MMFA - STANDARD OPERATING PROCEDURE (SOP)

Vodafone Business Intelligence

Enterprise Data Warehouse

|  |  |
| --- | --- |
|  | Application Name |
| 1 | MMFA ETL Operations Manual |
| 2 |  |
| 3 |  |
| 4 |  |
| 5 |  |

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| --- | --- |
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| Author |  |
| Operations Team | MMFA |

|  |
| --- |
| *<Notes on Tailoring This Document*  *As with all deliverables in the Vodafone Change Framework this document can be tailored to suit the needs of the project.* ***You may put Not-applicable and / or add details as required so that it is fit for purpose.***  *However, if you do so then insert a note explaining why – a short explanation may save challenges later. This may also help to avoid the problem of copying it for a subsequent project and leaving something out which could be relevant to that project. Also, depending on the audience refer to existing information rather than repeat it.>* |

What’s changed since the previous version (0.1) of this Template and this version (1.0).

| Template  Version | Section | Interested Parties | Comments |
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| V0.1 | Initial Draft | NA | NA |
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|  | Review Draft | More Standardize |  |
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What’s changed since the previous version (0.1) of this SOP Document and this version (1.0).

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| --- | --- | --- | --- | --- |
| Document Version No | **Date** | **Title or Brief Description  of Changes** | **Changed Done By** | **Reviewed by** |
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|  |  |  |  |  |
|  |  |  |  |  |

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# Introduction

This document establishes the Business Requirements in the Business Intelligence area for project MMFA.

This document establishes the Business Requirements in the Business Intelligence area for project MMFA.

* Scope with the details of AS-IS and TO-BE processes and functionalities of the MMFA Data Mart.
* Gap Analysis.
* Functional requirements.
* Non-functional requirements.
* Implementation Approach
* Master data requirements.
* Assumptions, Risks, Issues, Dependencies, Constraints*.*

## Purpose of Document

The purpose of this document is to provide guidance and steps to enable Applications Operations (AO) and Maintenance (AMS) teams for supporting application in production environment during normal run, exception run and enhancement of the application to meet changed business requirement. All necessary details are provided in the sections of this document for giving the deep understanding of the application(s).

## Sign-Off

The document needs to be prepared by Projects team and signed off by Operations Support team. Any change in the application must be reflected in the document and enhanced version of document to be released and published in the project folder. The table mentioning details of Sign-off authorities is placed as [Appendix](#_Appendices) to this document.

## Escalation Matrix

IBM :

|  |  |  |  |
| --- | --- | --- | --- |
| **Level** | **Name** | **Contact Number** | **Email Id** |
| 1. | Manish Maheshwari | 9822728681 | [manimahe@in.ibm.com](mailto:manimahe@in.ibm.com) |
| 2. | Bhuwnesh Kumar | 9819806086 | [bhuwnesh.kumar@in.ibm.com](mailto:bhuwnesh.kumar@in.ibm.com) |
| 3. | Murgesh Kaligudd | 9823489089 | [mkalligudd@in.ibm.com](mailto:mkalligudd@in.ibm.com) |

Vodafone :

|  |  |  |  |
| --- | --- | --- | --- |
| **Level** | **Name** | **Contact Number** | **Email Id** |
| 1. | Rajendar Shekhawat | 8411008401 | [Rajender.Shekhawat@vodafone.com](mailto:Rajender.Shekhawat@vodafone.com) |
| 2. | Sujata swamy | 9823006134 | [sujata.swamy@vodafone.com](mailto:sujata.swamy@vodafone.com) |
|  |  |  |  |
|  |  |  |  |

## Scope of SOP Document

This document discusses the functional requirement of MSISDN Mart for Analytics (MMFA), for 13 models as mentioned below.

* Home usage and revenue aggregates Daily
* Home usage and revenue aggregates Monthly
* In roamer usage and revenue aggregates Daily
* In roamer usage and revenue aggregates Monthly
* Out roamer usage and revenue aggregates Daily
* Out roamer usage and revenue aggregates Monthly
* Usage Circle Daily Fact
* Usage Circle Monthly Fact
* Handset History of Subscriber
* Recharges Per MSISDN Daily
* ISD country called daily fact – Daily
* MSISDN wise usage and revenue aggregate (Home + Out roamer) - daily
* MSISDN wise usage and revenue aggregate (Home + Out roamer) - monthly
* ISD country called daily fact - Daily
* Data usage and revenue data pack/pay g fact - Daily
* Data usage and revenue data pack/pay g fact - Monthly
* Subscription and pack history- Daily
* MTR - Account Adjustment - Daily
* MTR - Bonus Card - Daily
* VAS Revenue ADHOC - Daily
* Balance transfer fact - Daily
* Chota credit fact - Daily
* Night minutes usage (Local on net MOU) - Daily
* Night minutes usage (Local on net MOU) - Monthly

Following are in scope:

1. MSISDN subscriber level Usage, Revenue & count based on different legs e.g. onnet/offnet/local/STD/ISD etc. Details are provided in the embedded spreadsheet.
2. Device wise MSISDN subscriber level Usage, Revenue & count
3. Tariff wise MSISDN subscriber level Usage, Revenue & count
4. Design, development and implementation of MMFA Data mart which includes solution components for ETL, Database.
5. Data validation and trending will be designed and developed as per MMFA requirement.
6. Local on net MOU between 10pm to 8am.
7. Adjustment Amount with respect to Balance Transfer, Chota Credit.

## Assumption

This fact is to be triggered after completion of Subscriber master MSISDN DIM.

## Day to Day work instruction demarking critical activities

* Monitor the Etl jobs in Director client.
* Monitor the MMFA and Micro-segmentation job streams in Tivoli work scheduler.
* Check the MMFA bucket and analysis the raised incidents.
* Fix the tickets based on the priority.
* Validate the all models data.
* Validate the data for each fact based on the kpis.
* Check the audit table entries for all facts.
* Validate the target data with source data if there is any duplicated.
* Reload the data if there is any duplicated.
* To monitor Micro-segmentation jobs after MMFA Etl loading is done.
* Validate the data for D-3(Micro-segmentation).
* To clear the previous entries after etl reloading is done.
* Send the validated report for all facts after NZ Pushing is done in Analytics.

## Impact of not following critical procedures in day to day activities

ETL Jobs: If not done Jobs get aborted so that data might be duplicated.

Tivoli jobs: If not done Etl jobs will not be initiated any error occurred in Tivoli server.

Data Validation: If not done impact on daily business for users.

## Single point Failure with in the application environment

**FAILURE SCENARIOS**

* Etl jobs will be aborted due to sessions in Netezza and Terada Servers.
* Etl jobs will be aborted due to space issues in DSLOG and MountPoint.
* Sign Int issues will be occurred.

## Team Structure



Functional Mail ID:vilbmmfa@in.ibm.com

# Application

## ETL Process Design



### Structure of dimension tables and look up tables

For each of the attribute in dimension table, a corresponding SKEY column will be added to uniquely identify the value of the attribute. Value of this SKEY column will be populated from the corresponding source lookup tables in the warehouse or it will be generated through a sequence if it is a derived column. These SKEY columns in a dimension will be used to identify the dimension key of the table while populating the corresponding Index table and/or fact table. This SKEY column will also be used in Cognos reporting for sorting/ordering the values of the corresponding column.

### ETL Process Flow

Following are the process flow for Dimension and Facts Loading.

1. **Dimension Flow :-**

Teradata

Extraction from TD

Netezza

Target

Logic of Type 2 and Type 1.

