  Sample Onboarding BPMI Request JSON:  {  "com.vzw.orm.business.domain.objects.BPMIOrderRequest" :  {    "orderSource" : "One-Talk",  "requestHost" : "ms-t3-1.orbpm.ebiz.verizon.com",  "orderType" : "Onboardine",  "transactionId" : "986",  "userId" : "POSTST01",  "volteForBusinessId" : "V4BTC02",  "broadSoftProvisionInstance" : "EAST",  "groupId" : "GROUP0BBBBBAAAA2BBBBBBBBB3",  "productionParallelInd" : "N",  "billingInstance" : "E",    }  }  Sample Order Level BPMI Response JSON:  {  status : "Success",  statusMessage : "Workflow successfully started"  }  The high-level flow and compensation for technical and business errors is described in the flowchart below:     * 1. jBPM flow calls Provisioning MS in order to create the MTAS XML as following:  |  |  |  | | --- | --- | --- | | MTAS TAG Name | Source | Value or Tag name | | ReqId | Input Payload | transactionId | | UserId | Input Payload | ’ FCST895C’ (MTAS doesn’t use it is just a pass thru field) Confirm that this is the value to be used in OR. | | Source | Source determines for MTAS which MQ to listen & reply to. This is part of ORDER PROVSIIONING MS BAU.  ~~If not available in the table, use the value ‘VIS’ –~~  ~~VISION instance values:~~  ~~- B2B - VBP1W~~  ~~- East – VIS~~  ~~- North - VNP1J~~  ~~- West - VWP1P~~ |  | | SourceClass | Hardcode to ‘V’ | Currently hardcoded to ‘V” (in 451); continue to hardcode to “V” in OR as well to avoid MTAS impact. | | TrnType | Code logic  XML-TRN-TYPE-VALUE | 'AddBsnsGroup ' | | ReqDate | Code logic | Current date | | ReqTime | Code logic | Current time stamp | | GroupInfo |  |  | | BusinessID | Input Payload | volteForBusinessId | | BTAS | Input Payload | broadSoftProvisionInstance | | GroupID | Input Payload (for onboarding only one group will come) | groupId (1) | | GroupName | Inputpayload | groupName  (If not available use groupId) | | TimeZone | Inputpayload – verify availability in input payload | timeZone |     The Data types for the MTAS tags are currently defined in VISION as following:  ReqId X(10).  UserId X(08).  Source X(05).  SourceClass X(01).  TrnType X(15).  ReqDate X(10).  ReqTime X(10).  BusinessID X(30).  BTAS X(04).  GroupID X(30).  GroupName X(80).  TimeZone X(25).  **Sample MTAS request:**  <?xml version="1.0"?>  <Verizon>  <ReqId>0000000696</ReqId>  <UserId>FCST895C</UserId>  <Source>VBT4</Source>  <SourceClass>v</SourceClass>  <TrnType>AddBsnsGroup</TrnType>  <ReqDate>04/25/2016</ReqDate>  <ReqTime>06:15:21.0</ReqTime>  <GroupInfo>  <BusinessID>V4B000000695</BusinessID>  <BTAS>east</BTAS>  <GroupID>V4B000000695\_GROUP1</GroupID>  </GroupInfo>  </Verizon>  Note: the sample above was taken from QA/T4. The actual values in production are determined as in the MTAS tags table above.  The mapping between the ECPD request and the MTAS request is shown below:   |  |  |  |  |  | | --- | --- | --- | --- | --- | |  | Onboarding MTAS XML | | | | | From ECPD Request Payload (XML Sample) | MTAS TAG Name | Source | Value | MTAS XML Sample | | <transactionId>986</transactionId> | ReqId | Input Payload | transactionId | <ReqId>0000000696</ReqId> | | <userId>POSTST01</userId> | UserId | Input Payload | ’ FCST895C’ (MTAS doesn’t use it is just a pass thru field) | <UserId>FCST895C</UserId> | |  | Source | Source determines for MTAS which MQ to listen & reply to. This is part of ORDER PROVSIIONING MS BAU. |  | <Source>VBT4</Source> | |  | SourceClass | Hardcode to ‘v’ | Currently hardcoded to ‘v” (in 451); continue to hardcode to “V” in OR as well to avoid MTAS impact. | <SourceClass>v</SourceClass> | |  | TrnType | XML-TRN-TYPE-VALUE = 'AddBsnsGroup ' | AddBsnsGroup ' | <TrnType>AddBsnsGroup</TrnType> | |  | ReqDate | Code logic | Current date | <ReqDate>04/25/2016</ReqDate> | |  | ReqTime | Code logic | Current time stamp | <ReqTime>06:15:21.0</ReqTime> | |  | GroupInfo |  |  | <GroupInfo> | | <volteForBusinessId>V4BTC02</volteForBusinessId> | BusinessID | Input Payload | volteForBusinessId | <BusinessID>V4B000000695</BusinessID> | | <broadSoftProvisionInstance>EAST</broadSoftProvisionInstance> | BTAS | Input Payload | broadSoftProvisionInstance | <BTAS>east</BTAS> | | <groupId>GROUP0BBBBBAAAA2BBBBBBBBB3</groupId> | GroupID | Input Payload (for onboarding only one group will come) | groupId (1) | <GroupID>V4B000000695\_GROUP1</GroupID> | |  | GroupName | Inputpayload – confirm necessity & availability in input payload (absent from XML sample we have) | groupName - (If not available use groupId) |  | |  | TimeZone | Inputpayload – confirm necessity & availability in input payload (absent from XML sample we have) | timeZone |  |  * 1. Once the message is sent to MTAS’ MQ, Order Provisioning MS will: * Create an entry in Ord\_ln\_event\_log. Note: the DB2 XML\_TRANS\_LOG will not be operationally necessary for rewired onboarding. * If successfully posted to MQ - as indicated by the response of Order Provisioning MS to jBPM, then:   + Update volte\_bsns\_trans with the status (Posted to MTAS MQ).   + the jBPM flow will trigger sending the response to ECPD to close the http call **(via BPMI MS).** * *If the MTAS request did not post successfully (due to technical failure), jBPM will trigger the deletion of the volte\_bsns\_trans table entry in Cassandra write and then* ***self-heal to VISION.***   1. The Onboarding MTAS Response (sample);   <?xmlversion="1.0"?>  <VERIZON>  <DESTPGM>MTASNOSW</DESTPGM>  <PROCDATE>03/28/19</PROCDATE>  <PROCTIME>16:58:24.0</PROCTIME>  <REQID>0000342835</REQID>  <SOURCE>VBP1W</SOURCE>  <PROCDATETIME>2019-03-28-16.58.24.000000</PROCDATETIME>  <REQDATE>03/28/201913:58:22.0</REQDATE>  <USRID></USRID>  <SOURCECD>G</SOURCECD>  <ERRCODE>000000000</ERRCODE>  <ERRMSGTXT>SUCCESS.</ERRMSGTXT>  <SPLITCNT>1</SPLITCNT>  <DEVTYPE>SWC</DEVTYPE>  <SPLITLIST>BSNS\_TAS</SPLITLIST>  <NETYPE>BSNS\_TAS</NETYPE>  <TRANS\_PROC\_TYPE>LIVE\_MODE</TRANS\_PROC\_TYPE>  </VERIZON>  ERRCODE = 0, implies processing of the request by MTAS.  ERRCODE = !0, implies unsuccessful processing of the request by MTAS.  Provisioning MS will update jBPM accordingly.   * 1. Upon receiving **successful** MTAS response:      1. jBPM will check if the MTAS response corresponds to a request; this will be done by matching the Transaction ID (REQID). If there is no match, jBPM will trigger failure ECPD Notification.      2. **If the response corresponds to a request, perform the following steps:**         + jBPM will trigger the V4BID update in ecpd\_profile table.   ECPD\_PROFILE table schema (DB2 version)  ECPD\_PROFILE\_ID INTEGER  ECPD\_PROFILE\_ID\_RO INTEGER  DB\_USERID CHAR(8)  DB\_TMSTAMP TIMESTMP(6)  ECPD\_PROFILE\_NME VC(50)  M2M\_ALLOW VC(10)  VZ\_MSG\_BLOCK\_IND CHAR(1)  VOLTE\_FOR\_BSNS\_ID CHAR(30)  ADMIN\_FEE\_WAIVED\_I CHAR(1)  ADMIN\_FEE\_TIERED\_I CHAR(1)  REGLTR\_FEE\_WAIVED\_ CHAR(1)  FED\_UNV\_SVC\_WAIVED CHAR(1)  If there is no record, send a sync request to ECPD and get the details to update ecpd\_profile table (write) accordingly.     * + - * jBPM will call the Billing MS to create records (V4B ID and group details) in the VISION tables below by triggering a NSP: * VOLTE\_BSNS\_TRANS * VOLTE\_FOR\_BSNS\_INFO * VOLTE\_BSNS\_GROUP\_INFO * VOLTE\_BSNS\_GRP\_ID\_XREF * ECPD\_PROFILE - along with the data for ECPD\_PROFILE (need to mention whether it is a create or update).   From Vision DB, the data pop updates the tables in the Cassandra-read (should update in all the Cassandra read instances).   * + - * Obsolete volte\_bsns\_trans table record       * Send the **success** message to ECPD MQ   1. In case of **unsuccessful MTAS response**, the action depends on the type of error:      1. If the error is caused by a (BPM) defect generating a wrong MTAS payload, the request should be reflowed to VISION. This state is identified based on <DESTPGM>DISCARDED</DESTPGM> in the XML response indicating the erroneous payload was not sent to Broadsoft. * jBPM will trigger a call to Vision with the input request formed from volte\_bsns\_trans table. Vision will take over the Onboarding process. CHECK DETAILS WITH VISION. * BPM discards the volte\_bsns\_trans table entry (transaction ID = REQID) * Send the error message to ECPD MQ and closeout the jBPM flow.   + 1. If due to a valid business error: * Obsolete the volte\_bsns\_trans table record (transaction ID = REQID) * Send the Error message to ECPD MQ.   1. The response XML to ECPD MQ:   01 WS-ECPD-RQT1.  05 EcpdRequest.  10 Header.  15 ClientId PIC x(08).  15 UserId PIC X(08).  15 RequestId PIC X(26).  15 TransactionName PIC X(14).  10 Body.  15 StatusCd PIC X(02).  15 Messagz PIC X(30).  15 TransId PIC 9(10).   |  |  |  | | --- | --- | --- | | ECPD TAG Name | Source | Value or Tag name | | ClientId |  | “VISION” | | UserId |  | “VISION” | | RequestId |  | Current time stamp | | TransactionName |  | “SET-V4B-STATUS” | | StatusCd |  | if error message number is zero then populate with “A”  else  “E”. | | Messagz |  | if error message number is zero then populate with 'Success'  else  ‘failure’ | | TransId | Order number from input payload | V4BID |   Sample XML  <?xml version="1.0" encoding="UTF-8"?>  <EcpdRequest>  <Header>  <ClientId>Vision</ClientId>  <UserId>Vision</UserId>  <RequestId>2018-02-20-08.58.14.335513</RequestId>  <TransactionName>SET-V4B-STATUS</TransactionName>  </Header>  <Body>  <StatusCd>A</StatusCd>  <Message>Success</Message>  <V4BId>V4B000000083</V4BId>  </Body>   |  |  |  | | --- | --- | --- | | XML Tag | Value | Comments | | ClientId | ‘Vision’ |  | | UserId | ‘Vision’ |  | | RequestId | Use Current Timestamp |  | | TransId | Use Order No from the MTAS response which is the transaction Id from the original ECPD req.  Use zero if it is not received back from MTAS |  | | TransactionName | 'SET-V4B-STATUS' |  | | StatusCd | Use the following logic to derive statusCd  A – when Err Msg no is zero  E – For other values for Err MSg  N – if Err Message is zero but the transaction ID is not found in Volte\_BSNS\_Trans table |  | | Message | Use the following logic to derive Message  Success – when Err Msg no is zero  Failure – For other values for Err MSg  Not\_Found - if Err Message is zero but the transaction ID is not found in Volte\_BSNS\_Trans table |  |     ======================================================================  ---------------------------------------------------------------------------------------------------------------------------- |  |  |