Loading in Netezza

1. **DIM\_MMFA\_SUBSCRIBER\_MSISDN Flow :**

Teradata

Extraction from TD

Netezza

Target

Logic of Type 2 and Type 1.

Loading in Netezza

**s**

1. **DIM\_DEVICE\_MMFA / DIM\_TRFF\_MMFA/DIM\_GEOGRAPHY\_MMFA Flow :**

Teradata

Extraction from TD

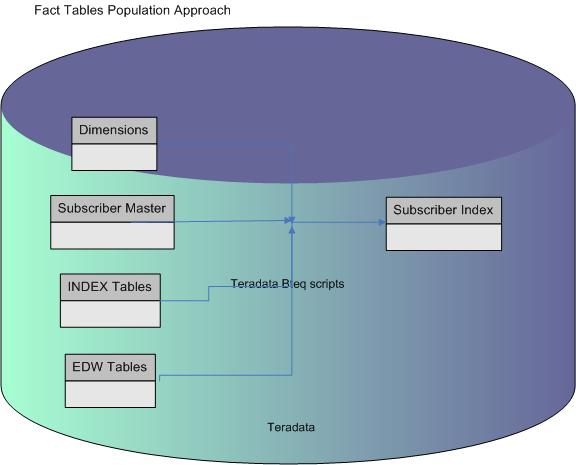
Netezza

Target

Logic of Type 2.

Loading in Netezza

1. **Facts Table Loading:-**

****

### Batch Flow

*This process will extract the data from TD(*dp\_tdm\_mi.MSTR\_SBSCRBR\_PRFL and DP\_TDM\_MI.IDX\_SBSCRBR\_DIM\_MNTHLY) through datastage and apply transformation and load into Netezza table.

**Batch Details:-**

**ETL server Ip: 10.87.224.202**

|  |
| --- |
| Dataset Directories : **/IVDS02/MMFA/Process/Dataset**  Process Path :**/IVDS02/MMFA/Process** |
| **Sequence 1 : S\_Mstr\_Dim\_Subs\_Master\_MSISDN**   |  | | --- | |  | | |  | | --- | | **Sequence 2 : S\_Mstr\_Fact\_Transfr\_Dly** |      |  | | --- | | **Sequence 3 : S\_Mstr\_Bonus\_Card\_Dly** | |  | |  |     **Sequence 4 : S\_Mstr\_Chota\_Credit\_Daily**   |  | | --- | |  | |  | |  |     Command to run the MMFA Circle wise:   |  | | --- | |  | |  |  |  | | --- | | **DSExecJob\_MMFA.ksh <Batch> <CircleCd> <JobName> <DSPROJECT>** | | **Example : ksh ./DSExecJob\_MMFA.ksh MMFA\_Daily\_Fact 30 S\_Mstr\_Fact\_Home\_Usg\_Rev\_Daily dsp\_mmfa** | | |

### Trouble Shooting

* In case of failure need to remove the par file form the PARAM location and run the command as it is mentioned above. Similar to all datastage jobs.
* For backdated data loading need to make the copy of extraction and load job .

Hardcode the dates as per requirement

### Validation Queries

select subs\_id,count(\*) from dp\_tdm\_mi..DIM\_MMFA\_SUBSCRIBER\_MSISDN\_88 where REC\_CLOSE\_DT='2899-09-09' group by 1 having count(\*)>1 ;

select \* from DP\_TDM\_MI..MMFA\_FACT\_HOME\_USG\_REV\_DAILY\_10 ;

select date\_skey,count(\*),sum(CREDITED\_AMT)as CREDITED\_AMT,sum(DEBITED\_AMT)as DEBITED\_AMT

from MMFA\_FACT\_CHOTA\_CREDIT\_10 group by 1;

select date\_skey,count(\*),sum(TRANSACTION\_VALUE)as TRANSACTION\_VALUE

from MMFA\_FACT\_ACCOUNT\_ADJ\_DLY\_10 group by 1;

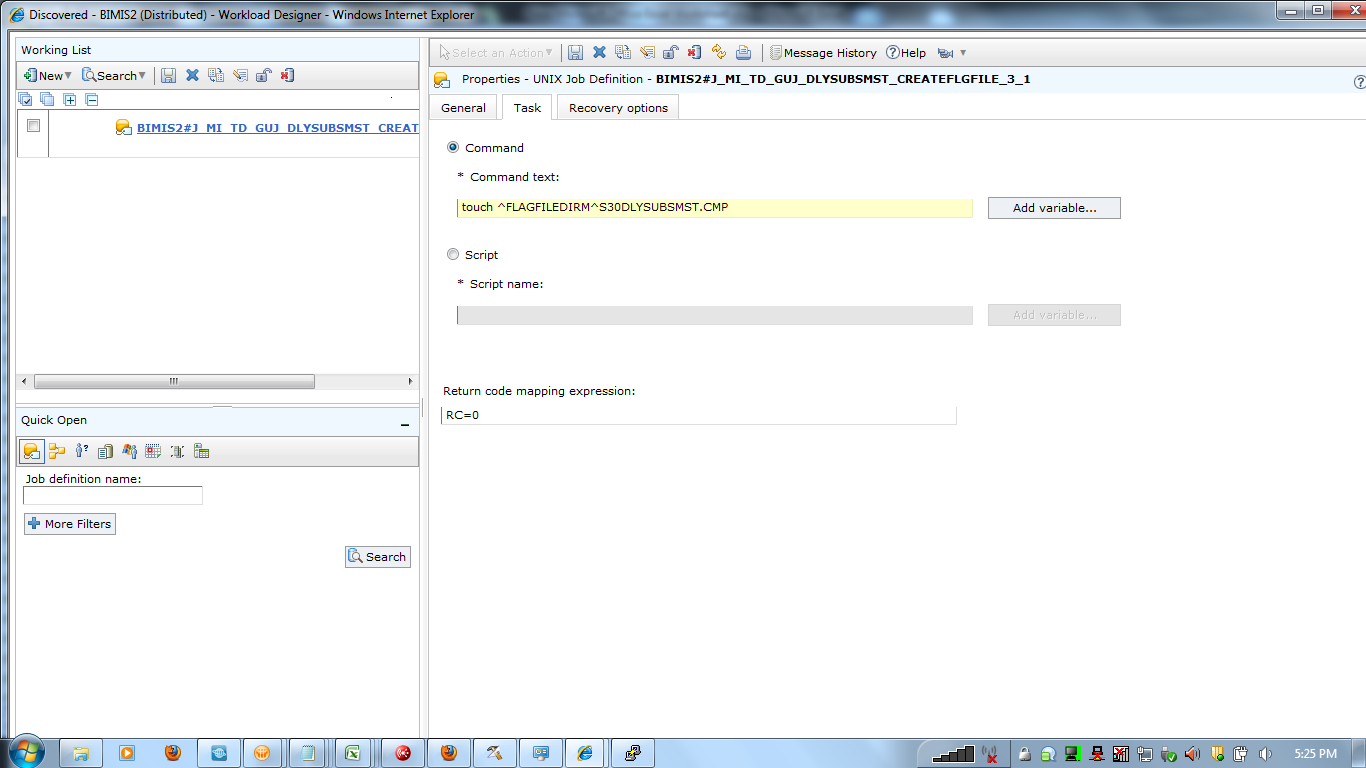
select date\_skey,count(\*),sum(LOC\_V2V\_MOU\_00AM\_06AM)as LOC\_V2V\_MOU\_00AM\_06AM,

sum(LOC\_V2V\_TRA\_00AM\_06AM)as LOC\_V2V\_TRA\_00AM\_06AM

from MMFA\_FACT\_CLLHIST\_NIMIUSG\_DLY\_10 group by 1;

>

### Tivoli Work Load Scheduler





|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Sl.No.** | **jobs** |  | **Dated** | **Deployed By** |
| 1 | Tivoli jobs design are attached. |  |  |  |

### Handshake Process between 10.87.224.202 and 10.87.165.15 server

* We have done the key-exchange between both server to get emm related conformation and password less communication among the servers.
* Followings are the details :

Server IP : 10.87.165.15

Host Name : 3GETLPROD

User ID : nztws

Password : \*\*\*\*\*\*\*\*\*

Group : twsadm

Script Path : /IVDS02/process/Tivoli/MMFA/Script

Script Name : MMFA\_EMM\_Touch\_File\_MMFA.ksh

Server IP :10.87.224.202

User Name :sftpmmfa

Password :\*\*\*\*\*\*\*\*\*

Script On Server :

=================

#!/bin/ksh

FileDir=/IVDS02/process/Tivoli/MMFA

FilePathMMFAServer=/IVDS02/MMFA/Process/Tivoli/EMM\_15\_SERVER/

set -A circles 1021 2021 3021 3521 4021 4521 5021 5521 6021 6521 7021 7521 8021 8121 8221 8321 8421 8521 8621 8721 8821 9021 9521

while [ 1 != 2 ]

do

for i in 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22

do

var=`ls ${FileDir}/|grep ${circles[$i]} |wc -l |sed 's/^ \*//g;s/ \*$//g'`

if [ ${var} == 2 ]

then

rm ${FileDir}/MMFA\_EMM\_\*\_${circles[$i]}.CMP

touch ${FileDir}/MMFA\_EMM\_${circles[$i]}.CMP

## ksh ./Java\_Script\_FTP\_MMFA.ksh ${FileDir} MMFA\_EMM\_${circles[$i]}.CMP

## scp nztws@10.87.165.15:${FileDir}/MMFA\_EMM\_${circles[$i]}.CMP sftpmmfa@10.87.224.202:${FilePathMMFAServer} 2>/tmp/mv.err

scp ${FileDir}/MMFA\_EMM\_${circles[$i]}.CMP mmfausr@10.87.224.202:${FilePathMMFAServer}

if [ $? == 0 ]

then

rm ${FileDir}/MMFA\_EMM\_${circles[$i]}.CMP

fi

fi

done

sleep 1800

done

# Alert details:

Server IP : 10.87.224.202

User : mmfa\_usr

Script Path : /IVDS02/MMFA/Process/Alert/JOB\_FAILURE\_ALERT

Scripts : Job\_Fail\_Alert\_New.sh

: JOB\_FAILURE\_ALERT.sh

: JOB\_FAILURE\_ALERT\_EMAIL.ksh

Message Server IP : 10.87.128.134

User : mmfa\_usr

| No | Description of Risk / Issue | Mitigation |
| --- | --- | --- |
| 1 |  |  |
|  |  |  |
|  |  |  |

### Table Names

Fact Tables :-

MMFA\_FACT\_USAGE\_CIRCLE\_DAILY\_<circle\_code>

MMFA\_FACT\_SBSCRBR\_HNDST\_HSTRY\_\_<circle\_code>

MMFA\_FACT\_RECHARGES\_PER\_MSISDN\_DAILY\_\_<circle\_code>

MMFA\_FACT\_INROAM\_USG\_REV\_DAILY\_\_<circle\_code>

MMFA\_FACT\_HOME\_USG\_REV\_DAILY\_\_<circle\_code>

MMFA\_FACT\_OUTROAM\_USG\_REV\_DAILY\_\_<circle\_code>

MMFA\_FACT\_HOME\_USG\_REV\_MONTHLY\_<circle\_code>

MMFA\_FACT\_HOME\_OUTROAM\_MONTHLY\_<circle\_code>

MMFA\_FACT\_INROAM\_USG\_REV\_MONTHLY\_<circle\_code>

MMFA\_FACT\_USAGE\_CIRCLE\_monthly\_<circle\_code>

MMFA\_FACT\_ACCOUNT\_ADJ\_DLY\_<Circle\_Code>

MMFA\_FACT\_BAL\_TRNSFR\_DLY\_<Circle\_Code>

MMFA\_FACT\_BONUS\_CARD\_<Circle\_Code>

MMFA\_FACT\_CHORDIANT\_DAILY\_<Circle\_Code>

MMFA\_FACT\_CHOTA\_CREDIT\_<Circle\_Code>

MMFA\_FACT\_CLLHIST\_NIMIUSG\_DLY\_<Circle\_Code>

MMFA\_FACT\_DATA\_PACK\_SUBS\_HIST\_<Circle\_Code>

MMFA\_FACT\_DATA\_USG\_RVN\_DLY\_<Circle\_Code>

MMFA\_FACT\_DATA\_USG\_RVN\_MLY\_<Circle\_Code>

MMFA\_FACT\_HOME\_OUTROAM\_DAILY\_<Circle\_Code>

MMFA\_FACT\_HOME\_OUTROAM\_MONTHLY\_<Circle\_Code>

MMFA\_FACT\_ISD\_COUNTRY\_CALLED\_DAILY\_<Circle\_Code>

MMFA\_FACT\_VAS\_RVN\_ADHOC\_DLY\_<Circle\_Code>

**Dimensions:**

IDX\_SBSCRBR\_DIM\_MNTHLY\_#CircleCode

DIM\_MMFA\_SUBSCRIBER\_MSISDN\_#CircleCode#

DIM\_RCH\_PRODUCT\_MASTER\_MMFA

DIM\_DEVICE\_MMFA

DIM\_GEOGRAPHY\_MMFA

DIM\_TRFF\_MMFA

DIM\_PACK\_MMFA

DIM\_PACK\_VOUCHER\_MMFA

DIM\_TRNS\_TYPE\_MMFA

**Note:**

**DP\_TDM\_MI..DIM\_VAS\_EVNT table we are pushing from 10.87.224.113 (NZ Analytics) to 10.87.224.120 (NZ EDW)**

| No | Description of Dependency | Mitigation |
| --- | --- | --- |
| 1 |  |  |
|  |  |  |

### Netezza Migration Details

* We are pushing the data from Nz EDW server to Nz Analytics server every day by 8:30 PM.
* Fact we are pushing incrementally
* Dimensions are truncate and load.
* Index subscriber monthly push is incremental.
* DIM\_VAS\_EVNT we are pushing from Nz analytics to Nz EDW.

Nz EDW IP : 10.87.224.120

Nz Analytics IP : 10.87.224.113

Script path on Nz EDW Server: /IVDS02/MMFA/Process/nzmigrate/NZmigrate\_scripts

Script Names:

nz\_migrate\_subscbr\_dim\_prod.sh

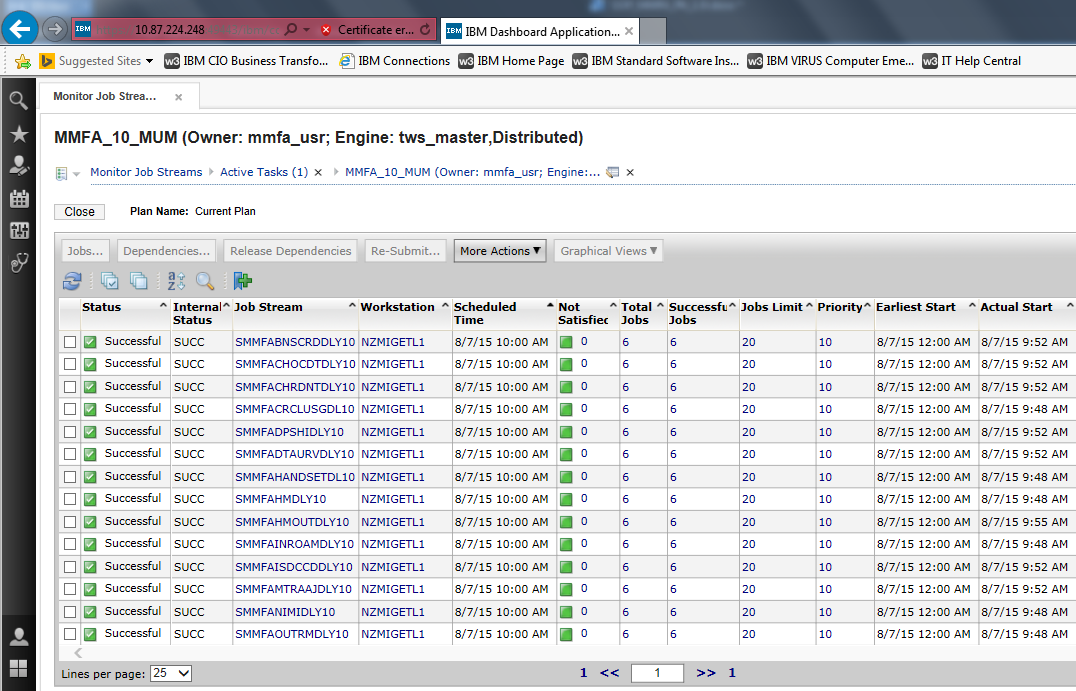
nz\_migrate\_mon\_dim\_prod.sh

nz\_migrate\_ana\_prod\_dim.sh

nz\_migrate\_fact\_prod.sh

nz\_migrate\_mon\_dim.sh

Note : Path of **nz\_migrate\_mon\_dim.sh:** /IVDS02/MMFA/Process/nzmigrate



# 3 Micro-Segmentation

# Daily Process

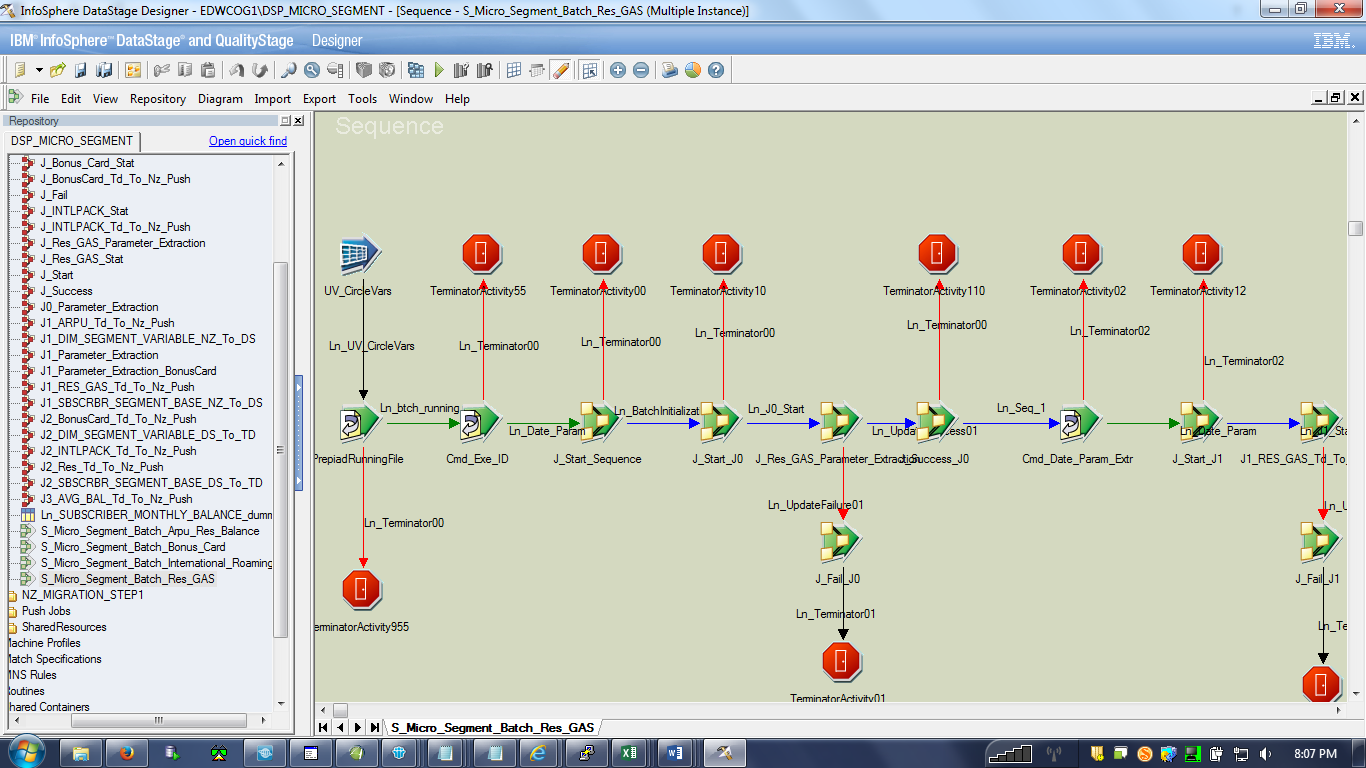
ETL Login Details: **10.87.224.249** server

Host Name: **EDWCOG1:9080**

User Name: edw\_mig1

Project Name: **EDWCOG1/DSP\_MICRO\_SEGMENT**

Job Path Location: Jobs--->**Micro\_segment\_Batch**----> S\_Micro\_Segment\_Batch\_Res\_GAS



Putty Login details: 10.87.224.249 server

user Name: **CTMneera**

Then Next **login with sudo**,

Command need to execute below command

**sudo su - dsadm**

Then enter Password : \*\*\*\*\*\*\*\*\*\*\*

Then go to following path

**cd /IVDS02/process/Shell/CTL** ---> Then Execute following "KSH" Script

ksh NzRunJob.ksh MICRO\_SEGMENT S\_Micro\_Segment\_Batch\_Res\_GAS 9999 &

**If Scripts got Failed** ,Then go to following Path:

**cd /IVDS02/process/Restart** ----> Then Remove Par File and Rerun above KSH Script .

Then Go to ETL Director and check the sequencer is running or Not.

**Note:**

In case Failure in Loading Job: Then go to below path

**cd /IVDS02/process/Restart**

In case of failure, if batch is to be restarted from last failed job onwards then delete .par file from restart folder and again run the sequence.

**In case Failure in Extraction Job**: Then go to below path

cd /IVDS02/process/Restart

In case if batch is to be restarted from first job, then delete all files from restart folder and also compile the sequence.

cd /IVDS02/process/Restart -> Remove below files

.par file, .err file, .running file, .log file

**If Sequencer got success then go to following Server:**

Logon to Putty: **10.87.224.247**

User Name: **anausr**

Then Following below Path:

**cd /IVDS02/process/MicroSegment/77\_fact\_micro\_segment\_daily\_batch**

Then Execute below KSH script:

**nohup ksh Run\_Script.ksh &**

If you want to check the circle entries , then go to following below path

cd /IVDS02/process/MicroSegment/77\_fact\_micro\_segment\_daily\_batch/77\_fact\_micro\_segment\_daily\_logfiles\_driver

Then Next Type ls -ltr

It displays the circle entries ,and check date wise.

If Circle Entries are not found, then go to following below path

cd /IVDS02/process/MicroSegment/77\_fact\_micro\_segment\_daily\_batch/77\_fact\_micro\_segment\_daily\_restart

For Example: If 10 Circle not found ,then go to above path and go to and type ls -ltr

Go to 10 circle Directory like

cd 1077\_fact\_micro\_segment\_daily\_restart

Then Remove .running file and go to below path

cd /IVDS02/process/MicroSegment/77\_fact\_micro\_segment\_daily\_batch

Mean while check in Netezza 10.87.224.113 server

Execute below query:

select \* from DP\_SDM\_MI..LOAD\_CONTROl where job\_name='fact\_micro\_segment\_daily'

and job\_status=0

and run\_dt=current\_date;

**Note: Don't Run this query,If it required then check in netezza Table. If entries are not found then execute this query.**

INSERT INTO DP\_SDM\_MI..RUN\_DATE

(

run\_dt

,source\_system\_code

,job\_name

,load\_type

,load\_freq

,update\_dt

,update\_tm

,update\_user

,load\_from\_dt

,load\_days

)

VALUES

(

'2015-04-03',

2077,

'fact\_micro\_segment\_daily',

'INCR',

'D',

'2015-04-03',

'01:00:00',

'ms\_load',

'2015-04-03',

1);

Then Execute below KSH script:

nohup ./77\_fact\_micro\_segment\_daily\_batch.sh 10 fact\_micro\_segment\_daily 2015-04-05 &

Date Should be D-3.

After completion of script then Check in Netezza validationQueries:

**VALIDATION:**

**Source Query :-**

select date\_Skey,BASE\_CIRCLE,count(\*)

from DP\_TDM\_MI..SBSCRBR\_RES\_BASE\_DAILY

where PRE\_POST\_IND=1 and date\_skey=20150522 group by 1,2;

**Target Query :-**

select date\_skey,BASE\_CIRCLE,sum(res\_subs)

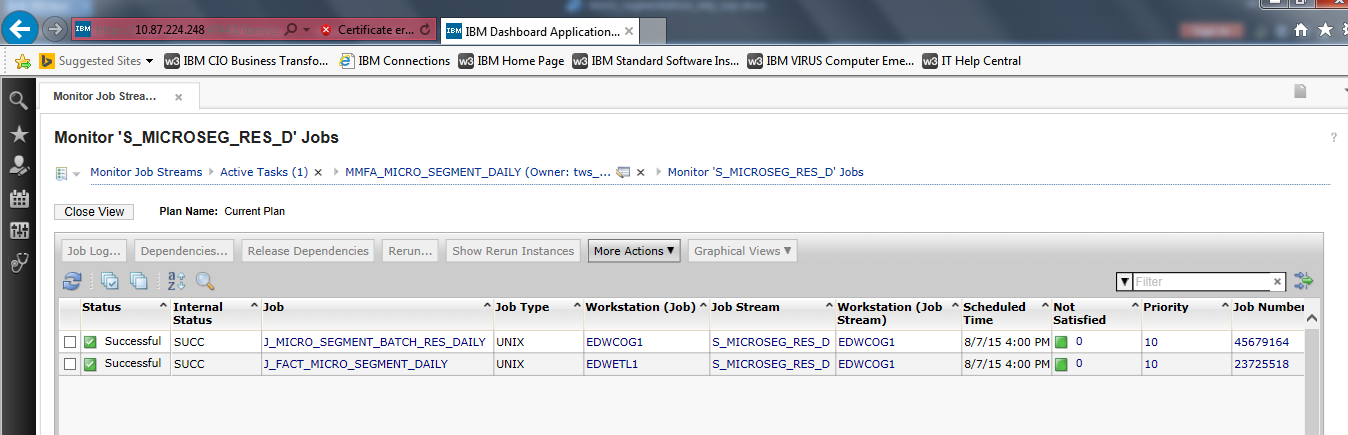
from DP\_TDM\_MI..FACT\_MICR\_SEG\_RPT\_DAILY\_AGG

where base\_circle not in (96,97) and date\_skey=20150522 group by 1,2;

**Note : Date Should be D-3**

**Tivoli Details :**

[**https://10.87.224.248:49443/ibm/console/logon.jsp**](https://10.87.224.248:49443/ibm/console/logon.jsp)



## Monthly Process

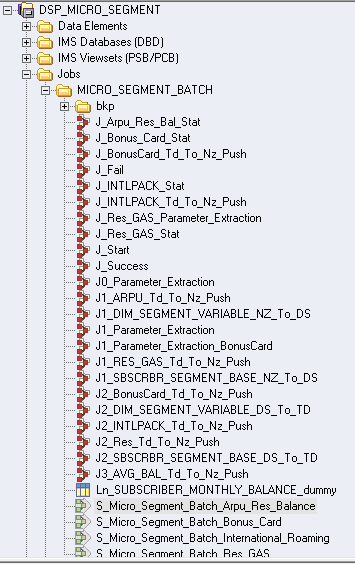
<ETL Server : 10.87.224.249

**Hostname** -> EDWCOG1

**Path of script** -> /IVDS02/process/Shell/CTL

**Path of Restart Folder ->**/IVDS02/process/Restart

**Datastage Job Location** ->



**MONTHLY Batches ->**

**1) S\_Micro\_Segment\_Batch\_Arpu\_Res\_Balance**

**Command to run ->**

ksh -x NzRunJob.ksh MICRO\_SEGMENT S\_Micro\_Segment\_Batch\_Arpu\_Res\_Balance 9999 &

**Circles** -> All circles at once

**Part I ARPU**

**Source Table ->** DIM\_SUBS\_USAGE\_REV\_HISTORY

**Target Table ->** DIM\_SUBS\_USAGE\_REV\_HISTORY

**Validation Query ->**

**SELECT** circle\_cd, COUNT(\*)

**FROM**

(

**SELECT** subscription\_id,20150301 date\_skey,source\_system\_Code/100 circle\_Cd,gross\_arpu **FROM** DP\_VEDW\_BO.DIM\_SUBS\_USAGE\_REV\_HISTORY

**WHERE** date\_mon\_id=1384

**AND** gross\_arpu<>0

)

sub

**GROUP** **BY** circle\_cd

**Part II RES**

**Source Table ->** MSTR\_SBSCRBR\_PRFL\_MNTHLY

**Target Table ->** SBSCRBR\_RES\_BASE\_MNTHLY

**Validation Query ->**

**SELECT** base\_circle,COUNT(\*)

**FROM**

(

**SELECT** SUBS\_ID, BASE\_CIRCLE, UNBR\_DT, LAST\_RES\_DT, ACTVN\_DT, STATUS, PRE\_POST\_IND, MSISDN, DATE\_SKEY **FROM** dp\_tdm\_mi.MSTR\_SBSCRBR\_PRFL\_MNTHLY

**WHERE** date\_skey=20150301

**AND** pre\_post\_ind=1

**AND** ( LAST\_RES\_DT **BETWEEN** '2015-03-01' **AND** '2015-03-31'

**OR** status **IN** ( 'A', 'ACTIVE') )

) sub

**GROUP** **BY** base\_circle

**Part III BALANCE**

**Source Table ->** SUBSCRIPTION\_BALANCE\_HISTORY

**Target Table ->** SUBSCRIBER\_MONTHLY\_BALANCE

**Validation Query ->**

**SELECT** base\_circle, COUNT(\*)

**FROM**

(

**SELECT** SUBS\_ID,SOURCE\_SYSTEM\_CODE/100 BASE\_CIRCLE,

SUM(SUBS\_BALANCE\_AMT) TOTAL\_BALANCE,COUNT(SUBS\_BALANCE\_DT) NO\_OF\_DAYS,

20150301 DATE\_SKEY **FROM** DP\_VEDW.SUBSCRIPTION\_BALANCE\_HISTORY

**WHERE** SOURCE\_SYSTEM\_CODE **IN** ( 1021,2021,3021,3521,4021,4521,5021,5521,6021,6521,7021,7521,8021,8121,8221,8321,8421,8521,8621,8721,8821,9021,9521)

**AND** SUBS\_BALANCE\_DT **BETWEEN** '2015-03-01' **AND** '2015-03-31'

**GROUP** **BY** 1,2,5

) sub

**GROUP** **BY** base\_circle

**Audit Table Query->**

select \* from MICRO\_SEGMENT\_BATCH\_AUDIT

WHERE BATCH\_NAME LIKE 'S\_Micro\_Segment\_Batch\_Arpu\_Res\_Balance'

AND SOURCE\_SYSTEM\_CODE LIKE '9999' AND JOB\_STATUS LIKE 'S'

AND EXECUTION\_ID = (SELECT MAX(cast(EXECUTION\_ID as INTEGER)) FROM MICRO\_SEGMENT\_BATCH\_AUDIT

WHERE BATCH\_NAME LIKE 'S\_Micro\_Segment\_Batch\_Arpu\_Res\_Balance'

AND SOURCE\_SYSTEM\_CODE LIKE '9999' AND JOB\_STATUS LIKE 'S')

**Stat table Query ->**

select \* from MICRO\_SEGMENT\_BATCH\_STAT where table\_name like 'DIM\_SUBS\_USAGE\_REV\_HISTORY'

and date\_skey=20150301 order by circle

select \* from MICRO\_SEGMENT\_BATCH\_STAT where table\_name like 'SBSCRBR\_RES\_BASE\_MNTHLY'

and date\_skey=20150301 order by circle

select \* from MICRO\_SEGMENT\_BATCH\_STAT where table\_name like 'SUBSCRIBER\_MONTHLY\_BALANCE'

and date\_skey=20150301 order by circle

**2) S\_Micro\_Segment\_Batch\_Bonus\_Card**

**Command to run ->**

ksh NzRunJob.ksh MICRO\_SEGMENT S\_Micro\_Segment\_Batch\_Bonus\_Card 9521 &

ksh NzRunJob.ksh MICRO\_SEGMENT S\_Micro\_Segment\_Batch\_Bonus\_Card 9021 &

ksh NzRunJob.ksh MICRO\_SEGMENT S\_Micro\_Segment\_Batch\_Bonus\_Card 8821 &

ksh NzRunJob.ksh MICRO\_SEGMENT S\_Micro\_Segment\_Batch\_Bonus\_Card 8721 &

ksh NzRunJob.ksh MICRO\_SEGMENT S\_Micro\_Segment\_Batch\_Bonus\_Card 8621 &

ksh NzRunJob.ksh MICRO\_SEGMENT S\_Micro\_Segment\_Batch\_Bonus\_Card 8521 &

ksh NzRunJob.ksh MICRO\_SEGMENT S\_Micro\_Segment\_Batch\_Bonus\_Card 8421 &

ksh NzRunJob.ksh MICRO\_SEGMENT S\_Micro\_Segment\_Batch\_Bonus\_Card 8321 &

ksh NzRunJob.ksh MICRO\_SEGMENT S\_Micro\_Segment\_Batch\_Bonus\_Card 8221 &

ksh NzRunJob.ksh MICRO\_SEGMENT S\_Micro\_Segment\_Batch\_Bonus\_Card 8121 &

ksh NzRunJob.ksh MICRO\_SEGMENT S\_Micro\_Segment\_Batch\_Bonus\_Card 8021 &

ksh NzRunJob.ksh MICRO\_SEGMENT S\_Micro\_Segment\_Batch\_Bonus\_Card 7521 &

ksh NzRunJob.ksh MICRO\_SEGMENT S\_Micro\_Segment\_Batch\_Bonus\_Card 7021 &

ksh NzRunJob.ksh MICRO\_SEGMENT S\_Micro\_Segment\_Batch\_Bonus\_Card 6521 &

ksh NzRunJob.ksh MICRO\_SEGMENT S\_Micro\_Segment\_Batch\_Bonus\_Card 6021 &

ksh NzRunJob.ksh MICRO\_SEGMENT S\_Micro\_Segment\_Batch\_Bonus\_Card 5521 &

ksh NzRunJob.ksh MICRO\_SEGMENT S\_Micro\_Segment\_Batch\_Bonus\_Card 5021 &

ksh NzRunJob.ksh MICRO\_SEGMENT S\_Micro\_Segment\_Batch\_Bonus\_Card 4521 &

ksh NzRunJob.ksh MICRO\_SEGMENT S\_Micro\_Segment\_Batch\_Bonus\_Card 4021 &

ksh NzRunJob.ksh MICRO\_SEGMENT S\_Micro\_Segment\_Batch\_Bonus\_Card 3521 &

ksh NzRunJob.ksh MICRO\_SEGMENT S\_Micro\_Segment\_Batch\_Bonus\_Card 3021 &

ksh NzRunJob.ksh MICRO\_SEGMENT S\_Micro\_Segment\_Batch\_Bonus\_Card 2021 &

ksh NzRunJob.ksh MICRO\_SEGMENT S\_Micro\_Segment\_Batch\_Bonus\_Card 1021 &

**Circles** -> Only one circle at once

**Source Table ->** DP\_VEDW.ACCOUNT\_ADJUSTMENT, D\_TEMP\_OPS.DIM\_RCH\_PRODUCT\_MASTER\_MMFA,  
DP\_VEDW.ADJUSTMENT\_REASON

**Target Table ->** SBSCRBR\_BONUS\_CARD\_HISTORY

**Audit Table Query->**

select \* from MICRO\_SEGMENT\_BATCH\_AUDIT

WHERE BATCH\_NAME LIKE 'S\_Micro\_Segment\_Batch\_Bonus\_Card'

AND JOB\_STATUS LIKE 'S'

AND EXECUTION\_ID = (SELECT MAX(cast(EXECUTION\_ID as INTEGER)) FROM MICRO\_SEGMENT\_BATCH\_AUDIT

WHERE BATCH\_NAME LIKE 'S\_Micro\_Segment\_Batch\_Bonus\_Card'

AND JOB\_STATUS LIKE 'S')

**Stat table Query ->**

select \* from MICRO\_SEGMENT\_BATCH\_STAT where table\_name like 'SBSCRBR\_BONUS\_CARD\_HISTORY'

and date\_skey=20150301 order by circle

**Validation Query ->**

**SELECT** base\_circle, COUNT(\*)

**FROM**

(

**SELECT** ACCOUNT\_ID SUBS\_ID,BC\_TYPE,10 Base\_circle,20150301 DATE\_SKEY

**FROM**(

**SELECT**

A.ACCOUNT\_ID,

B.BC\_TYPE

**FROM** DP\_VEDW.ACCOUNT\_ADJUSTMENT A,

DP\_VEDW.ADJUSTMENT\_REASON C ,

(**SELECT** MRP,(**CASE** **WHEN** (UPPER(B.PRODUCT\_TYPE) **LIKE** ('%3G%') **OR** UPPER(B.PRODUCT\_TYPE) **LIKE** ('%2G%') **OR** UPPER(B.PRODUCT\_TYPE) **LIKE** ('%DATA%') **OR** UPPER(B.PRODUCT\_TYPE) **LIKE** ('%BLACKBERRY%')) **THEN** 'DATA'

**WHEN** (UPPER(B.PRODUCT\_TYPE) **LIKE** ('%SMS%')) **THEN** 'SMS' **ELSE** 'VOICE' **END**) BC\_TYPE **FROM** D\_TEMP\_OPS.DIM\_RCH\_PRODUCT\_MASTER\_MMFA B

**WHERE** UPPER(B.PRODUCT\_TYPE) **NOT** **IN**

('NULL','2ND\_RECH','CHOTA','CHOTA RECHARGE','CHOTA TT','CHOTTA','COMBO','COMBO FRC','FR','FRC','FRC FTT','FTT','FULL TALK TIME','HERO RECHARGE','INTERNATIONAL ROAMING','MFTT','OTHERS','PCO','PLAN VOUCHER','PV','ROAM','ROAM BC','ROAM FTT','ROAM NAT BC','ROAM NAT PV','ROAM PV','ROAM\_RTP','ROAM\_RTP FR','ROAMING','ROAMING RECHARGES','SEGMENTED FTT','SEGTMENTED TT','TALKTIME','TALK-TIME','TOP UP','TT','UNKNOWN','VALIDITY TTT')

**AND** CIRCLE\_ID=10 **GROUP** **BY** 1,2) B

**WHERE** A.SOURCE\_SYSTEM\_CODE=1020

**AND** ADJUSTMENT\_DT **BETWEEN** '2015-03-01' **AND** '2015-03-31'

**AND** A.ADJUSTMENT\_AMT=B.MRP

**AND** A.ADJUSTMENT\_RESN\_CD = C.ADJUSTMENT\_RESN\_CD

**AND** A.SOURCE\_SYSTEM\_CODE = C.SOURCE\_SYSTEM\_CODE

**AND** C.SOURCE\_SYSTEM\_CODE=1020

**AND** A.adjustment\_type\_cd=3

**AND** (UPPER(C.ADJUSTMENT\_RESN\_DESC) **LIKE** ('%PROMO%') **OR** UPPER(C.ADJUSTMENT\_RESN\_DESC) **LIKE** ('%USSD%')

**OR** UPPER(C.ADJUSTMENT\_RESN\_DESC) **LIKE** ('%BC%'))

**AND** UPPER(C.ADJUSTMENT\_RESN\_DESC) **NOT** **LIKE** ('%DNLD%')

**UNION**

**SELECT** A.ACCOUNT\_ID,

'DATA' BC\_TYPE

**FROM** DP\_VEDW.ACCOUNT\_ADJUSTMENT A,

DP\_VEDW.ADJUSTMENT\_REASON C

**WHERE** A.SOURCE\_SYSTEM\_CODE=1020

**AND** ADJUSTMENT\_DT **BETWEEN** '2015-03-01' **AND** '2015-03-31'

**AND** A.ADJUSTMENT\_RESN\_CD = C.ADJUSTMENT\_RESN\_CD

**AND** A.SOURCE\_SYSTEM\_CODE = C.SOURCE\_SYSTEM\_CODE

**AND** C.SOURCE\_SYSTEM\_CODE=1020

**AND** A.adjustment\_type\_cd=3

**AND** UPPER(C.ADJUSTMENT\_RESN\_DESC) **LIKE** ('%R.%')

)A

**GROUP** **BY** 1,2

) sub

**GROUP** **BY** base\_circle

**3) S\_Micro\_Segment\_Batch\_International\_Roaming**

**Command to run ->**

ksh NzRunJob.ksh MICRO\_SEGMENT S\_Micro\_Segment\_Batch\_International\_Roaming 9521 &

ksh NzRunJob.ksh MICRO\_SEGMENT S\_Micro\_Segment\_Batch\_International\_Roaming 9021 &

ksh NzRunJob.ksh MICRO\_SEGMENT S\_Micro\_Segment\_Batch\_International\_Roaming 8821 &

ksh NzRunJob.ksh MICRO\_SEGMENT S\_Micro\_Segment\_Batch\_International\_Roaming 8721 &

ksh NzRunJob.ksh MICRO\_SEGMENT S\_Micro\_Segment\_Batch\_International\_Roaming 8621 &

ksh NzRunJob.ksh MICRO\_SEGMENT S\_Micro\_Segment\_Batch\_International\_Roaming 8521 &

ksh NzRunJob.ksh MICRO\_SEGMENT S\_Micro\_Segment\_Batch\_International\_Roaming 8421 &

ksh NzRunJob.ksh MICRO\_SEGMENT S\_Micro\_Segment\_Batch\_International\_Roaming 8321 &

ksh NzRunJob.ksh MICRO\_SEGMENT S\_Micro\_Segment\_Batch\_International\_Roaming 8221 &

ksh NzRunJob.ksh MICRO\_SEGMENT S\_Micro\_Segment\_Batch\_International\_Roaming 8121 &

ksh NzRunJob.ksh MICRO\_SEGMENT S\_Micro\_Segment\_Batch\_International\_Roaming 8021 &

ksh NzRunJob.ksh MICRO\_SEGMENT S\_Micro\_Segment\_Batch\_International\_Roaming 7521 &

ksh NzRunJob.ksh MICRO\_SEGMENT S\_Micro\_Segment\_Batch\_International\_Roaming 7021 &

ksh NzRunJob.ksh MICRO\_SEGMENT S\_Micro\_Segment\_Batch\_International\_Roaming 6521 &

ksh NzRunJob.ksh MICRO\_SEGMENT S\_Micro\_Segment\_Batch\_International\_Roaming 6021 &

ksh NzRunJob.ksh MICRO\_SEGMENT S\_Micro\_Segment\_Batch\_International\_Roaming 5521 &

ksh NzRunJob.ksh MICRO\_SEGMENT S\_Micro\_Segment\_Batch\_International\_Roaming 5021 &

ksh NzRunJob.ksh MICRO\_SEGMENT S\_Micro\_Segment\_Batch\_International\_Roaming 4521 &

ksh NzRunJob.ksh MICRO\_SEGMENT S\_Micro\_Segment\_Batch\_International\_Roaming 4021 &

ksh NzRunJob.ksh MICRO\_SEGMENT S\_Micro\_Segment\_Batch\_International\_Roaming 3521 &

ksh NzRunJob.ksh MICRO\_SEGMENT S\_Micro\_Segment\_Batch\_International\_Roaming 3021 &

ksh NzRunJob.ksh MICRO\_SEGMENT S\_Micro\_Segment\_Batch\_International\_Roaming 2021 &

ksh NzRunJob.ksh MICRO\_SEGMENT S\_Micro\_Segment\_Batch\_International\_Roaming 1021 &

**Circles** -> Only one circle at once

**Source Table ->** DP\_VEDW.ACCOUNT\_ADJUSTMENT,   
DP\_VEDW.ACCOUNT\_SUBSCRIPTION\_HISTORY,  
DP\_VEDW.ADJUSTMENT\_REASON  
DP\_BEDW.LKP\_ROAMING\_PACK\_MASTER

**Target Table ->** SUBS\_NAT\_INTL\_PACK\_USR

**Audit Table Query->**

select \* from MICRO\_SEGMENT\_BATCH\_AUDIT

WHERE BATCH\_NAME LIKE 'S\_Micro\_Segment\_Batch\_International\_Roaming'

AND trim(JOB\_STATUS) LIKE 'S'

AND EXECUTION\_ID = (SELECT MAX(cast(EXECUTION\_ID as INTEGER)) FROM MICRO\_SEGMENT\_BATCH\_AUDIT

WHERE trim(BATCH\_NAME) LIKE 'S\_Micro\_Segment\_Batch\_International\_Roaming'

AND trim(JOB\_STATUS) LIKE 'S')

**Stat table Query ->**

select \* from MICRO\_SEGMENT\_BATCH\_STAT where <table\_name>

like 'SUBS\_NAT\_INTL\_PACK\_USR'

and date\_skey=20150301 order by circle

**Validation Query ->**

**SELECT** base\_circle,COUNT(\*)

**FROM**

(

**SELECT**

C.SUBS\_ID SUBS\_ID,

10 BASE\_CIRCLE,

20150301 DATE\_SKEY ,

NATIONAL\_INTERNATIONAL

**FROM**

DP\_VEDW.ACCOUNT\_ADJUSTMENT AA

**INNER** **JOIN**

DP\_VEDW.ADJUSTMENT\_REASON AR

**ON** AA.ADJUSTMENT\_RESN\_CD=AR.ADJUSTMENT\_RESN\_CD

**AND** AA.SOURCE\_SYSTEM\_CODE=AR.SOURCE\_SYSTEM\_CODE

**INNER** **JOIN**

DP\_VEDW.ACCOUNT\_SUBSCRIPTION\_HISTORY C

**ON** AA.ACCOUNT\_ID=C.ACCOUNT\_ID

**AND** AA.SOURCE\_SYSTEM\_CODE=C.SOURCE\_SYSTEM\_CODE

**INNER** **JOIN**

DP\_BEDW.LKP\_ROAMING\_PACK\_MASTER D

**ON** AA.SOURCE\_SYSTEM\_CODE/100=D.CIRCLE\_CODE

**AND** AR.ADJUSTMENT\_RESN\_DESC=D.PACK\_NAME

**AND** D.PACK\_NAME <> 'UNKNOWN'

**WHERE** AA.SOURCE\_SYSTEM\_CODE **IN**(1020,1040)

**AND** AA.ADJUSTMENT\_DT **BETWEEN** '2015-03-01' **AND**'2015-03-31'

**AND** AA.ADJUSTMENT\_TYPE\_CD=3

**AND** C.ACCOUNT\_SUBS\_END\_DT > '2015-03-01'

**AND** D.STATUS='A'

**UNION** **ALL**

**SELECT**

SUBS\_ID,

10 BASE\_CIRCLE,

20150301 DATE\_SKEY,

NATIONAL\_INTERNATIONAL

**FROM**

DP\_VEDW.SUBSCRIPTION\_REFILL\_HISTORY A

**INNER** **JOIN**

DP\_BEDW.LKP\_ROAMING\_PACK\_MASTER B

**ON** A.MRP=B.MRP

**AND** ( B.TALKTIME = COALESCE(A.SUBS\_REFILL\_AMT,0) **OR** B.TALKTIME = COALESCE(A.SUBS\_REFILL\_FACE\_VAL,0) )

**AND** A.SOURCE\_SYSTEM\_CODE/100=B.CIRCLE\_CODE

**WHERE** A.SOURCE\_SYSTEM\_CODE **IN** (1020,1040)

**AND** A.SUBS\_REFILL\_MODE\_CD=1

**AND** B.STATUS='A'

**AND** RECHARGE\_TYPE **LIKE** '%ETOP%'

**AND** A.SUBS\_REFILL\_DT **BETWEEN** '2015-03-01' **AND**'2015-03-31'

) sub

**GROUP** **BY** base\_circle

**Re-startability ->**

In case of failure, if batch is to be restarted from last failed job onwards then delete .par file from restart folder and again run the sequence.

In case if batch is to be restarted from first job, then delete all files from restart folder and also compile the sequence.

**Files getting generated in restart folder->**

.par file, .err file, .running file, .log file

**Reports with objective of report, Maker Checker, frequency of report ,**

**distribution list , format of report etc.**

1. Daily Stats Report
   1. Objective – daily loading of all MMFA dimensions and facts & Microsegmentation.
   2. Also migration of data from production to analytics server.
   3. Maker – Person in shift
   4. Checker – BI Team
   5. Frequency – Daily
   6. Distribution List – TBO - BI

#### Service Level Agreements

* **System Availability**. e.g. The servers must be available 24X7 days a week.
* **Recovery Time**. e.g. In the event of a disaster, the systems should be back up and running within one day.
* **Performance**. e.g. Transaction response time should not exceed 1 Hr.

**SOX compliance controls and documentation wherever applicable**

-Raise RFC to make any changes in Production Server

**BRM (Business Review Meetings) review process and frequency**

-Meetings are held in case of major change or issues

**Upstream Partners :**

|  |  |  |  |
| --- | --- | --- | --- |
| **Level** | **Name** | **Contact Number** | **Email Id** |
| 1 | Usage Team | 020-67061529 | velbiops@in.ibm.com |
| 2 | MI Team | 020-67061517 | velbisas@in.ibm.com |
| 3 | Non-Usage Team | 020-67061527 | velbiops@in.ibm.com |

Source Feeds Details :

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Level** | **Name** | **Feed SLA timing** | **Contact Number** | **Email Id** |
| 1 | Usage | 7.30 AM | 020-67061529 | velbiops@in.ibm.com |
| 2 | Non Usage | 7.30 AM | 020-67061527 | velbiops@in.ibm.com |
| 3 | MI Team | 7.30 AM | 020-67061517 | velbisas@in.ibm.com |

Downstream Team Details :

|  |  |  |  |
| --- | --- | --- | --- |
| **Level** | **Name** | **Contact Number** | **Email Id** |
| 1 | Cognos | 020-41475402 | [vilbmmfa@in.ibm.com](mailto:vilbmmfa@in.ibm.com) |

# 6.Risks and Issues

The following risks and issues have been identified in the application:

| No | Description of Risk / Issue | Mitigation |
| --- | --- | --- |
| 1 | Trend Issues | Post Loading the trends have to be validated by the team |
| 2 | Loading Issues | Team has been instructed to monitor and validate the loading process |
| 3 | Data issues | Post loading validations have to be done to eradicate Data Issues |

## External Dependencies

The following external dependencies have been identified for this application:-

| No | Description of Dependency | Mitigation |
| --- | --- | --- |
| 1 | Files receiving from Olympus and from circles. | Team inform the Business user about the delay and coordinate with Olympus and circle team to deliver the data on time. |

# Document details

## Filename & location

*<SOP\_TBO\_BI>*

Document references -

|  |  |  |  |
| --- | --- | --- | --- |
| Appl Name | Doc Name | Ver No. | URL/Doc Location |
| *MMFA\_SOP* | *Standard Operating Procedure - SOP MMFA Team* | 1.0 | IBM Team Room |

## Sign-offs

Sign Offs

|  |  |  |  |
| --- | --- | --- | --- |
| Application Name | Role and Area (VIL & IBM) | Name | Acceptance |
| MMFA SOP V.0.1 | IBM | Bhuwnesh Kumar (IBM) | Email required |
| MMFA SOP V.1.0 | VIL | Rajender Shekhawat (COR) | Email required |
|  |  |  |  |
|  |  |  |  |

## Circulation and Reviews

|  |  |  |  |
| --- | --- | --- | --- |
| Application Name | Review Date | Name | Review comments  *Page/Section/Heading - Comment* |
| MMFA Operations |  | Bhuwnesh Kumar (IBM) |  |
| MMFA Operations |  | Rajender Shekhawat (COR) | Change In Alignment & Standards |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |

End of Document