## Impacts to MTAS Interface

## Impacts to PRE Interface

## Impacts to Order Manager GUI

## Impacts to Production Parallel

## Impacts to RPA

None

## Other Impacts

None

# Special Considerations

## T&Cs / Consent

## Provisioning

### Order Provisioning

### Vendor Provisioning

No incremental impact due to One\_Talk

## Remarks

## Fees

## B2B

## OneMessage

No impact

## Security

No impact

## Interactions (HTTP/MQ)

## Post Order Record Processes

## Feeds/Pops/Reports/Batch

## Other Special Considerations

# Fall Out Process

# Testing Considerations

# Vendor Interfaces and System Impacts

|  |  |  |
| --- | --- | --- |
| Application | Y or N or NA | SPEC Name |
| VISION |  |  |
| REVO |  |  |
| EDW |  |  |
| Usage Broker |  |  |
| ACSS |  |  |
| Commission |  |  |
| VIP |  |  |
| ETNI |  |  |
| DMD |  |  |
| MTAS |  |  |
| EWI |  |  |
| One Message |  |  |
| MVM/MFA/RPS |  |  |
| .com |  |  |
| POS |  |  |
| BBP |  |  |

*NW- New*

*E – Existing*

*Y – Yes*

*N – No*

*NA – Not applicable*

# Mapping Matrix

|  |  |  |
| --- | --- | --- |
| **JIRA** | **Approach section** | **Description** |
| *<CS-XXXXX>* | *<Section 4.1>* | *<Functionality name 1> -* |
| *<CS-XXXXX>* | *<Section 4.1>* | *<Functionality name 1> -* |

# Appendix B – Backend Modules

# Appendix H – Codes & Descriptions

## MTN Status Code

|  |  |
| --- | --- |
| A | ASSIGNED |
| D | DELETED |
| H | HOLD |
| P | RESELLER RESERVED |
| R | RENAMED |
| S | SPLIT ADDED |
| T | TEMPORARY RESERVED |

## Vision Line Level Errors

|  |  |  |
| --- | --- | --- |
| LN\_ITM\_STAT\_CD | LN\_ITM\_STAT\_CD\_DSC |  |
| CB | CS MINUS PRIOR 6  ORDERS |  |
| CO | ORD ON COLL\_ORD\_REQUEST |  |
| EA | LINE IN ERR AFTER SWITCH |  |
| EB | LINE IN ERR BEFORE SWITCH |  |
| EC | ERROR CDMA PROVIS/LTE OK |  |
| ED | ERR-CDMA & SIMOTA/NSN OK |  |
| EN | ERROR-NSN PROVIS GATEWAY |  |
| ES | ERROR-SIMOTA PROVISIONING |  |
| LC | LINE COMPLETE |  |
| LD | LINE CANCELLED |  |
| LN | LINE NOT COMPLETE |  |
| OK | LINE READY TO GOTO SWITCH |  |
| PC | PARTIALLY COMPLETED |  |
| PN | PENDING-4G TO 4G CHG ORD |  |
| RF | ORD RECORD-FAIL SIM PGMG |  |
| RS | ORD RECORD-NO SIM PGMG |  |
| SB | SS MINUS PRIOR 6  ORDERS |  |
| SS | LINE SENT TO SWITCH |  |
| WB | WS MINUS PRIOR 6  ORDERS |  |

# Appendix K – Error Codes

*These are new error codes specific to the project. For full list of error codes please refer to the SDK.*

|  |  |  |  |
| --- | --- | --- | --- |
| **Error Code** | **Error response message** | **Error Condition** | **API(s)** |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |

# Appendix L – Terminology

|  |  |
| --- | --- |
| Term | Description |
| IMEI |  |
| ICC |  |
| T&C | Terms and Condition |
| LDN | Local Display Number (for secure phone) |
| DAS | Distributed Antennae System |
| MS | Micro Service |
| WAM | Wireless Access Management |
|  |  |
| AAL | Add A Line transaction – MDN activation |
| OR | Order Rewire |
| MVM | My Verizon Mobile app |
| MFA | Mobile First app |
| BBP | Broad Band Portal |
| POS Omni | POS, EROES, etc. |
| EDW | Enterprise Data Warehouse |
| OMS | Ordering Micro Service |
| MABEL | Major Account Billing Exchange Logistic |
| ICE | Interval Control Element. Transaction is executed after a specified interval/time is reached. After execution it sleeps until the time/interval is reached again |
| BOGO | Buy One Get One |
| BIC | Billing Incentive Credit |

# Appendix M - References

|  |  |
| --- | --- |
| **Name** | **Reference** |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |