

HP Mobile Subscriber Activation Solution Pack v7.0.0

Services Specifications



Legal Notices

Warranty

Hewlett-Packard makes no warranty of any kind with regard to this manual, including, but not limited to, the implied warranties of merchantability and fitness for a particular purpose. Hewlett-Packard shall not be held liable for errors contained herein or direct, indirect, special, incidental or consequential damages in connection with the furnishing, performance, or use of this material.

A copy of the specific warranty terms applicable to your Hewlett-Packard product can be obtained from your local Sales and Service Office.

Restricted Rights Legend

Use, duplication or disclosure by the U.S. Government is subject to restrictions as set forth in subparagraph (c)(1)(ii) of the Rights in Technical Data and Computer Software clause in DFARS 252.227-7013.

Hewlett-Packard Company United States of America.

Rights for non-DOD U.S. Government Departments and Agencies are as set forth in FAR 52.227-19(c)(1,2).

Copyright Notices

©Copyright 2001-2010 Hewlett-Packard Development Company, L.P., all rights reserved.

No part of this document may be copied, reproduced, or translated to another language without the prior written consent of Hewlett-Packard Company. The information contained in this material is subject to change without notice.

Trademark Notices

Java™ is a U.S. trademark of Oracle®.

Linux is a U.S. registered trademark of Linus Torvalds

Microsoft® is a U.S. registered trademark of Microsoft Corporation.

Oracle® is a registered U.S. trademark of Oracle Corporation, Redwood City, California.

UNIX® is a registered trademark of the Open Group.

Windows® and MS Windows® are U.S. registered trademarks of Microsoft Corporation.

All other product names are the property of their respective trademark or service mark holders and are hereby acknowledged.

Table of Contents

1 Introduction	7
2 Service Specification	8
2.1 EMA services	8
2.1.1 HLR	8
2.1.2 AUC.....	41
2.1.3 EIREQU	48
2.2 HSS services	55
2.2.1 HSS (4G).....	55
2.3 Voice Mail service	69
2.3.1 Voice Mail Create Subscriber Operation	69
2.3.2 Voice Mail Delete Subscriber Operation	74
2.3.3 Voice Mail Set Subscriber Operation	76
2.3.4 Voice Mail Query Subscriber Operation.....	81
2.3.5 Voice Mail Error Management.....	86
2.4 Missed Call Alerts (MCA) service	87
2.4.1 MCA Create Subscriber Operation	87
2.4.2 MCA Delete Subscriber Operation.....	90
2.4.3 MCA Set Subscriber Operation	92
2.4.4 MCA Query Subscriber Operation.....	95
2.4.5 MCA Error Management	97
2.5 Service Manager Service.....	98
2.5.1 SM AddService	98
2.5.2 SM AssociatePortal	100
2.5.3 SM AttachNewPage.....	102
2.5.4 SM DeleteService.....	104
2.5.5 SM DeleteAttachedPage	105
2.5.6 SM UnlockService.....	107
2.5.7 SM SwitchPortal.....	109
2.5.8 SM GetMenu.....	110
2.5.9 SM GetTransactionStatus	112
2.5.10 SM GetAvailableServices.....	114
2.5.11 SM GetAvailableAttachmentPages	116
2.5.12 SM Error Management	118
2.6 Device Manager Service	119
2.6.1 DM ActivateSubscriber	119
2.6.2 DM AddTac	121
2.6.3 DM LinkToGroup	122
2.6.4 DM DeactivateSubscriber.....	124
2.6.5 DM UnlinkToGroup	125
2.6.6 DM UpdateModelOfSubscriber	127
2.6.7 DM CheckInvocation	128
2.6.8 DM SendSettingSets	131
2.6.9 DM SendAllSettingSets	133
2.6.10 DM SendAllSettingSetsBR.....	135
2.6.11 DM DownloadHandsetConfig.....	136
2.6.12 DM GetSettingsSet	138
2.6.13 DM GetHistory	139
2.6.14 DM GetHistoryMSISDN	141
2.6.15 DM GetHistoryIMEI	143
2.6.16 DM RequestDMProvision.....	145
2.6.17 DM GetExtraHandsetCapabilities.....	147
2.6.18 DM GetHandsetCapabilities.....	150
2.6.19 DM Error Management.....	152

2.7 OTA Service	153
2.7.1 OTA ChangeMSISDN	153
2.7.2 OTA NewMSISDN.....	155
2.7.3 OTA GenericCardUpdate	157
2.7.4 OTA DeleteSimCard.....	159
2.7.5 OTA DeactivateSimCard.....	161
2.7.6 OTA DeleteApplet.....	163
2.7.7 OTA DownloadApplet	165
2.7.8 OTA GetSubscriber	166
2.7.9 OTA GetApplets	169
2.7.10 OTA GetMaxADNs.....	171
2.7.11 OTA GetMaxadnNameLength	173
2.7.12 OTA Error Management	174
2.8 OTA Backup Service	175
2.8.1 OTA Backup startBackup	175
2.8.2 OTA Backup startRestore	176
2.8.3 OTA Backup startSynchronization	178
2.8.4 OTA Backup requestBackup	179
2.8.5 OTA Backup requestRestore	180
2.8.6 OTA Backup requestSynchronization.....	182
2.8.7 OTA Backup createContact	183
2.8.8 OTA Backup updateContact.....	185
2.8.9 OTA Backup deleteContact	187
2.8.10 OTA Backup getContacts.....	188
2.8.11 OTA Backup getLastTransactions	190
2.8.12 OTA Backup getCurrentTransaction.....	191
2.8.13 OTA Backup deleteSubscriber	193
2.8.14 OTA Backup changeMsisdn	195
2.8.15 OTA Error Management	196
2.9 SDP Service	197
2.9.1 SDP Create Subscriber	200
2.9.2 SDP Delete Subscriber	201
2.9.3 SDP Set Subscriber.....	202
2.9.4 SDP Change MSISDN	204
2.9.5 SDP Error Management	205
2.10 MNP Service.....	206
2.10.1 MNP Create Subscriber Operation	206
2.10.2 MNP Delete Subscriber Operation.....	208
2.10.3 MNP Set Subscriber Operation	209
2.10.4 MNP Get Subscriber Operation.....	210
2.10.5 MNP Error Management.....	211
2.11 PTT (Push to talk) Service	214
2.11.1 Create Subscriber	214
2.11.2 Create Corporate Profile.....	215
2.11.3 Create Corporate Administrator.....	216
2.11.4 Delete Subscriber.....	217
2.11.5 Delete Corporate Profile	218
2.11.6 Delete Corporate Administrator	219
2.11.7 Update Subscriber	220
2.11.8 Change MSISDN	221
2.11.9 Deactivate Subscriber.....	222
2.11.10 Activate Subscriber	223
2.11.11 Reset Subscriber Password	224
2.11.12 Synchronize HandSet.....	225
2.11.13 Update Corporate Profile.....	226
2.11.14 Update Corporate Administrator.....	227

- 2.11.15 Reset Administrator Password 228
- 2.11.16 Get Subscriber Details 229
- 2.11.17 Get Subscriber Group Details 232
- 2.11.18 Get Subscriber Contact Group Details 233
- 2.11.19 Get Subscriber Group Details 235
- 2.11.20 Get All Administrator Accounts 236
- 2.11.21 PTT Error Management 237
- 2.12 RIM Blackberry Service 242
 - 2.12.1 RIMBLACKBERRY Active Subscriber Operation 242
 - 2.12.2 RIMBLACKBERRY Cancel Subscriber Operation 243
 - 2.12.3 RIMBLACKBERRY Resume Subscriber Operation 244
 - 2.12.4 RIMBLACKBERRY Suspend Subscriber Operation 245

In This Guide

This guide contains a technical description of all the services includes off-the-shelf in MSA 7.0.0. For each service there is defined the parameters need in the northbound interface to activated it as well as the parameters returned by each invocation. Also is defined the error management offers off-the-shelf for each service.

This guide could be considering as an appendix of the Delivery Guide.

Audience

The audience for this guide is the Solutions Integrator (SI).

References

Manuals for HP Mobile Subscriber Activation SP v7.0.0:

- HP Mobile Subscriber Activation SP v7.0.0 – User’s Guide
- HP Mobile Subscriber Activation SP v7.0.0 – Delivery Guide

1 Introduction

This document provided a detailed specification for the services included in the version 7.0.0 of MSA. This document should be used as a reference to analyze the definition of the service in MSA. Here the user can find the input parameters that need to use to invoke each operation of services as well as the output parameters that MSA is going to return as response of the user request in the northbound interface.

For each Service's parameters is defined the format expected, is specified if the parameter is mandatory or not, and is specified if there is a default value defined for this parameters.

Also for each service there is a section named Error management where are defined the error managed by each target, as well as the translation apply by default in MSA.

2 Service Specification

This section contains detailed technical information about the services included in the MSA. It should be take a reference to understand how to manage each service.

The next bullet described the implementation of each of these services. This description includes the parameters defined in the northbound interface for each service as well as the response for each request, also is included the error management implemented for each service.

2.1 EMA services

All the services described in this subsection are activated through EMA system of Ericsson.

The services activated through EMA are:

- HLR, for the voice and data subscription information.
- AUC, for the SIM provisioning.
- EIRQ, for the terminal registration.

2.1.1 HLR

Next table explains all the parameters manage by the Ericsson HLR.

The parameter name column indicates the name of the parameter in the north bound interface, in the following section are described the parameters used for each operation for this service.

The mandatory column specify if this parameter is must be on the command or not.

The description column explains the meaningful of each parameter.

Parameter Name	Mandatory	Description
MSISDN	Yes	A Mobile Subscriber Integrated Services Digital Network-Number is a number uniquely identifying a subscription in a mobile network.
IMSI	Yes	An International Mobile Subscriber Identity is a unique identification associated with all GSM, UMTS and LTE network mobile phone users.
PROFILE	Yes	Internal parameters defined in EMA, which can include all the subscription information except passwords. For the supplementary services only the provision state can be set.
CALL_WAITING	No	Call Waiting. Notifies a subscriber of an incoming call while on another call.
CATEGORY	No	Subscriber category
SUBSCRIPTION_TYPE	No	Subscription type
CAMEL_PROFILE	No	Camel Subscription Profile. 0= No profile. The availability of this parameter value depends on commercial agreements.
INCOMING_CALLS	No	All incoming calls

OUTGOING_CALLS	No	All outgoing calls
NETWORK_ACCESS_MODE	No	Network access mode
ROAMING_AREA	No	Roaming service area
SCHAR	No	GPRS Subscriber charging characteristic
CALL_HOLD	No	Call hold
MULTIPARTY	No	Multiparty service
BASIC_GROUP_SERVICE	No	Default Basic Service Group
ADITIONAL_NUMBER	No	Additional MSISDN
PERSONAL_RING_TONE	No	Personal Ring Back Tone
GPRS_PROFILE	No	GPRS Profile Value
ORIGIN_FORWARDED_ANALYSIS	No	Origin For Forwarded-to Number Analysis
Line Identification Services		
CALLING_LINE_IDENTIFICATION_PRESENTATION	No	Calling Line Identification Presentation
CALLING_LINE_IDENTIFICATION_RESTRICTION	No	Calling Line Identification Restriction
CONNECTED_LINE_IDENTIFICATION_PRESENTATION	No	Connected Line identification Presentation
CONNECTED_LINE_IDENTIFICATION_RESTRICTION	No	Connected Line Identification Restriction
Call Forwarding Services		
CALLFORWARDING_BUSY	No	Call Forwarding on mobile subscriber Busy
CFB_NUMBER		
CALLFORWARDING_NOTREACHABLE	No	Call Forwarding on mobile subscriber Not Reachable
CFNRC_NUMBER		
CALLFORWARDING_NOTREPLAY	No	Call Forwarding on No Reply
CFNRY_NUMBER		
CALLFORWARDING_UNCONDITIONAL	No	Call Forwarding Unconditional
CFU_NUMBER		
DEFAULT_CALL_FORWARDING	No	Default Call Forwarding
DCF_NUMBER		

	No	Single Personal Number
Barring Services		
BARRING_ALL_INCOMING_CALL	No	Barring of All Incoming Calls
BARRING_ALL_OUTGOING_CALL	No	Barring of All Outgoing Calls
	No	Barring of All Incoming Calls when Roaming Outside the home PLMN country
	No	Barring of All Outgoing International Calls
	No	Barring of All Outgoing International Calls Except those directed to the Home PLMN country
HPLMN_BARRING_TYPE1	No	Specific Barring in HPLMN (Home Public Land Mobile Network) (Type 1)
HPLMN_BARRING_TYPE2	No	Specific Barring in HPLMN (Type 2)
HPLMN_BARRING_TYPE3	No	Specific Barring in HPLMN (Type 3)
HPLMN_BARRING_TYPE4	No	Specific Barring in HPLMN (Type 4)
BARRING_SERVICES_ROAMING	No	Barring Service for Roaming

2.1.1.1 HLR Create Subscriber Operation

The next table has the input parameters defined for this service in the Service Catalog. These are the parameters that need to be sent to the MSA northbound interface to activate this service.

The means of each column in this table is:

- Name: Name of the parameter in the northbound interface.
- Type: Type of the parameters.
- Format: is a regular expression used to validate the value of the parameter, if the value received in the northbound interfaces does not match this regular expression an error will be returned indicating the error.
- Mandatory: indicates is the parameters is mandatory for this service.
- Default Value: indicate a default value set for this parameters is case that it is not received in the service request.

INPUT				
Name	Type	Format	Mandatory	Default Value
MSISDN	String	\d{5,15}	Yes	
IMSI	String	\d{15}	Yes	
PROFILE	String	[0-9][0-9] [0-9] [0-1][0-9]*[0-9]* 2[0-5][0-5]	Yes	
GPRS_PROFILE	String	1[0-9]*[0-9]* 2[0-5][0-5]	No	
CAMEL_PROFILE	String	1[0-9]*[0-9]* 2[0-5][0-5]	No	0
CALL_WAITING	String	[0-1]	No	1

CATEGORY	String	[0-9] [0-1][03]* 15 22[4-9] 23[0-9] 24[0-9] 25[0-4]	No	
SUBSCRIPTION_TYPE	String	[0-9][0-9] [0-9] [0-1][0-2]*[0-7]*	No	
INCOMING_CALLS	String	[0-2]	No	1
OUTGOING_CALLS	String	[0-4]	No	1
NETWORK_ACCESS_MODE	String	[0-2]	No	0
ROAMING_AREA	String	[0-9][0-9] [0-9] [0-1][0-1]*[0-9]* 12[0-8]	No	
GRPS_SUB_CHARGING_CHARACTERISTIC	String	([0-9] 1[0-5])(-[0-3][0-9]*[0-9]*[0-9]* 40[0-9][0-5])*	No	
CALL_HOLD	String	[0-1]	No	1
MULTIPARTY	String	[0-1]	No	
ADDITIONAL_NUMBER	String	\d{5,15}	No	
PERSONAL_RING_TONE	String	[0-1]	No	
BASIC_GROUP_SERVICE	String	[1 3 5 6]	No	
ORIGIN_FORWARDED_ANALYSIS	Integer	From 0 to 511	No	
DEFAULT_CALL_FORWARDING	String	[0-1]	No	0
DCF_NUMBER	String		No	
CALLFORWARDING_UNCONDITIONAL	String	[0-1]	No	0
CFU_NUMBER	String		No	
CALLFORWARDING_NOTREPLAY	String	[0-1]	No	0
CFNRY_NUMBER	String		No	
CALLFORWARDING_NOTREACHABLE	String	[0-1]	No	0
CFNRC_NUMBER	String		No	
CALLFORWARDING_BUSY	String	[0-1]	No	0
CFB_NUMBER	String		No	
BARRING_ALL_OUTGOING_CALL	String	[0-1]	No	0
BARRING_ALL_INCOMING_CALL	String	[0-1]	No	0
CALLING_LINE_IDENTIFICATION_PRESENTATION	String	[0-1]	No	1
CALLING_LINE_IDEN	String	[0-1]	No	1

TIFICATION_RESTRICTION				
CONNECTED_LINE_IDENTIFICATION_PRESSENTATION	String	[0-1]	No	1
CONNECTED_LINE_IDENTIFICATION_RESTRICTION	String	[0-1]	No	1
BARRING_SERVICES_ROAMING	String	[0-9][0-9]*	No	
HPLMN_BARRING_TYPE1	String	[0-1]	No	1
HPLMN_BARRING_TYPE2	String	[0-1]	No	1
HPLMN_BARRING_TYPE3	String	[0-1]	No	1
HPLMN_BARRING_TYPE4	String	[0-1]	No	1
TRANSID	String	\w{1,32}	No	

The next table has the values returned in the northbound interface as a response for this service request.

OUTPUT		
Name	Type	Description
S_SOSA_CODE	String	SOSA internal output, indicated is the was ok or not
S_SOSA_DESCRIPTION	String	SOSA internal description
S_CODE	String	Represent the output code returned by this action
S_DESCRIPTION	String	Represent the output description for this action
NE_CODE	String	Code returned by the target
NE_DESCRIPTION	String	Description returned by the target
NE_OUTPUT	String	Exactly output returned by the target
NE_ACT_TOTAL_TIME	String	Time taken to perform the activation only in the target (in milliseconds)
NETWORKELEMENT	String	Name of the target where the activation have been done
COMMANDS_SENT	String	Command sent to the target
WF_INSTANCE	String	Name of the HPSA workflow manager that executed this action

2.1.1.2 HLR Delete Subscriber Operation

The next table has the input parameters defined for this service in the Service Catalog. These are the parameters that need to be sent to the MSA northbound interface to activate this service.

The means of each column in this table is:

- Name: Name of the parameter in the northbound interface.
- Type: Type of the parameters.

- Format: is a regular expression used to validate the value of the parameter, if the value received in the northbound interfaces does not match this regular expression an error will be returned indicating the error.
- Mandatory: indicates is the parameters is mandatory for this service.
- Default Value: indicate a default value set for this parameters is case that it is not received in the service request.

INPUT				
Name	Type	Format	Mandatory	Default Value
MSISDN	String	\d{5,15}	Yes	
IMSI	String	\d{15}	Yes	
TRANSID	String	\w{1,32}	No	

The next table has the values returned in the northbound interface as a response for this service request.

OUTPUT		
Name	Type	Description
S_SOSA_CODE	String	SOSA internal output, indicated is the was ok or not
S_SOSA_DESCRIPTION	String	SOSA internal description
S_CODE	String	Represent the output code returned by this action
S_DESCRIPTION	String	Represent the output description for this action
NE_CODE	String	Code returned by the target
NE_DESCRIPTION	String	Description returned by the target
NE_OUTPUT	String	Exactly output returned by the target
NE_ACT_TOTAL_TIME	String	Time taken to perform the activation only in the target (in milliseconds)
NETWORKELEMENT	String	Name of the target where the activation have been done
COMMANDS_SENT	String	Command sent to the target
WF_INSTANCE	String	Name of the HPSA workflow manager that executed this action

2.1.1.3 HLR Set Subscriber Operation

The next table has the input parameters defined for this service in the Service Catalog. These are the parameters that need to be sent to the MSA northbound interface to activate this service.

The means of each column in this table is:

- Name: Name of the parameter in the northbound interface.
- Type: Type of the parameters.

- Format: is a regular expression used to validate the value of the parameter, if the value received in the northbound interfaces does not match this regular expression an error will be returned indicating the error.
- Mandatory: indicates is the parameters is mandatory for this service.
- Default Value: indicate a default value set for this parameters is case that it is not received in the service request.

INPUT				
Name	Type	Format	Mandatory	Default Value
MSISDN	String	\d{5,15}	Yes	
IMSI	String	\d{15}	Yes	
PROFILE	String	[0-9][0-9] [0-9] [0-1][0-9]*[0-9]* 2[0-5][0-5]	Yes	
GPRS_PROFILE	String	1[0-9]*[0-9]* 2[0-5][0-5]	No	
CAMEL_PROFILE	String	1[0-9]*[0-9]* 2[0-5][0-5]	No	0
CALL_WAITING	String	[0-1]	No	1
CATEGORY	String	[0-9] [0-1][03]* 15 22[4-9] 23[0-9] 24[0-9] 25[0-4]	No	
SUBSCRIPTION_TYPE	String	[0-9][0-9] [0-9] [0-1][0-2]*[0-7]*	No	
INCOMING_CALLS	String	[0-2]	No	1
OUTGOING_CALL	String	[0-4]	No	1
NETWORK_ACCESS_MODE	String	[0-2]	No	0
ROAMING_AREA	String	[0-9][0-9] [0-9] [0-1][0-1]*[0-9]* 12[0-8]	No	
GRPS_SUB_CHARGING_CHARACTERISTIC	String	([0-9] 1[0-5])(-[0-3][0-9]*[0-9]*[0-9]* 40[0-9][0-5])*	No	
CALL_HOLD	String	[0-1]	No	1
MULTIPARTY	String	[0-1]	No	
ADDITIONAL_NUMBER	String	\d{5,15}	No	
PERSONAL_RING_TONE	String	[0-1]	No	
BASIC_GROUP_SERVICE	String	[1 3 5 6]	No	
ORIGIN_FORWARDED_ANALYSIS	String	From 0 to 511	No	
DEFAULT_CALL_FORWARDING	String	[0-1]	No	0

NG				
DCF_NUMBER	String		No	
CALLFORWARDING_UNCONDITIONAL	String	[0-1]	No	0
CFU_NUMBER	String		No	
CALLFORWARDING_NOTREPLAY	String	[0-1]	No	0
CFNRY_NUMBER	String		No	
CALLFORWARDING_NOTREACHABLE	String	[0-1]	No	0
CFNRC_NUMBER	String		No	
CALLFORWARDING_BUSY	String	[0-1]	No	0
CFB_NUMBER	String		No	
BARRING_ALL_OUTGOING_CALL	String	[0-1]	No	0
BARRING_ALL_INCOMING_CALL	String	[0-1]	No	0
CALLING_LINE_IDENTIFICATION_PRESENTATION	String	[0-1]	No	1
CALLING_LINE_IDENTIFICATION_RESTRICTION	String	[0-1]	No	1
CONNECTED_LINE_IDENTIFICATION_PRESENTATION	String	[0-1]	No	1
CONNECTED_LINE_IDENTIFICATION_RESTRICTION	String	[0-1]	No	1
BARRING_SERVICES_ROAMING	String	[0-9][0-9]*	No	
HPLMN_BARRING_TYPE1	String	[0-1]	No	1
HPLMN_BARRING_TYPE2	String	[0-1]	No	1
HPLMN_BARRING_TYPE3	String	[0-1]	No	1
HPLMN_BARRING_TYPE4	String	[0-1]	No	1
TRANSID	String	\w{1,32}	No	

The next table has the values returned in the northbound interface as a response for this service request.

OUTPUT		
Name	Type	Description
S_SOSA_CODE	String	SOSA internal output, indicated is the was ok or not
S_SOSA_DESCRIPTION	String	SOSA internal description
S_CODE	String	Represent the output code returned by this action
S_DESCRIPTION	String	Represent the output description for this action
NE_CODE	String	Code returned by the target
NE_DESCRIPTION	String	Description returned by the target
NE_OUTPUT	String	Exactly output returned by the target

NE_ACT_TOTAL_TIME	String	Time taken to perform the activation only in the target (in milliseconds)
NETWORKELEMENT	String	Name of the target where the activation have been done
COMMANDS_SENT	String	Command sent to the target
WF_INSTANCE	String	Name of the HPSA workflow manager that executed this action

2.1.1.4 HLR Query Subscriber Operation

The next table has the input parameters defined for this service in the Service Catalog. These are the parameters that need to be sent to the MSA northbound interface to activate this service.

The means of each column in this table is:

- Name: Name of the parameter in the northbound interface.
- Type: Type of the parameters.
- Format: is a regular expression used to validate the value of the parameter, if the value received in the northbound interfaces does not match this regular expression an error will be returned indicating the error.
- Mandatory: indicates is the parameters is mandatory for this service.
- Default Value: indicate a default value set for this parameters is case that it is not received in the service request.

INPUT				
Name	Type	Format	Mandatory	Default Value
MSISDN	String	.[1,25}	Yes	
TRANSID	String	\w{1,32}	No	
IMSI	String	\d{15}	Yes	

The next table has the values returned in the northbound interface as a response for this service request.

OUTPUT		
Name	Type	Description
S_SOSA_CODE	String	SOSA internal output, indicated is the was ok or not
S_SOSA_DESCRIPTION	String	SOSA internal description
S_CODE	String	Represent the output code returned by this action
S_DESCRIPTION	String	Represent the output description for this action
NE_CODE	String	Code returned by the target
NE_DESCRIPTION	String	Description returned by the target

NE_OUTPUT	String	Exactly output returned by the target
NE_ACT_TOTAL_TIME	String	Time taken to perform the activation only in the target (in milliseconds)
NETWORKELEMENT	String	Name of the target where the activation have been done
COMMANDS_SENT	String	Command sent to the target
WF_INSTANCE	String	Name of the HPSA workflow manager that executed this action
MSISDN	String	MSISDN value for this subscription
IMSI	String	IMSI value for this subscription
CALL_WAITING	String	CAW value for this subscription
CATEGORY	String	CAT value for this subscription
SUBSCRIPTION_TYPE	String	STYPE value for this subscription
CAMEL_PROFILE	String	CSP value for this subscription
INCOMING_CALLS	String	OBI value for this subscription
OUTGOING_CALLS	String	OBO value for this subscription
NETWORK_ACCESS_MODE	String	NAM value for this subscription
ROAMING_AREA	String	RSA value for this subscription
GRPS_SUB_CHARGING_CHARATERISTIC	String	SCHAR value for this subscription
CALL_HOLD	String	HOLD value for this subscription
MULTIPARTY	String	MPTY value for this subscription
BASIC_GROUP_SERVICE	String	DBSG value for this subscription
ADITIONAL_NUMBER	String	AMSISDN value for this subscription
PERSONAL_RING_TONE	String	PRBT value for this subscription
GPRS_PROFILE	String	PDPCP value for this subscription
ORIGIN_FORWARDED_ANALYSIS	String	OFA value for this subscription
CALLING_LINE_IDENTIFICATION_PRESENTATION	String	CLIP value for this subscription
CALLING_LINE_IDENTIFICATION_RESTRICTION	String	CLIR value for this subscription
CONNECTED_LINE_IDENTIFICATION_PRESENTATION	String	COLP value for this subscription
CONNECTED_LINE_IDENTIFICATION_RESTRICTION	String	COLR value for this subscription
CALLFORWARDING_BUSY	String	CFB activation value for this subscription
CALLFORWARDING_NOTREACHABLE	String	CFNRC activation value for this subscription
CALLFORWARDING_NOTREPLAY	String	CFNRY activation value for this subscription
CALLFORWARDING_UNCONDITIONAL	String	CFU activation value for this subscription
DEFAULT_CALL_FORWARDING	String	DCF activation value for this subscription
BARRING_ALL_INCOMING_CALL	String	BAIC value for this subscription
BARRING_ALL_OUTGOING_CALL	String	BAOC value for this subscription
HPLMN_BARRING_TYPE1	String	OSB1 value for this subscription
HPLMN_BARRING_TYPE2	String	OSB2 value for this subscription
HPLMN_BARRING_TYPE3	String	OSB3 value for this subscription
HPLMN_BARRING_TYPE4	String	OSB4 value for this subscription
BARRING_SERVICES_ROAMING	String	OBR value for this subscription

2.1.1.5 HLR Error Management

These are the errors returned by the HLR platform and the translation that MSA will applied.

Platform type	Service	Operation	Ne_code	Return_code	Return_description	Action	Number_retrievals	Timeout	Number_exists	Number_not_exists
EMA	HLR	CREATE	1	1	IMSI already defined.	RETURN			1	0
EMA	HLR	CREATE	2	2	MSISDN already defined.	RETURN			0	0
EMA	HLR	SET	2	2	MSISDN already defined.	RETURN			0	0
EMA	HLR	CREATE	3	3	Lack of storage space in subscription data file.	RETURN			0	0
EMA	HLR	CREATE	4	4	Lack of storage space in IMSI analysis file.	RETURN			0	0
EMA	HLR	CREATE	5	5	Lack of storage space in MSISDN analysis file.	RETURN			0	0
EMA	HLR	SET	5	5	Lack of storage space in MSISDN analysis file.	RETURN			0	0
EMA	HLR	CREATE	6	6	Subscriber authentication data not found.	RETURN			0	0
EMA	HLR	CREATE	7	7	No connection to authentication centre.	RETURN			0	0
EMA	HLR	CREATE	8	8	Time out while fetching authentication data.	RETURN			0	0
EMA	HLR	CREATE	9	9	IMSI is prefix of existing IMSI.	RETURN			0	0
EMA	HLR	CREATE	10	10	There is an IMSI prefix of the IMSI.	RETURN			0	0
EMA	HLR	CREATE	11	11	MSISDN is prefix of existing MSISDN.	RETURN			0	0
EMA	HLR	DELETE	11	11	MSISDN is prefix of existing MSISDN.	RETURN			0	0
EMA	HLR	SET	11	11	MSISDN is prefix of existing	RETURN			0	0

					MSISDN.					
EMA	HLR	GET	11	11	MSISDN is prefix of existing MSISDN.	RETURN			0	0
EMA	HLR	DELETE	12	12	There is a MSISDN prefix of the MSISDN.	RETURN			0	0
EMA	HLR	GET	12	12	There is a MSISDN prefix of the MSISDN.	RETURN			0	0
EMA	HLR	DELETE	13	13	IMSI is not defined.	RETURN			0	1
EMA	HLR	GET	13	13	IMSI is not defined.	RETURN			0	1
EMA	HLR	SET	13	13	IMSI is not defined.	RETURN			0	1
EMA	HLR	DELETE	14	14	MSISDN is not defined.	RETURN			0	0
EMA	HLR	GET	14	14	MSISDN is not defined.	RETURN			0	0
EMA	HLR	CREATE	15	15	Subscriber data not recognized.	RETURN			0	0
EMA	HLR	SET	15	15	Subscriber data not recognized.	RETURN			0	0
EMA	HLR	CREATE	16	16	Supplementary service not recognized.	RETURN			0	0
EMA	HLR	SET	16	16	Supplementary service not recognized.	RETURN			0	0
EMA	HLR	CREATE	17	17	Supplementary service not provided.	RETURN			0	0
EMA	HLR	SET	17	17	Supplementary service not provided.	RETURN			0	0
EMA	HLR	CREATE	18	18	Supplementary service not applicable.	RETURN			0	0
EMA	HLR	SET	18	18	Supplementary service not applicable.	RETURN			0	0
EMA	HLR	CREATE	19	19	Forward-to-number restricted.	RETURN			0	0
EMA	HLR	SET	19	19	Forward-to-number restricted.	RETURN			0	0
EMA	HLR	CREATE	25	25	Attribute not applicable.	RETURN			0	0
EMA	HLR	SET	25	25	Attribute not applicable.	RETURN			0	0

EMA	HLR	CREATE	26	26	Forward to number missing.	RETURN			0	0
EMA	HLR	SET	26	26	Forward to number missing.	RETURN			0	0
EMA	HLR	CREATE	27	27	Operation not allowed due to interact.	RETURN			0	0
EMA	HLR	SET	27	27	Operation not allowed due to interact.	RETURN			0	0
EMA	HLR	CREATE	32	32	Subscriber data not applicable.	RETURN			0	0
EMA	HLR	SET	32	32	Subscriber data not applicable.	RETURN			0	0
EMA	HLR	CREATE	33	33	Operation not allowed due to current location.	RETURN			0	0
EMA	HLR	SET	33	33	Operation not allowed due to current location.	RETURN			0	0
EMA	HLR	CREATE	41	41	BSG not subscribed.	RETURN			0	0
EMA	HLR	SET	41	41	BSG not subscribed.	RETURN			0	0
EMA	HLR	CREATE	43	43	BSG not recognized.	RETURN			0	0
EMA	HLR	SET	43	43	BSG not recognized.	RETURN			0	0
EMA	HLR	CREATE	44	44	SS not applicable to specified BSG.	RETURN			0	0
EMA	HLR	SET	44	44	SS not applicable to specified BSG.	RETURN			0	0
EMA	HLR	CREATE	47	47	Subscription limit of numbers reached.	RETURN			0	0
EMA	HLR	SET	47	47	Subscription limit of numbers reached.	RETURN			0	0
EMA	HLR	CREATE	48	48	MSISDN it not an additional MSISDN.	RETURN			0	0
EMA	HLR	SET	48	48	MSISDN it not an additional MSISDN.	RETURN			0	0
EMA	HLR	CREATE	51	51	Storage shortage in data file.	RETURN			0	0
EMA	HLR	SET	51	51	Storage shortage in data file.	RETURN			0	0
EMA	HLR	CREATE	55	55	BC not defined.	RETURN			0	0
EMA	HLR	SET	55	55	BC not defined.	RETURN			0	0

EMA	HLR	CREATE	57	57	BC out of range.	RETURN			0	0
EMA	HLR	SET	57	57	BC out of range.	RETURN			0	0
EMA	HLR	CREATE	61	61	SS not applicable to any subscribed BSG.	RETURN			0	0
EMA	HLR	SET	61	61	SS not applicable to any subscribed BSG.	RETURN			0	0
EMA	HLR	CREATE	62	62	Supplementary service not registered.	RETURN			0	0
EMA	HLR	SET	62	62	Supplementary service not registered.	RETURN			0	0
EMA	HLR	SET	64	64	Change-over not initiated.	RETURN			0	0
EMA	HLR	SET	66	66	Change-over still pending.	RETURN			0	0
EMA	HLR	CREATE	68	68	BC represents a BS not supported.	RETURN			0	0
EMA	HLR	SET	68	68	BC represents a BS not supported.	RETURN			0	0
EMA	HLR	CREATE	73	73	Subscriber disconnection in process.	RETURN			0	0
EMA	HLR	SET	73	73	Subscriber disconnection in process.	RETURN			0	0
EMA	HLR	DELETE	73	73	Subscriber disconnection in process.	RETURN			0	0
EMA	HLR	GET	73	73	Subscriber disconnection in process.	RETURN			0	0
EMA	HLR	CREATE	75	75	Functionality not supported by this exchange.	RETURN			0	0
EMA	HLR	SET	75	75	Functionality not supported by this exchange.	RETURN			0	0
EMA	HLR	CREATE	76	76	Closed user group not applicable to bsg.	RETURN			0	0
EMA	HLR	SET	76	76	Closed user group not applicable to bsg.	RETURN			0	0
EMA	HLR	SET	77	77	Index already defined.	RETURN			0	0
EMA	HLR	SET	78	78	Interlock code already defined.	RETURN			0	0

EMA	HLR	CREATE	79	79	Basic service group included more than once.	RETURN			0	0
EMA	HLR	SET	79	79	Basic service group included more than once.	RETURN			0	0
EMA	HLR	SET	80	80	Updating closed user group data.	RETURN			0	0
EMA	HLR	CREATE	81	81	Closed user group not applicable to any bsg.	RETURN			0	0
EMA	HLR	SET	81	81	Closed user group not applicable to any bsg.	RETURN			0	0
EMA	HLR	CREATE	82	82	Max number of closed user groups reached.	RETURN			0	0
EMA	HLR	SET	82	82	Max number of closed user groups reached.	RETURN			0	0
EMA	HLR	SET	83	83	Basic service group erase not allowed.	RETURN			0	0
EMA	HLR	CREATE	84	84	Index not defined.	RETURN			0	0
EMA	HLR	SET	84	84	Index not defined.	RETURN			0	0
EMA	HLR	CREATE	85	85	MSISDN not defined as closed user group.	RETURN			0	0
EMA	HLR	SET	85	85	MSISDN not defined as closed user group.	RETURN			0	0
EMA	HLR	CREATE	86	86	Bsg not defined within any closed user group.	RETURN			0	0
EMA	HLR	SET	86	86	Bsg not defined within any closed user group.	RETURN			0	0
EMA	HLR	CREATE	87	87	Bsg not defined within a given pcsug.	RETURN			0	0
EMA	HLR	SET	87	87	Bsg not defined within a given pcsug.	RETURN			0	0
EMA	HLR	CREATE	88	88	Pcsug not defined as index.	RETURN			0	0
EMA	HLR	SET	88	88	Pcsug not defined as index.	RETURN			0	0
EMA	HLR	CREATE	89	89	Pcsug not allowed.	RETURN			0	0

EMA	HLR	SET	89	89	Pcsug not allowed.	RETURN			0	0
EMA	HLR	CREATE	96	96	Zone code set not defined.	RETURN			0	0
EMA	HLR	SET	96	96	Zone code set not defined.	RETURN			0	0
EMA	HLR	CREATE	102	102	Odd number of characters in subaddress.	RETURN			0	0
EMA	HLR	SET	102	102	Odd number of characters in subaddress.	RETURN			0	0
EMA	HLR	CREATE	115	115	Restriction not allowed.	RETURN			0	0
EMA	HLR	SET	115	115	Restriction not allowed.	RETURN			0	0
EMA	HLR	SET	116	116	Index erasure not allowed.	RETURN			0	0
EMA	HLR	CREATE	117	117	Collective basic service group not allowed.	RETURN			0	0
EMA	HLR	SET	117	117	Collective basic service group not allowed.	RETURN			0	0
EMA	HLR	CREATE	149	149	No translation defined for the IMSI /Storage shortage in GPRS data file.	RETURN			0	0
EMA	HLR	SET	149	149	No translation defined for the IMSI /Storage shortage in GPRS data file.	RETURN			0	0
EMA	HLR	CREATE	150	150	Storage shortage in MSISDN analysis file for flexible numbering / Storage shortage in PDP context datafile.	RETURN			0	0
EMA	HLR	SET	150	150	Storage shortage in MSISDN analysis file for flexible numbering / Storage shortage in PDP context datafile.	RETURN			0	0
EMA	HLR	CREATE	151	151	Storage shortage in routing data file for flexible numbering /Storage	RETURN			0	0

					shortage in facsimile transmission data file.					
EMA	HLR	SET	151	151	Storage shortage in routing data file for flexible numbering /Storage shortage in facsimile transmission data file.	RETURN			0	0
EMA	HLR	CREATE	152	152	Storage shortage in MSISDN series analysis file.	RETURN			0	0
EMA	HLR	SET	152	152	Storage shortage in MSISDN series analysis file.	RETURN			0	0
EMA	HLR	CREATE	153	153	Storage shortage in data circuit asynchronous data file.	RETURN			0	0
EMA	HLR	SET	153	153	Storage shortage in data circuit asynchronous data file.	RETURN			0	0
EMA	HLR	CREATE	154	154	Storage shortage in data circuit synchronous data file.	RETURN			0	0
EMA	HLR	SET	154	154	Storage shortage in data circuit synchronous data file.	RETURN			0	0
EMA	HLR	CREATE	159	159	Bearer Capability number is not permitted.	RETURN			0	0
EMA	HLR	CREATE	160	160	IMSI does not belong to WCDMA network.	RETURN			0	0
EMA	HLR	SET	160	160	IMSI does not belong to WCDMA network.	RETURN			0	0
EMA	HLR	CREATE	167	167	The mobility management IN triggering subscription data are being updated for the subscriber.	RETURN			0	0
EMA	HLR	SET	167	167	The mobility management IN triggering	RETURN			0	0

					subscription data are being updated for the subscriber.					
EMA	HLR	CREATE	168	168	Detection Point already defined.	RETURN			0	0
EMA	HLR	SET	168	168	Detection Point already defined.	RETURN			0	0
EMA	HLR	CREATE	169	169	Detection Point not defined.	RETURN			0	0
EMA	HLR	SET	169	169	Detection Point not defined.	RETURN			0	0
EMA	HLR	SET	170	170	The Detection Point is activated for the subscriber.	RETURN			0	0
EMA	HLR	SET	171	171	The Detection Point is not activated for the subscriber.	RETURN			0	0
EMA	HLR	CREATE	172	172	Detection Point value not allowed.	RETURN			0	0
EMA	HLR	SET	172	172	Detection Point value not allowed.	RETURN			0	0
EMA	HLR	CREATE	173	173	Maximum number of Trigger Detection Points has been reached for the subscriber.	RETURN			0	0
EMA	HLR	SET	173	173	Maximum number of Trigger Detection Points has been reached for the subscriber.	RETURN			0	0
EMA	HLR	CREATE	174	174	Too many detection points specified.	RETURN			0	0
EMA	HLR	SET	174	174	Too many detection points specified.	RETURN			0	0
EMA	HLR	CREATE	175	175	GSM Service Control Function address is not defined.	RETURN			0	0
EMA	HLR	SET	175	175	GSM Service Control Function address is not defined.	RETURN			0	0
EMA	HLR	SET	182	182	General bearer service not subscribed.	RETURN			0	0
EMA	HLR	SET	183	183	Parameter not	RETURN			0	0

					supported by this exchange.					
EMA	HLR	DELETE	183	183	Parameter not supported by this exchange.	RETURN			0	0
EMA	HLR	CREATE	187	187	Updating CAMEL subscription data in progress for the subscriber.	RETURN			0	0
EMA	HLR	SET	187	187	Updating CAMEL subscription data in progress for the subscriber.	RETURN			0	0
EMA	HLR	CREATE	188	188	CAMEL subscription data not defined.	RETURN			0	0
EMA	HLR	SET	188	188	CAMEL subscription data not defined.	RETURN			0	0
EMA	HLR	CREATE	189	189	Parameter value not supported by this exchange.	RETURN			0	0
EMA	HLR	SET	189	189	Parameter value not supported by this exchange.	RETURN			0	0
EMA	HLR	SET	190	190	MSISDN is defined as an additional MSISDN /TCTDP not defined.	RETURN			0	0
EMA	HLR	DELETE	190	190	MSISDN is defined as an additional MSISDN /TCTDP not defined.	RETURN			0	0
EMA	HLR	GET	190	190	MSISDN is defined as an additional MSISDN /TCTDP not defined.	RETURN			0	0
EMA	HLR	SET	191	191	OCTDP not defined.	RETURN			0	0
EMA	HLR	DELETE	191	191	OCTDP not defined.	RETURN			0	0
EMA	HLR	CREATE	195	195	IMSI does not belong to an operator /TCTDP already defined.	RETURN			0	0
EMA	HLR	SET	195	195	IMSI does not belong to an operator /TCTDP already defined.	RETURN			0	0
EMA	HLR	CREATE	196	196	OCTDP already	RETURN			0	0

					defined.					
EMA	HLR	SET	197	197	MSISDN not connected to an IMSI in the FNR, probably exported or other number / Maximum number of TCTDP reached.	RETURN			0	0
EMA	HLR	DELETE	197	197	MSISDN not connected to an IMSI in the FNR, probably exported or other number / Maximum number of TCTDP reached.	RETURN			0	0
EMA	HLR	GET	197	197	MSISDN not connected to an IMSI in the FNR, probably exported or other number / Maximum number of TCTDP reached.	RETURN			0	0
EMA	HLR	CREATE	198	198	Maximum number of OCTDP reached.	RETURN			0	0
EMA	HLR	CREATE	199	199	Maximum number of subscriptions exceeded.	RETURN			0	0
EMA	HLR	CREATE	200	200	Storage shortage in BSG data file / Maximum number of GPRS subscription succeeded.	RETURN			0	0
EMA	HLR	SET	200	200	Storage shortage in BSG data file / Maximum number of GPRS subscription succeeded.	RETURN			0	0
EMA	HLR	SET	10203	10203	No originating CAMEL subscription defined.	RETURN			0	0
EMA	HLR	SET	10204	10204	No terminating CAMEL subscription defined.	RETURN			0	0
EMA	HLR	CREATE	10211	10211	APN not defined.	RETURN			0	0
EMA	HLR	SET	10211	10211	APN not defined.	RETURN			0	0

EMA	HLR	CREATE	10215	10215	Maximum number of subscriber PDP context reached.	RETURN			0	0
EMA	HLR	SET	10215	10215	Maximum number of subscriber PDP context reached.	RETURN			0	0
EMA	HLR	CREATE	10216	10216	SubscriberPDP context already defined.	RETURN			0	0
EMA	HLR	SET	10216	10216	SubscriberPDP context already defined.	RETURN			0	0
EMA	HLR	CREATE	10217	10217	SubscriberPDP context with non subscribed APN already defined.	RETURN			0	0
EMA	HLR	SET	10217	10217	SubscriberPDP context with non subscribed APN already defined.	RETURN			0	0
EMA	HLR	CREATE	10218	10218	Updating of subscriber PDP context in progress.	RETURN			0	0
EMA	HLR	SET	10218	10218	Updating of subscriber PDP context in progress.	RETURN			0	0
EMA	HLR	CREATE	10219	10219	Packetdata protocol context identifier repeated.	RETURN			0	0
EMA	HLR	SET	10219	10219	Packetdata protocol context identifier repeated.	RETURN			0	0
EMA	HLR	SET	10220	10220	SubscriberNAM already has that value.	RETURN			0	0
EMA	HLR	SET	10221	10221	Subscriberdata not compatible with stored subscriber data.	RETURN			0	0
EMA	HLR	SET	10222	10222	SubscriberPDP context not defined.	RETURN			0	0
EMA	HLR	CREATE	10240	10240	GMLC address not defined.	RETURN			0	0
EMA	HLR	SET	10240	10240	GMLC address not defined.	RETURN			0	0
EMA	HLR	CREATE	10242	10242	Storage shortage in subaddress data file for	RETURN			0	0

					speech.					
EMA	HLR	CREATE	10243	10243	Storage shortage in subaddress data file for data circuit asynchronous.	RETURN			0	0
EMA	HLR	CREATE	10244	10244	Storage shortage in subaddress data file for data circuit synchronous.	RETURN			0	0
EMA	HLR	CREATE	10245	10245	Storage shortage in subaddress data file for facsimile.	RETURN			0	0
EMA	HLR	CREATE	10246	10246	Storage shortage in subaddress data file for auxiliary speech.	RETURN			0	0
EMA	HLR	CREATE	10259	10259	OFA value not allowed.	RETURN			0	0
EMA	HLR	CREATE	10260	10260	Storage shortage in originating CAMEL phase 2 data file.	RETURN			0	0
EMA	HLR	SET	10260	10260	Storage shortage in originating CAMEL phase 2 data file.	RETURN			0	0
EMA	HLR	CREATE	10261	10261	Storage shortage in terminating CAMEL phase 2 data file.	RETURN			0	0
EMA	HLR	SET	10261	10261	Storage shortage in terminating CAMEL phase 2 data file.	RETURN			0	0
EMA	HLR	SET	10262	10262	Not applicable for OCTDP.	RETURN			0	0
EMA	HLR	SET	10263	10263	Last OCTDP phase 2 removal not allowed.	RETURN			0	0
EMA	HLR	CREATE	10265	10265	Storage shortage in BSG for auxiliary speech service data file.	RETURN			0	0
EMA	HLR	SET	10266	10266	No originating CAMEL phase 2 subscription defined.	RETURN			0	0
EMA	HLR	CREATE	10267	10267	Storage shortage in originating CAMEL phase 1 data file.	RETURN			0	0

EMA	HLR	SET	10267	10267	Storage shortage in originating CAMEL phase 1 data file.	RETURN			0	0
EMA	HLR	CREATE	10268	10268	Storage shortage in terminating CAMEL phase 1 data file.	RETURN			0	0
EMA	HLR	SET	10268	10268	Storage shortage in terminating CAMEL phase 1 data file.	RETURN			0	0
EMA	HLR	CREATE	10269	10269	Storage shortage in triplet data file.	RETURN			0	0
EMA	HLR	SET	10269	10269	Storage shortage in triplet data file.	RETURN			0	0
EMA	HLR	CREATE	10270	10270	Storage shortage in quintet data file.	RETURN			0	0
EMA	HLR	SET	10270	10270	Storage shortage in quintet data file.	RETURN			0	0
EMA	HLR	CREATE	10271	10271	Storage shortage in GPRS CAMEL phase 3 data file.	RETURN			0	0
EMA	HLR	CREATE	10272	10272	GPRS TDP already defined.	RETURN			0	0
EMA	HLR	SET	10272	10272	GPRS TDP already defined.	RETURN			0	0
EMA	HLR	CREATE	10273	10273	Maximum number of GPRSTDP reached.	RETURN			0	0
EMA	HLR	SET	10273	10273	Maximum number of GPRSTDP reached.	RETURN			0	0
EMA	HLR	SET	10274	10274	I not applicable for this type of TDP.	RETURN			0	0
EMA	HLR	CREATE	10275	10275	CCH VALUE not allowed for this type of TDP.	RETURN			0	0
EMA	HLR	SET	10275	10275	CCH VALUE not allowed for this type of TDP.	RETURN			0	0
EMA	HLR	SET	10277	10277	GPRSTDP not defined.	RETURN			0	0
EMA	HLR	CREATE	10278	10278	Too many GPRSTDP specified.	RETURN			0	0
EMA	HLR	SET	10278	10278	Too many GPRSTDP specified.	RETURN			0	0

EMA	HLR	CREATE	10279	10279	Operation not applicable to an LMU subscriber.	RETURN			0	0
EMA	HLR	SET	10279	10279	Operation not applicable to an LMU subscriber.	RETURN			0	0
EMA	HLR	CREATE	10280	10280	Storage shortage in LCS data file.	RETURN			0	0
EMA	HLR	SET	10280	10280	Storage shortage in LCS data file.	RETURN			0	0
EMA	HLR	CREATE	10281	10281	Updating of subscriber LCS data in progress.	RETURN			0	0
EMA	HLR	SET	10281	10281	Updating of subscriber LCS data in progress.	RETURN			0	0
EMA	HLR	CREATE	10282	10282	Maximum number of subscriber external identities reached.	RETURN			0	0
EMA	HLR	SET	10282	10282	Maximum number of subscriber external identities reached.	RETURN			0	0
EMA	HLR	SET	10283	10283	No subscriber LCS classes defined.	RETURN			0	0
EMA	HLR	SET	10284	10284	No subscriber LCS privacy classes defined.	RETURN			0	0
EMA	HLR	SET	10285	10285	No subscriber LCS MO classes defined.	RETURN			0	0
EMA	HLR	SET	10286	10286	Subscriber LCS class not defined.	RETURN			0	0
EMA	HLR	SET	10287	10287	No subscriber GMLC addresses defined.	RETURN			0	0
EMA	HLR	CREATE	10291	10291	Subscriber LCS privacy class already defined.	RETURN			0	0
EMA	HLR	SET	10291	10291	Subscriber LCS privacy class already defined.	RETURN			0	0
EMA	HLR	CREATE	10292	10292	Subscriber LCS MO class already defined.	RETURN			0	0
EMA	HLR	SET	10292	10292	Subscriber LCS MO class already defined.	RETURN			0	0
EMA	HLR	CREATE	10293	10293	Subscriber internal identity	RETURN			0	0

					already defined.					
EMA	HLR	SET	10293	10293	Subscriber internal identity already defined.	RETURN			0	0
EMA	HLR	CREATE	10294	10294	External address already defined.	RETURN			0	0
EMA	HLR	SET	10294	10294	External address already defined.	RETURN			0	0
EMA	HLR	CREATE	10295	10295	Call unrelated LCS class not defined.	RETURN			0	0
EMA	HLR	SET	10295	10295	Call unrelated LCS class not defined.	RETURN			0	0
EMA	HLR	SET	10296	10296	Subscriber LCS privacy class not defined.	RETURN			0	0
EMA	HLR	SET	10297	10297	Subscriber LCS MO class not defined.	RETURN			0	0
EMA	HLR	SET	10298	10298	Subscriber external address not defined.	RETURN			0	0
EMA	HLR	SET	10299	10299	Internal identity not defined.	RETURN			0	0
EMA	HLR	SET	10300	10300	GMLC restriction not defined.	RETURN			0	0
EMA	HLR	CREATE	10301	10301	Maximum number of subscriber GMLC addresses exceeded.	RETURN			0	0
EMA	HLR	SET	10301	10301	Maximum number of subscriber GMLC addresses exceeded.	RETURN			0	0
EMA	HLR	CREATE	10302	10302	Subscriber GMLC address already defined.	RETURN			0	0
EMA	HLR	SET	10302	10302	Subscriber GMLC address already defined.	RETURN			0	0
EMA	HLR	SET	10303	10303	Subscriber GMLC address not defined.	RETURN			0	0
EMA	HLR	CREATE	10304	10304	Storage shortage in originating SMS CAMEL data file.	RETURN			0	0
EMA	HLR	SET	10304	10304	Storage shortage in originating SMS CAMEL data file.	RETURN			0	0

EMA	HLR	CREATE	10305	10305	OSMSTDP already defined.	RETURN			0	0
EMA	HLR	SET	10305	10305	OSMSTDP already defined.	RETURN			0	0
EMA	HLR	CREATE	10306	10306	Maximum number of OSMSTDP reached.	RETURN			0	0
EMA	HLR	SET	10306	10306	Maximum number of OSMSTDP reached.	RETURN			0	0
EMA	HLR	SET	10308	10308	OSMSTDP not defined.	RETURN			0	0
EMA	HLR	SET	10309	10309	Too many OSMSTDP specified.	RETURN			0	0
EMA	HLR	CREATE	10314	10314	Extended QOS not defined.	RETURN			0	0
EMA	HLR	SET	10314	10314	Extended QOS not defined.	RETURN			0	0
EMA	HLR	CREATE	10315	10315	PDP type incompatible.	RETURN			0	0
EMA	HLR	SET	10315	10315	PDP type incompatible.	RETURN			0	0
EMA	HLR	CREATE	10316	10316	Static addressing not allowed for PDP context.	RETURN			0	0
EMA	HLR	SET	10316	10316	Static addressing not allowed for PDP context.	RETURN			0	0
EMA	HLR	CREATE	10324	10324	Call related LCS class not defined.	RETURN			0	0
EMA	HLR	SET	10324	10324	Call related LCS class not defined.	RETURN			0	0
EMA	HLR	CREATE	10325	10325	TSMSTDP value not allowed.	RETURN			0	0
EMA	HLR	SET	10325	10325	TSMSTDP value not allowed.	RETURN			0	0
EMA	HLR	SET	10330	10330	TSMSTDP not defined.	RETURN			0	0
EMA	HLR	SET	10345	10345	DSTDP not defined.	RETURN			0	0
EMA	HLR	CREATE	10361	10361	Triggering basic service already defined.	RETURN			0	0
EMA	HLR	SET	10361	10361	Triggering basic service already defined.	RETURN			0	0
EMA	HLR	SET	10362	10362	Triggering basic service not allowed.	RETURN			0	0

EMA	HLR	SET	10363	10363	Maximum number of triggering basic services reached.	RETURN			0	0
EMA	HLR	CREATE	10364	10364	Storage shortage in CAMEL TCTDP2 criteria data file.	RETURN			0	0
EMA	HLR	SET	10364	10364	Storage shortage in CAMEL TCTDP2 criteria data file.	RETURN			0	0
EMA	HLR	CREATE	10365	10365	Storage shortage in CAMEL OCTDP2 criteria data file.	RETURN			0	0
EMA	HLR	SET	10365	10365	Storage shortage in CAMEL OCTDP2 criteria data file.	RETURN			0	0
EMA	HLR	CREATE	10366	10366	Forwarding triggering criteria already defined.	RETURN			0	0
EMA	HLR	SET	10366	10366	Forwarding triggering criteria already defined.	RETURN			0	0
EMA	HLR	SET	10368	10368	Triggering criteria data not defined.	RETURN			0	0
EMA	HLR	SET	10369	10369	Destination number not defined.	RETURN			0	0
EMA	HLR	SET	10370	10370	Destination number length not defined.	RETURN			0	0
EMA	HLR	SET	10371	10371	Forwarding triggering criteria not defined.	RETURN			0	0
EMA	HLR	SET	10372	10372	No triggering basic service defined.	RETURN			0	0
EMA	HLR	SET	10373	10373	BS not defined as triggering basic service.	RETURN			0	0
EMA	HLR	SET	10374	10374	BSG not defined as triggering basic service.	RETURN			0	0
EMA	HLR	CREATE	10375	10375	Maximum number of subscriber call related external identities reached.	RETURN			0	0
EMA	HLR	CREATE	10376	10376	Maximum number of subscriber call unrelated external	RETURN			0	0

					identities reached.					
EMA	HLR	SET	10377	10377	Subscriber call related external address not defined.	RETURN			0	0
EMA	HLR	DELETE	10377	10377	Subscriber call related external address not defined.	RETURN			0	0
EMA	HLR	SET	10378	10378	Subscriber call unrelated external address not defined.	RETURN			0	0
EMA	HLR	DELETE	10378	10378	Subscriber call unrelated external address not defined.	RETURN			0	0
EMA	HLR	CREATE	10379	10379	Call related external address already defined.	RETURN			0	0
EMA	HLR	CREATE	10380	10380	Call unrelated external address already defined.	RETURN			0	0
EMA	HLR	SET	10381	10381	Call related GMLC restriction not defined.	RETURN			0	0
EMA	HLR	DELETE	10381	10381	Call related GMLC restriction not defined.	RETURN			0	0
EMA	HLR	SET	10382	10382	Call unrelated GMLC restriction not defined.	RETURN			0	0
EMA	HLR	DELETE	10382	10382	Call unrelated GMLC restriction not defined.	RETURN			0	0
EMA	HLR	CREATE	10383	10383	NAM value not allowed due to functionality not supported.	RETURN			0	0
EMA	HLR	CREATE	10385	10385	Storage shortage in call unrelated external LCS client address data file.	RETURN			0	0
EMA	HLR	CREATE	10386	10386	Storage shortage in call related external LCS client address data file.	RETURN			0	0
EMA	HLR	CREATE	10387	10387	Internal identity already given in command.	RETURN			0	0

EMA	HLR	DELETE	10387	10387	Internal identity already given in command.	RETURN			0	0
EMA	HLR	CREATE	10388	10388	Subscriber LCS MO class already given in command.	RETURN			0	0
EMA	HLR	DELETE	10388	10388	Subscriber LCS MO class already given in command.	RETURN			0	0
EMA	HLR	CREATE	10389	10389	Storage shortage in IPV6 address data file.	RETURN			0	0
EMA	HLR	CREATE	10390	10390	Storage shortage in external address data file.	RETURN			0	0
EMA	HLR	CREATE	10391	10391	CCH value not compatible for this TDP value.	RETURN			0	0
EMA	HLR	DELETE	10391	10391	CCH value not compatible for this TDP value.	RETURN			0	0
EMA	HLR	CREATE	10392	10392	VTTDP already defined.	RETURN			0	0
EMA	HLR	SET	10392	10392	VTTDP already defined.	RETURN			0	0
EMA	HLR	DELETE	10392	10392	VTTDP already defined.	RETURN			0	0
EMA	HLR	CREATE	10394	10394	Storage shortage in Originating CAMEL phase 3 data file.	RETURN			0	0
EMA	HLR	CREATE	10395	10395	Storage shortage in terminating CAMEL phase 3 data file.	RETURN			0	0
EMA	HLR	CREATE	10396	10396	Storage shortage in visitor MSC terminating CAMEL phase 3 data file.	RETURN			0	0
EMA	HLR	SET	10396	10396	Storage shortage in visitor MSC terminating CAMEL phase 3 data file.	RETURN			0	0
EMA	HLR	SET	10397	10397	VTTDP not defined.	RETURN			0	0
EMA	HLR	DELETE	10397	10397	VTTDP not defined.	RETURN			0	0
EMA	HLR	DELETE	10398	10398	Too many VTTDP specified.	RETURN			0	0

EMA	HLR	CREATE	10399	10399	Maximum number of VTDP reached.	RETURN			0	0
EMA	HLR	SET	10399	10399	Maximum number of VTDP reached.	RETURN			0	0
EMA	HLR	DELETE	10400	10400	Trigger detection point included more than once.	RETURN			0	0
EMA	HLR	CREATE	10401	10401	Subscriber PICI already defined.	RETURN			0	0
EMA	HLR	SET	10401	10401	Subscriber PICI already defined.	RETURN			0	0
EMA	HLR	CREATE	10415	10415	Subscriber GMLC address already given.	RETURN			0	0
EMA	HLR	SET	10417	10417	No destination number defined.	RETURN			0	0
EMA	HLR	DELETE	10417	10417	No destination number defined.	RETURN			0	0
EMA	HLR	SET	10418	10418	No destination number length defined.	RETURN			0	0
EMA	HLR	DELETE	10418	10418	No destination number length defined.	RETURN			0	0
EMA	HLR	CREATE	10419	10419	Storage shortage in external address analysis file.	RETURN			0	0
EMA	HLR	CREATE	10420	10420	Spatial triggers data is already defined.	RETURN			0	0
EMA	HLR	SET	10420	10420	Spatial triggers data is already defined.	RETURN			0	0
EMA	HLR	CREATE	10421	10421	Storage shortage in spatial triggers data file.	RETURN			0	0
EMA	HLR	SET	10421	10421	Storage shortage in spatial triggers data file.	RETURN			0	0
EMA	HLR	CREATE	10422	10422	Subscriber spatial trigger data not defined.	RETURN			0	0
EMA	HLR	SET	10422	10422	Subscriber spatial trigger data not defined.	RETURN			0	0
EMA	HLR	CREATE	10424	10424	Subscriber Service Type Already Defined.	RETURN			0	0
EMA	HLR	SET	10424	10424	Subscriber	RETURN			0	0

					Service Type Already Defined.					
EMA	HLR	CREATE	10426	10426	Too many service types specified for the subscriber.	RETURN			0	0
EMA	HLR	SET	10426	10426	Too many service types specified for the subscriber.	RETURN			0	0
EMA	HLR	CREATE	10427	10427	Subscriber service type already given in command.	RETURN			0	0
EMA	HLR	SET	10427	10427	Subscriber service type already given in command.	RETURN			0	0
EMA	HLR	CREATE	10428	10428	No subscriber service types defined.	RETURN			0	0
EMA	HLR	SET	10428	10428	No subscriber service types defined.	RETURN			0	0
EMA	HLR	CREATE	10429	10429	Subscriber service type not defined.	RETURN			0	0
EMA	HLR	SET	10429	10429	Subscriber service type not defined.	RETURN			0	0
EMA	HLR	CREATE	10430	10430	Service type GMLC restriction not defined.	RETURN			0	0
EMA	HLR	SET	10430	10430	Service type GMLC restriction not defined.	RETURN			0	0
EMA	HLR	CREATE	10433	10433	Subscription link already exists.	RETURN			0	0
EMA	HLR	CREATE	10435	10435	MSISDN is not a linked MSISDN.	RETURN			0	0
EMA	HLR	CREATE	10437	10437	PDP Context Identifier in use.	RETURN			0	0
EMA	HLR	SET	10437	10437	PDP Context Identifier in use.	RETURN			0	0
EMA	HLR	CREATE	10438	10438	PDP address incompatible with PDP type.	RETURN			0	0
EMA	HLR	SET	10438	10438	PDP address incompatible with PDP type.	RETURN			0	0
EMA	HLR	CREATE	10444	10444	Spatial trigger event value not allowed.	RETURN			0	0
EMA	HLR	SET	10444	10444	Spatial trigger event value not allowed.	RETURN			0	0

EMA	HLR	CREATE	10445	10445	Updating of subscriber spatial trigger data in progress.	RETURN			0	0
EMA	HLR	SET	10445	10445	Updating of subscriber spatial trigger data in progress.	RETURN			0	0
EMA	HLR	CREATE	10446	10446	Command Restricted During Dump.	RETURN			0	0
EMA	HLR	SET	10446	10446	Command Restricted During Dump.	RETURN			0	0
EMA	HLR	DELETE	10446	10446	Command Restricted During Dump.	RETURN			0	0
EMA	HLR	GET	10446	10446	Command Restricted During Dump.	RETURN			0	0
EMA	HLR	CREATE	10456	10456	Subscription belongs to a multiple subscription.	RETURN			0	0
EMA	HLR	SET	10456	10456	Subscription belongs to a multiple subscription.	RETURN			0	0
EMA	HLR	CREATE	10457	10457	IMSI corresponds to master subscription.	RETURN			0	0
EMA	HLR	SET	10457	10457	IMSI corresponds to master subscription.	RETURN			0	0
EMA	HLR	CREATE	10458	10458	IMSI already given in command.	RETURN			0	0
EMA	HLR	SET	10458	10458	IMSI already given in command.	RETURN			0	0
EMA	HLR	CREATE	10459	10459	Updating multiple subscription data in progress.	RETURN			0	0
EMA	HLR	SET	10459	10459	Updating multiple subscription data in progress.	RETURN			0	0
EMA	HLR	DELETE	10459	10459	Updating multiple subscription data in progress.	RETURN			0	0
EMA	HLR	CREATE	10460	10460	Too many IMSIS specified.	RETURN			0	0
EMA	HLR	SET	10460	10460	Too many IMSIS specified.	RETURN			0	0

EMA	HLR	CREATE	10461	10461	Storage shortage in multiple subscription data file	RETURN			0	0
EMA	HLR	SET	10462	10462	Subscription is not a master subscription.	RETURN			0	0
EMA	HLR	DELETE	10462	10462	Subscription is not a master subscription.	RETURN			0	0
EMA	HLR	SET	10463	10463	Subscription does not belong to the multiple subscriptions.	RETURN			0	0
EMA	HLR	SET	10464	10464	Maximum number of subscription in multiple subscriptions exceeded.	RETURN			0	0
EMA	HLR	SET	10465	10465	Minimum number of subscription in multiple subscription exceeded.	RETURN			0	0
EMA	HLR	SET	10466	10466	Change of active subscription not allowed.	RETURN			0	0
EMA	HLR	CREATE	10469	10469	Subscriber SMSC address series already defined.	RETURN			0	0
EMA	HLR	CREATE	10470	10470	Series is prefix of existing series.	RETURN			0	0
EMA	HLR	CREATE	10471	10471	There is a series prefix of the given series.	RETURN			0	0
EMA	HLR	CREATE	10472	10472	Updating of subscriber SPAM SMS data in progress.	RETURN			0	0
EMA	HLR	DELETE	10472	10472	Updating of subscriber SPAM SMS data in progress.	RETURN			0	0
EMA	HLR	CREATE	10473	10473	Maximum number of subscriber SMSC address series reached.	RETURN			0	0
EMA	HLR	CREATE	10474	10474	Storage shortage in subscriber SPAM SMS data file.	RETURN			0	0
EMA	HLR	CREATE	10475	10475	Storage shortage in SPAM SMSC address series	RETURN			0	0

					data file.					
EMA	HLR	DELETE	10476	10476	No SPAM SMS data defined.	RETURN			0	0
EMA	HLR	DELETE	10477	10477	Subscriber SMSC address series not defined.	RETURN			0	0
EMA	HLR	CREATE	10478	10478	LCS address not defined.	RETURN			0	0
EMA	HLR	CREATE	10479	10479	Subscriber has a HGMLC address already defined.	RETURN			0	0
EMA	HLR	CREATE	10480	10480	Subscriber has a PPR address already defined.	RETURN			0	0
EMA	HLR	DELETE	10481	10481	No subscriber HGMLC address defined.	RETURN			0	0
EMA	HLR	DELETE	10482	10482	No subscriber PPR.	RETURN			0	0
EMA	HLR	CREATE	10485	10485	Storage shortage in originating Camel phase 4 data file.	RETURN			0	0
EMA	HLR	SET	10485	10485	Storage shortage in originating Camel phase 4 data file.	RETURN			0	0
EMA	HLR	CREATE	10486	10486	Storage shortage in terminating Camel phase 4 data file.	RETURN			0	0
EMA	HLR	SET	10486	10486	Storage shortage in terminating Camel phase 4 data file.	RETURN			0	0
EMA	HLR	CREATE	10487	10487	Storage shortage in VMSC terminating Camel phase 4 data file.	RETURN			0	0
EMA	HLR	SET	10487	10487	Storage shortage in VMSC terminating Camel phase 4 data file.	RETURN			0	0
EMA	HLR	DELETE	23005	23005	Inconsistency MSISDN/IMSI.	RETURN			0	0

2.1.2 AUC

Next table explains all the parameters manage by the Ericsson AUC.

The parameter name column indicates the name of the parameter in the north bound interface, in the following section are described the parameters used for each operation for this service.

The mandatory column specify if this parameter is must be on the command or not.

The description column explains the meaningful of each parameter.

Parameter Name	Mandatory	Description
TRANSID	No	The transaction id of the CREATE provisioning Operation.
IMSI	Yes	An International Mobile Subscriber Identity is a unique identification associated with all GSM, UMTS and LTE network mobile phone users.
AUTHENTICATION_KEY	Yes	The authentication key of the subscriber to be defined.
DECRYPT_ALGORITHM	Yes	The decrypting algorithm that should be used to decrypt Ki
KEY_INDEX	Yes	The index of the key to be used in association with the DEA 1 version of the algorithm Ad
ALGORITHM_VERSION	Yes	A38 algorithm version number
AUTHENTICATION_MANAGEMENT	No	Authentication Management Field (for WCDMA only)
AKA_INDEX	No	Authentication and KeyAgreement (AKA) algorithm Index
AKA_TYPE	No	Authentication and Key Agreement (AKA) type

2.1.2.1 AUC Create Subscriber Operation

The next table has the input parameters defined for this service in the Service Catalog. These are the parameters that need to be sent to the MSA northbound interface to activate this service.

The means of each column in this table is:

- Name: Name of the parameter in the northbound interface.
- Type: Type of the parameters.
- Format: is a regular expression used to validate the value of the parameter, if the value received in the northbound interfaces does not match this regular expression an error will be returned indicating the error.
- Mandatory: indicates is the parameters is mandatory for this service.
- Default Value: indicate a default value set for this parameters is case that it is not received in the service request.

INPUT				
Name	Type	Format	Mandatory	Default Value
IMSI	String	\d{10,15}	Yes	

AUTHENTICATION_KEY	String	\w{32}	Yes	
KEY_INDEX	String	(([0-5]?[0-1][0-1] [0-9]?[0-9] [0-9])*)	Yes	
DECRYPT_ALGORITHM	String	(([0-1]?[0-2][0-7] [0-9]?[0-9] [0-9])*)	Yes	
AUTHENTICATION_MANAGEMENT	String	(DEFAULT [0-6]?[0-5][0-5][0-3][0-5] [0-9]?[0-9]?[0-9]?[0-9])	No	
ALGORITHM_VERSION	String	(([0-1]?[0-9] [0-9])*)	No	
TRANSID	String	\w{1,32}	No	

The next table has the values returned in the northbound interface as a response for this service request.

OUTPUT		
Name	Type	Description
S_SOSA_CODE	String	SOSA internal output, indicated is the was ok or not
S_SOSA_DESCRIPTION	String	SOSA internal description
S_CODE	String	Represent the output code returned by this action
S_DESCRIPTION	String	Represent the output description for this action
NE_CODE	String	Code returned by the target
NE_DESCRIPTION	String	Description returned by the target
NE_OUTPUT	String	Exactly output returned by the target
NE_ACT_TOTAL_TIME	String	Time taken to perform the activation only in the target (in milliseconds)
NETWORKELEMENT	String	Name of the target where the activation have been done
COMMANDS_SENT	String	Command sent to the target
WF_INSTANCE	String	Name of the HPSA workflow manager that executed this action

2.1.2.2 AUC Delete Subscriber Operation

The next table has the input parameters defined for this service in the Service Catalog. These are the parameters that need to be sent to the MSA northbound interface to activate this service.

The means of each column in this table is:

- Name: Name of the parameter in the northbound interface.
- Type: Type of the parameters.
- Format: is a regular expression used to validate the value of the parameter, if the value received in the northbound interfaces does not match this regular expression an error will be returned indicating the error.

- **Mandatory:** indicates is the parameters is mandatory for this service.
- **Default Value:** indicate a default value set for this parameters is case that it is not received in the service request.

INPUT				
Name	Type	Format	Mandatory	Default Value
IMSI	String	\d{10,15}	Yes	
TRANSID	String	\w{1,32}	No	

The next table has the values returned in the northbound interface as a response for this service request.

OUTPUT		
Name	Type	Description
S_SOSA_CODE	String	SOSA internal output, indicated is the was ok or not
S_SOSA_DESCRIPTION	String	SOSA internal description
S_CODE	String	Represent the output code returned by this action
S_DESCRIPTION	String	Represent the output description for this action
NE_CODE	String	Code returned by the target
NE_DESCRIPTION	String	Description returned by the target
NE_OUTPUT	String	Exactly output returned by the target
NE_ACT_TOTAL_TIME	String	Time taken to perform the activation only in the target (in milliseconds)
NETWORKELEMENT	String	Name of the target where the activation have been done
COMMANDS_SENT	String	Command sent to the target
WF_INSTANCE	String	Name of the HPSA workflow manager that executed this action

2.1.2.3 AUC Set Subscriber Operation

The next table has the input parameters defined for this service in the Service Catalog. These are the parameters that need to be sent to the MSA northbound interface to activate this service.

The means of each column in this table is:

- **Name:** Name of the parameter in the northbound interface.
- **Type:** Type of the parameters.
- **Format:** is a regular expression used to validate the value of the parameter, if the value received in the northbound interfaces does not match this regular expression an error will be returned indicating the error.

- Mandatory: indicates is the parameters is mandatory for this service.
- Default Value: indicate a default value set for this parameters is case that it is not received in the service request.

INPUT				
Name	Type	Format	Mandatory	Default Value
IMSI	String	\d{10,15}	Yes	
AKA_INDEX	String	(DEFAULT 1 2)	No	
AUTHENTICATION_MANAGEMENT	String	(DEFAULT [0-6]?[0-5][0-5][0-3][0-5] [0-9]?[0-9]?[0-9]?[0-9])	No	
TRANSID	String	\w{1,32}	No	

The next table has the values returned in the northbound interface as a response for this service request.

OUTPUT		
Name	Type	Description
S_SOSA_CODE	String	SOSA internal output, indicated is the was ok or not
S_SOSA_DESCRIPTION	String	SOSA internal description
S_CODE	String	Represent the output code returned by this action
S_DESCRIPTION	String	Represent the output description for this action
NE_CODE	String	Code returned by the target
NE_DESCRIPTION	String	Description returned by the target
NE_OUTPUT	String	Exactly output returned by the target
NE_ACT_TOTAL_TIME	String	Time taken to perform the activation only in the target (in milliseconds)
NETWORKELEMENT	String	Name of the target where the activation have been done
COMMANDS_SENT	String	Command sent to the target
WF_INSTANCE	String	Name of the HPSA workflow manager that executed this action

2.1.2.4 AUC Query Subscriber Operation

The next table has the input parameters defined for this service in the Service Catalog. These are the parameters that need to be sent to the MSA northbound interface to activate this service.

The means of each column in this table is:

- Name: Name of the parameter in the northbound interface.
- Type: Type of the parameters.

- Format: is a regular expression used to validate the value of the parameter, if the value received in the northbound interfaces does not match this regular expression an error will be returned indicating the error.
- Mandatory: indicates is the parameters is mandatory for this service.
- Default Value: indicate a default value set for this parameters is case that it is not received in the service request.

INPUT				
Name	Type	Format	Mandatory	Default Value
IMSI	String	\d{10,15}	Yes	
TRANSID	String	\w{1,32}	No	

The next table has the values returned in the northbound interface as a response for this service request.

OUTPUT		
Name	Type	Description
S_SOSA_CODE	String	SOSA internal output, indicated is the was ok or not
S_SOSA_DESCRIPTION	String	SOSA internal description
S_CODE	String	Represent the output code returned by this action
S_DESCRIPTION	String	Represent the output description for this action
NE_CODE	String	Code returned by the target
NE_DESCRIPTION	String	Description returned by the target
NE_OUTPUT	String	Exactly output returned by the target
NE_ACT_TOTAL_TIME	String	Time taken to perform the activation only in the target (in milliseconds)
NETWORKELEMENT	String	Name of the target where the activation have been done
COMMANDS_SENT	String	Command sent to the target
WF_INSTANCE	String	Name of the HPSA workflow manager that executed this action
IMSI	String	IMSI value for this subscription
AUTHENTICATION_KEY	String	KI value for this subscription
ALGORITHM_VERSION	String	A38 value for this subscription
DECRYPT_ALGORITHM	String	AD value for this subscription
KEY_INDEX	String	ADKEY value for this subscription
AKA_TYPE	String	AKATYPE value for this subscription

2.1.2.5 AUC Error Management

These are the errors returned by the AUC platform and the translation that MSA will applied.

Platform type	Service	Operation	Ne_code	Return_code	Return_description	Action	Number_retrievals	Timeout	Number_exists	Number_not_exists
EMA	AUC	CREATE	301	301	Data already exist for key	RETURN			1	0
EMA	AUC	DELETE	302	302	Subscriber does not exist	RETURN			0	1
EMA	AUC	SET	302	302	Subscriber does not exist	RETURN			0	1
EMA	AUC	GET	302	302	Subscriber does not exist	RETURN			0	1
EMA	AUC	CREATE	303	303	Unknown algorithm version number	RETURN			0	0
EMA	AUC	CREATE	307	307	Command Restricted During Dump	RETURN			0	0
EMA	AUC	DELETE	307	307	Command Restricted During Dump	RETURN			0	0
EMA	AUC	SET	307	307	Command Restricted During Dump	RETURN			0	0
EMA	AUC	GET	307	307	Command Restricted During Dump	RETURN			0	0
EMA	AUC	CREATE	308	308	Adkey not defined	RETURN			0	0
EMA	AUC	CREATE	309	309	Storage shortage in IMSI analysis file	RETURN			0	0
EMA	AUC	CREATE	310	310	Storage shortage in subscriber data file	RETURN			0	0
EMA	AUC	CREATE	312	312	Key data operation in progress	RETURN			0	0
EMA	AUC	DELETE	312	312	Key data operation in progress	RETURN			0	0
EMA	AUC	CREATE	313	313	Subscription operation in progress	RETURN			0	0
EMA	AUC	SET	313	313	Subscription operation in progress	RETURN			0	0
EMA	AUC	CREATE	314	314	Maximum number of subscriptions exceeded	RETURN			0	0
EMA	AUC	CREATE	315	315	A4IND not supported	RETURN			0	0
EMA	AUC	DELETE	316	316	Key data change in progress	RETURN			0	0
EMA	AUC	DELETE	317	317	Key data change pending	RETURN			0	0
EMA	AUC	DELETE	320	320	Customer key operation in progress	RETURN			0	0
EMA	AUC	CREATE	324	324	Functionality not supported by this exchange	RETURN			0	0
EMA	AUC	SET	324	324	Functionality not supported by this exchange	RETURN			0	0

EMA	AUC	GET	327	327	FSETIND only supported for AUC WCDMA	RETURN			0	0
EMA	AUC	CREATE	330	330	OP change in process	RETURN			0	0
EMA	AUC	CREATE	332	332	AKA Algorithm change in progress	RETURN			0	0
EMA	AUC	SET	332	332	AKA Algorithm change in progress	RETURN			0	0
EMA	AUC	CREATE	333	333	AKA Algorithm change pending	RETURN			0	0
EMA	AUC	SET	333	333	AKA Algorithm change pending	RETURN			0	0
EMA	AUC	SET	334	334	WCDMA IMSI series not defined	RETURN			0	0
EMA	AUC	CREATE	336	336	No WCDMA subscribers defined	RETURN			0	0
EMA	AUC	SET	336	336	No WCDMA subscribers defined	RETURN			0	0
EMA	AUC	CREATE	337	337	No WCDMA subscribers defined	RETURN			0	0
EMA	AUC	SET	337	337	No WCDMA subscribers defined for specified fset	RETURN			0	0
EMA	AUC	CREATE	340	340	Subscription data change pending	RETURN			0	0
EMA	AUC	SET	340	340	Subscription data change pending	RETURN			0	0
EMA	AUC	CREATE	341	341	No subscription data change pending	RETURN			0	0
EMA	AUC	SET	341	341	No subscription data change pending	RETURN			0	0
EMA	AUC	GET	349	349	NE response is series, no IMSI matched	RETURN			0	0

2.1.3 EIREQU

Next table explains all the parameters manage by the Ericsson EIREQU.

The parameter name column indicates the name of the parameter in the north bound interface, in the following section are described the parameters used for each operation for this service.

The mandatory column specify if this parameter is must be on the command or not.

The description column explains the meaningful of each parameter.

Parameter Name	Mandatory	Description
TRANSID	No	The transaction id of the CREATE provisioning operation.
IMEI	Yes	The International Mobile Target Identity is a number to identify uniquely mobile phones in the mobile network.
LIST_TYPE	No	The list type of target. The definition of the lists is site specific and mapped against the status of the lists internally in the EIREQU. For example can <list_type>= 1 mean Stolen Phone and be mapped against the status black

		list.
SERIAL_NUMBER	No	The End Serial number of the target range to be defined
STATUS	No	The status that the displayed target is active in. Following values are valid: -1 - unknown 0 - white list 1 - black list 2 - grey list
SOFTWARE_VERSION	No	The Software version number.

2.1.3.1 EIREQU Create Subscriber Operation

The next table has the input parameters defined for this service in the Service Catalog. These are the parameters that need to be sent to the MSA northbound interface to activate this service.

The means of each column in this table is:

- Name: Name of the parameter in the northbound interface.
- Type: Type of the parameters.
- Format: is a regular expression used to validate the value of the parameter, if the value received in the northbound interfaces does not match this regular expression an error will be returned indicating the error.
- Mandatory: indicates is the parameters is mandatory for this service.
- Default Value: indicate a default value set for this parameters is case that it is not received in the service request.

INPUT				
Name	Type	Format	Mandatory	Default Value
IMEI	String	\d{15}	Yes	Yes
LIST_TYPE	String	-?[0-9]	Yes	Yes
SERIAL_NUMBER	String	\d{6,6}	No	No
SOFTWARE_VERSION	String	[0-9][0-8]	No	No
TRANSID	String	\d{1,32}	No	No

The next table has the values returned in the northbound interface as a response for this service request.

OUTPUT		
Name	Type	Description
S_SOSA_CODE	String	SOSA internal output, indicated is the was ok or not
S_SOSA_DESCRIPTION	String	SOSA internal description
S_CODE	String	Represent the output code returned by this

		action
S_DESCRIPTION	String	Represent the output description for this action
NE_CODE	String	Code returned by the target
NE_DESCRIPTION	String	Description returned by the target
NE_OUTPUT	String	Exactly output returned by the target
NE_ACT_TOTAL_TIME	String	Time taken to perform the activation only in the target (in milliseconds)
NETWORKELEMENT	String	Name of the target where the activation have been done
COMMANDS_SENT	String	Command sent to the target
WF_INSTANCE	String	Name of the HPSA workflow manager that executed this action

2.1.3.2 EIREQU Delete Subscriber Operation

The next table has the input parameters defined for this service in the Service Catalog. These are the parameters that need to be sent to the MSA northbound interface to activate this service.

The means of each column in this table is:

- Name: Name of the parameter in the northbound interface.
- Type: Type of the parameters.
- Format: is a regular expression used to validate the value of the parameter, if the value received in the northbound interfaces does not match this regular expression an error will be returned indicating the error.
- Mandatory: indicates is the parameters is mandatory for this service.
- Default Value: indicate a default value set for this parameters is case that it is not received in the service request.

INPUT				
Name	Type	Format	Mandatory	Default Value
IMEI	String	\d{15}	Yes	Yes
LIST_TYPE	String	-?[0-9]	Yes	Yes
SERIAL_NUMBER	String	\d{6,6}	No	No
SOFTWARE_VERSION	String	[0-9][0-8]	No	No
TRANSID	String	\d{1,32}	No	No

The next table has the values returned in the northbound interface as a response for this service request.

OUTPUT		
Name	Type	Description
S_SOSA_CODE	String	SOSA internal output, indicated is the was ok or not
S_SOSA_DESCRIPTION	String	SOSA internal description
S_CODE	String	Represent the output code returned by this action
S_DESCRIPTION	String	Represent the output description for this action
NE_CODE	String	Code returned by the target
NE_DESCRIPTION	String	Description returned by the target
NE_OUTPUT	String	Exactly output returned by the target
NE_ACT_TOTAL_TIME	String	Time taken to perform the activation only in the target (in milliseconds)
NETWORKELEMENT	String	Name of the target where the activation have been done
COMMANDS_SENT	String	Command sent to the target
WF_INSTANCE	String	Name of the HPSA workflow manager that executed this action

2.1.3.3 EIREQU Set Subscriber Operation

The next table has the input parameters defined for this service in the Service Catalog. These are the parameters that need to be sent to the MSA northbound interface to activate this service.

The means of each column in this table is:

- Name: Name of the parameter in the northbound interface.
- Type: Type of the parameters.
- Format: is a regular expression used to validate the value of the parameter, if the value received in the northbound interfaces does not match this regular expression an error will be returned indicating the error.
- Mandatory: indicates is the parameters is mandatory for this service.
- Default Value: indicate a default value set for this parameters is case that it is not received in the service request.

INPUT				
Name	Type	Format	Mandatory	Default Value
IMEI	String	\d{15}	Yes	Yes
LIST_TYPE	String	-?[0-9]	Yes	Yes
SERIAL_NUMBER	String	\d{6,6}	No	No
SOFTWARE_VERSION	String	[0-9][0-8]	No	No
TRANSID	String	\d{1,32}	No	No

The next table has the values returned in the northbound interface as a response for this service request.

OUTPUT		
Name	Type	Description
S_SOSA_CODE	String	SOSA internal output, indicated is the was ok or not
S_SOSA_DESCRIPTION	String	SOSA internal description
S_CODE	String	Represent the output code returned by this action
S_DESCRIPTION	String	Represent the output description for this action
NE_CODE	String	Code returned by the target
NE_DESCRIPTION	String	Description returned by the target
NE_OUTPUT	String	Exactly output returned by the target
NE_ACT_TOTAL_TIME	String	Time taken to perform the activation only in the target (in milliseconds)
NETWORKELEMENT	String	Name of the target where the activation have been done
COMMANDS_SENT	String	Command sent to the target
WF_INSTANCE	String	Name of the HPSA workflow manager that executed this action

2.1.3.4 EIREQU Query Subscriber Operation

The next table has the input parameters defined for this service in the Service Catalog. These are the parameters that need to be sent to the MSA northbound interface to activate this service.

The means of each column in this table is:

- Name: Name of the parameter in the northbound interface.
- Type: Type of the parameters.
- Format: is a regular expression used to validate the value of the parameter, if the value received in the northbound interfaces does not match this regular expression an error will be returned indicating the error.
- Mandatory: indicates is the parameters is mandatory for this service.
- Default Value: indicate a default value set for this parameters is case that it is not received in the service request.

INPUT				
Name	Type	Format	Mandatory	Default Value
IMEI	String	\d{15}	Yes	Yes
LIST_TYPE	String	-?[0-9]	Yes	Yes
SERIAL_NUMBER	String	\d{6,6}	No	No
SOFTWARE_VERSION	String	[0-9][0-8]	No	No

TRANSID	String	\d{1,32}	No	No
TRANSID	String	\d{1,32}	No	No

The next table has the values returned in the northbound interface as a response for this service request.

OUTPUT		
Name	Type	Description
S_SOSA_CODE	String	SOSA internal output, indicated is the was ok or not
S_SOSA_DESCRIPTION	String	SOSA internal description
S_CODE	String	Represent the output code returned by this action
S_DESCRIPTION	String	Represent the output description for this action
NE_CODE	String	Code returned by the target
NE_DESCRIPTION	String	Description returned by the target
NE_OUTPUT	String	Exactly output returned by the target
NE_ACT_TOTAL_TIME	String	Time taken to perform the activation only in the target (in milliseconds)
NETWORKELEMENT	String	Name of the target where the activation have been done
COMMANDS_SENT	String	Command sent to the target
WF_INSTANCE	String	Name of the HPSA workflow manager that executed this action
TRANSID	String	TRANSID returned by the target
LIST_TYPES	String	LISTTYPES value of this register
LIST_TYPE	String	LISTTYPE value of this register
SERIAL_NUMBER	String	ESN value of this register
SOFTWARE_VERSION	String	SVN value of this register
IMEI	String	IMEI value of this register
STATUS	String	STATUS value of this register

2.1.3.5 EIREQU Error Management

These are the errors returned by the EIREQU platform and the translation that MSA will applied.

Platform type	Service	Operation	Ne_code	Return_code	Return_description	Action	Number_retrievals	Time_out	Number_exists	Number_not_exists
EMA	EIREQU	GET	201	201	Target not known	RETURN			0	0
EMA	EIREQU	SET	201	201	Target not	RETURN			0	0

					known					
EMA	EIREQU	CREATE	202	202	Part or all target range already exists	RETURN			1	0
EMA	EIREQU	DELETE	203	203	Part or all target range does not exist	RETURN			0	1
EMA	EIREQU	CREATE	204	204	Range of IMEIs must not overlap with any other	RETURN			0	0
EMA	EIREQU	CREATE	205	205	Start of range must be less than or equal to the end of the range	RETURN			0	0
EMA	EIREQU	DELETE	205	205	Start of range must be less than or equal to the end of the range	RETURN			0	0
EMA	EIREQU	CREATE	206	206	TAC and FAC fields cannot be updated	RETURN			0	0
EMA	EIREQU	CREATE	207	207	Target not found in any list in the default search order	RETURN			0	0
EMA	EIREQU	DELETE	208	208	Invalid argument 1	RETURN			0	0
EMA	EIREQU	SET	208	208	Invalid argument 1	RETURN			0	0
EMA	EIREQU	GET	208	208	Invalid argument 1	RETURN			0	0
EMA	EIREQU	CREATE	208	208	Invalid argument 1	RETURN			0	0
EMA	EIREQU	CREATE	209	209	Cannot parse action request	RETURN			0	0
EMA	EIREQU	DELETE	209	209	Cannot parse action request	RETURN			0	0
EMA	EIREQU	SET	209	209	Cannot parse action request	RETURN			0	0
EMA	EIREQU	GET	209	209	Cannot parse action request	RETURN			0	0
EMA	EIREQU	CREATE	210	210	Invalid object id	RETURN			0	0
EMA	EIREQU	DELETE	210	210	Invalid object id	RETURN			0	0
EMA	EIREQU	GET	210	210	Invalid object id	RETURN			0	0
EMA	EIREQU	CREATE	211	211	Wrong number arguments	RETURN			0	0
EMA	EIREQU	DELETE	211	211	Wrong number arguments	RETURN			0	0
EMA	EIREQU	GET	211	211	Wrong number arguments	RETURN			0	0

					arguments					
EMA	EIREQU	DELETE	212	212	Mobile station with this IMEI does not exist	RETURN			0	0
EMA	EIREQU	GET	212	212	Mobile station with this IMEI does not exist	RETURN			0	0
EMA	EIREQU	CREATE	290	290	Mobile station with this IMEI already exist	RETURN			0	0
EMA	EIREQU	GET	290	290	Other user database error	RETURN			0	0
EMA	EIREQU	CREATE	291	291	Unknown EIR error	RETURN			0	0
EMA	EIREQU	DELETE	291	291	Unknown EIR error	RETURN			0	0
EMA	EIREQU	GET	291	291	Unknown EIR error	RETURN			0	0

2.2 HSS services

All the services described in this subsection are activated through HSS system of HP.

The services activated through HP HSS are:

- Create 4G subscription.
- Delete 4G subscription.
- Update 4G subscription.
- Query 4G subscription.

2.2.1 HSS (4G)

An HSS is also the master profile database of LTE subscribers for a provider. Besides managing a master list of features and services that are associated with each subscriber, and supporting access authentication and authorization of the user, the HSS's role is to provide the subscriber profile information to Evolved Packet Core (EPC) network components, such as the Mobility Management Entity (MME).

The HP HSS subscription activation is based on the profile defined inside the HSS, this fact reduce the number of parameters needed to create a subscription in the target.

2.2.1.1 HSS Create Subscriber Operation

The next table has the input parameters defined for this service in the Service Catalog. These are the parameters that need to be sent to the MSA northbound interface to activate this service.

The means of each column in this table is:

- Name: Name of the parameter in the northbound interface.
- Type: Type of the parameters.

- **Format:** is a regular expression used to validate the value of the parameter, if the value received in the northbound interfaces does not match this regular expression an error will be returned indicating the error.
- **Mandatory:** indicates is the parameters is mandatory for this service.
- **Default Value:** indicate a default value set for this parameters is case that it is not received in the service request.

INPUT				
Name	Type	Format	Mandatory	Default Value
MSISDN	String	\d{5,15}	Yes	
IMSI	String	\d{15}	Yes	
PROFILE	String		Yes	

The next table has the values returned in the northbound interface as a response for this service request.

OUTPUT		
Name	Type	Description
S_SOSA_CODE	String	SOSA internal output, indicated is the was ok or not
S_SOSA_DESCRIPTION	String	SOSA internal description
S_CODE	String	Represent the output code returned by this action
S_DESCRIPTION	String	Represent the output description for this action
NE_CODE	String	Code returned by the target
NE_DESCRIPTION	String	Description returned by the target
NE_OUTPUT	String	Exactly output returned by the target
NE_ACT_TOTAL_TIME	String	Time taken to perform the activation only in the target (in milliseconds)
NETWORKELEMENT	String	Name of the target where the activation have been done
COMMANDS_SENT	String	Command sent to the target
WF_INSTANCE	String	Name of the HPSA workflow manager that executed this action

2.2.1.2 HSS Delete Subscriber Operation

The next table has the input parameters defined for this service in the Service Catalog. These are the parameters that need to be sent to the MSA northbound interface to activate this service.

The means of each column in this table is:

- **Name:** Name of the parameter in the northbound interface.

- Type: Type of the parameters.
- Format: is a regular expression used to validate the value of the parameter, if the value received in the northbound interfaces does not match this regular expression an error will be returned indicating the error.
- Mandatory: indicates is the parameters is mandatory for this service.
- Default Value: indicate a default value set for this parameters is case that it is not received in the service request.

INPUT				
Name	Type	Format	Mandatory	Default Value
IMSI	String	\d{15}	Yes	

The next table has the values returned in the northbound interface as a response for this service request.

OUTPUT		
Name	Type	Description
S_SOSA_CODE	String	SOSA internal output, indicated is the was ok or not
S_SOSA_DESCRIPTION	String	SOSA internal description
S_CODE	String	Represent the output code returned by this action
S_DESCRIPTION	String	Represent the output description for this action
NE_CODE	String	Code returned by the target
NE_DESCRIPTION	String	Description returned by the target
NE_OUTPUT	String	Exactly output returned by the target
NE_ACT_TOTAL_TIME	String	Time taken to perform the activation only in the target (in milliseconds)
NETWORKELEMENT	String	Name of the target where the activation have been done
COMMANDS_SENT	String	Command sent to the target
WF_INSTANCE	String	Name of the HPSA workflow manager that executed this action

2.2.1.3 HSS Set Subscriber Operation

The next table has the input parameters defined for this service in the Service Catalog. These are the parameters that need to be sent to the MSA northbound interface to activate this service.

The means of each column in this table is:

- Name: Name of the parameter in the northbound interface.
- Type: Type of the parameters.

- **Format:** is a regular expression used to validate the value of the parameter, if the value received in the northbound interfaces does not match this regular expression an error will be returned indicating the error.
- **Mandatory:** indicates is the parameters is mandatory for this service.
- **Default Value:** indicate a default value set for this parameters is case that it is not received in the service request.

INPUT				
Name	Type	Format	Mandatory	Default Value
MSISDN	String	\d{5,15}	Yes	
IMSI	String	\d{15}	Yes	
PROFILE	String		Yes	

The next table has the values returned in the northbound interface as a response for this service request.

OUTPUT		
Name	Type	Description
S_SOSA_CODE	String	SOSA internal output, indicated is the was ok or not
S_SOSA_DESCRIPTION	String	SOSA internal description
S_CODE	String	Represent the output code returned by this action
S_DESCRIPTION	String	Represent the output description for this action
NE_CODE	String	Code returned by the target
NE_DESCRIPTION	String	Description returned by the target
NE_OUTPUT	String	Exactly output returned by the target
NE_ACT_TOTAL_TIME	String	Time taken to perform the activation only in the target (in milliseconds)
NETWORKELEMENT	String	Name of the target where the activation have been done
COMMANDS_SENT	String	Command sent to the target
WF_INSTANCE	String	Name of the HPSA workflow manager that executed this action

2.2.1.4 HSS Query Subscriber Operation

The next table has the input parameters defined for this service in the Service Catalog. These are the parameters that need to be sent to the MSA northbound interface to activate this service.

The means of each column in this table is:

- **Name:** Name of the parameter in the northbound interface.
- **Type:** Type of the parameters.
- **Format:** is a regular expression used to validate the value of the parameter, if the value received in the northbound interfaces does not match this regular expression an error will be returned indicating the error.

- **Mandatory:** indicates is the parameters is mandatory for this service.
- **Default Value:** indicate a default value set for this parameters is case that it is not received in the service request.

INPUT				
Name	Type	Format	Mandatory	Default Value
IMSI	String	\d{15}	Yes	

The next table has the values returned in the northbound interface as a response for this service request.

OUTPUT		
Name	Type	Description
S_SOSA_CODE	String	SOSA internal output, indicated is the was ok or not
S_SOSA_DESCRIPTION	String	SOSA internal description
S_CODE	String	Represent the output code returned by this action
S_DESCRIPTION	String	Represent the output description for this action
NE_CODE	String	Code returned by the target
NE_DESCRIPTION	String	Description returned by the target
NE_OUTPUT	String	Exactly output returned by the target
NE_ACT_TOTAL_TIME	String	Time taken to perform the activation only in the target (in milliseconds)
NETWORKELEMENT	String	Name of the target where the activation have been done
COMMANDS_SENT	String	Command sent to the target
WF_INSTANCE	String	Name of the HPSA workflow manager that executed this action
A3	String	A3 value for this subscription
A8	String	A8 value for this subscription
AKA_VERSION	String	AKA_VERSION value for this subscription
AMBR_MAX_REQ_BANDWIDTH_DL	String	AMBR_MAX_REQ_BANDWIDTH_DL value for this subscription
AMBR_MAX_REQ_BANDWIDTH_UL	String	AMBR_MAX_REQ_BANDWIDTH_UL value for this subscription
AMF_VALUE	String	AMF_VALUE value for this subscription
APN_CONFIG_ENTRY_NAMES	String	APN_CONFIG_ENTRY_NAMES value for this subscription
APN_CONFIG_ENTRY_NAME_1	String	APN_CONFIG_ENTRY_NAME_1 value for this subscription
APN_CONFIG_ENTRY_NAME_10	String	APN_CONFIG_ENTRY_NAME_10 value for this subscription
APN_CONFIG_ENTRY_NAME_11	String	APN_CONFIG_ENTRY_NAME_11 value for this subscription
APN_CONFIG_ENTRY_NAME_12	String	APN_CONFIG_ENTRY_NAME_12 value for this subscription

NAME_12		
APN_CONFIG_ENTRY_NAME_13	String	APN_CONFIG_ENTRY_NAME_13 value for this subscription
APN_CONFIG_ENTRY_NAME_14	String	APN_CONFIG_ENTRY_NAME_14 value for this subscription
APN_CONFIG_ENTRY_NAME_15	String	APN_CONFIG_ENTRY_NAME_15 value for this subscription
APN_CONFIG_ENTRY_NAME_16	String	APN_CONFIG_ENTRY_NAME_16 value for this subscription
APN_CONFIG_ENTRY_NAME_17	String	APN_CONFIG_ENTRY_NAME_17 value for this subscription
APN_CONFIG_ENTRY_NAME_18	String	APN_CONFIG_ENTRY_NAME_18 value for this subscription
APN_CONFIG_ENTRY_NAME_19	String	APN_CONFIG_ENTRY_NAME_19 value for this subscription
APN_CONFIG_ENTRY_NAME_2	String	APN_CONFIG_ENTRY_NAME_2 value for this subscription
APN_CONFIG_ENTRY_NAME_20	String	APN_CONFIG_ENTRY_NAME_20 value for this subscription
APN_CONFIG_ENTRY_NAME_21	String	APN_CONFIG_ENTRY_NAME_21 value for this subscription
APN_CONFIG_ENTRY_NAME_22	String	APN_CONFIG_ENTRY_NAME_22 value for this subscription
APN_CONFIG_ENTRY_NAME_23	String	APN_CONFIG_ENTRY_NAME_23 value for this subscription
APN_CONFIG_ENTRY_NAME_24	String	APN_CONFIG_ENTRY_NAME_24 value for this subscription
APN_CONFIG_ENTRY_NAME_25	String	APN_CONFIG_ENTRY_NAME_25 value for this subscription
APN_CONFIG_ENTRY_NAME_26	String	APN_CONFIG_ENTRY_NAME_26 value for this subscription
APN_CONFIG_ENTRY_NAME_27	String	APN_CONFIG_ENTRY_NAME_27 value for this subscription
APN_CONFIG_ENTRY_NAME_28	String	APN_CONFIG_ENTRY_NAME_28 value for this subscription
APN_CONFIG_ENTRY_NAME_29	String	APN_CONFIG_ENTRY_NAME_29 value for this subscription
APN_CONFIG_ENTRY_NAME_3	String	APN_CONFIG_ENTRY_NAME_3 value for this subscription
APN_CONFIG_ENTRY_NAME_30	String	APN_CONFIG_ENTRY_NAME_30 value for this subscription
APN_CONFIG_ENTRY_NAME_31	String	APN_CONFIG_ENTRY_NAME_31 value for this subscription
APN_CONFIG_ENTRY_NAME_32	String	APN_CONFIG_ENTRY_NAME_32 value for this subscription
APN_CONFIG_ENTRY_NAME_33	String	APN_CONFIG_ENTRY_NAME_33 value for this subscription
APN_CONFIG_ENTRY_NAME_34	String	APN_CONFIG_ENTRY_NAME_34 value for this subscription

APN_CONFIG_ENTRY_NAME_35	String	APN_CONFIG_ENTRY_NAME_35 value for this subscription
APN_CONFIG_ENTRY_NAME_36	String	APN_CONFIG_ENTRY_NAME_36 value for this subscription
APN_CONFIG_ENTRY_NAME_37	String	APN_CONFIG_ENTRY_NAME_37 value for this subscription
APN_CONFIG_ENTRY_NAME_38	String	APN_CONFIG_ENTRY_NAME_38 value for this subscription
APN_CONFIG_ENTRY_NAME_39	String	APN_CONFIG_ENTRY_NAME_39 value for this subscription
APN_CONFIG_ENTRY_NAME_4	String	APN_CONFIG_ENTRY_NAME_4 value for this subscription
APN_CONFIG_ENTRY_NAME_40	String	APN_CONFIG_ENTRY_NAME_40 value for this subscription
APN_CONFIG_ENTRY_NAME_41	String	APN_CONFIG_ENTRY_NAME_41 value for this subscription
APN_CONFIG_ENTRY_NAME_42	String	APN_CONFIG_ENTRY_NAME_42 value for this subscription
APN_CONFIG_ENTRY_NAME_43	String	APN_CONFIG_ENTRY_NAME_43 value for this subscription
APN_CONFIG_ENTRY_NAME_44	String	APN_CONFIG_ENTRY_NAME_44 value for this subscription
APN_CONFIG_ENTRY_NAME_45	String	APN_CONFIG_ENTRY_NAME_45 value for this subscription
APN_CONFIG_ENTRY_NAME_46	String	APN_CONFIG_ENTRY_NAME_46 value for this subscription
APN_CONFIG_ENTRY_NAME_47	String	APN_CONFIG_ENTRY_NAME_47 value for this subscription
APN_CONFIG_ENTRY_NAME_48	String	APN_CONFIG_ENTRY_NAME_48 value for this subscription
APN_CONFIG_ENTRY_NAME_49	String	APN_CONFIG_ENTRY_NAME_49 value for this subscription
APN_CONFIG_ENTRY_NAME_5	String	APN_CONFIG_ENTRY_NAME_5 value for this subscription
APN_CONFIG_ENTRY_NAME_50	String	APN_CONFIG_ENTRY_NAME_50 value for this subscription
APN_CONFIG_ENTRY_NAME_6	String	APN_CONFIG_ENTRY_NAME_6 value for this subscription
APN_CONFIG_ENTRY_NAME_7	String	APN_CONFIG_ENTRY_NAME_7 value for this subscription
APN_CONFIG_ENTRY_NAME_8	String	APN_CONFIG_ENTRY_NAME_8 value for this subscription
APN_CONFIG_ENTRY_NAME_9	String	APN_CONFIG_ENTRY_NAME_9 value for this subscription
APN_COS_NAME	String	APN_COS_NAME value for this subscription
APN_OI_REPLACEMENT	String	APN_OI_REPLACEMENT value for this subscription
APN_SP_ADDR1_1	String	APN_SP_ADDR1_1 value for this subscription
APN_SP_ADDR1_2	String	APN_SP_ADDR1_2 value for this subscription

APN_SP_ADDR1_3	String	APN_SP_ADDR1_3 value for this subscription
APN_SP_ADDR1_4	String	APN_SP_ADDR1_4 value for this subscription
APN_SP_ADDR1_5	String	APN_SP_ADDR1_5 value for this subscription
APN_SP_ADDR1_HR_1	String	APN_SP_ADDR1_HR_1 value for this subscription
APN_SP_ADDR1_HR_2	String	APN_SP_ADDR1_HR_2 value for this subscription
APN_SP_ADDR1_HR_3	String	APN_SP_ADDR1_HR_3 value for this subscription
APN_SP_ADDR1_HR_4	String	APN_SP_ADDR1_HR_4 value for this subscription
APN_SP_ADDR1_HR_5	String	APN_SP_ADDR1_HR_5 value for this subscription
APN_SP_ADDR1_TYPE_1	String	APN_SP_ADDR1_TYPE_1 value for this subscription
APN_SP_ADDR1_TYPE_2	String	APN_SP_ADDR1_TYPE_2 value for this subscription
APN_SP_ADDR1_TYPE_3	String	APN_SP_ADDR1_TYPE_3 value for this subscription
APN_SP_ADDR1_TYPE_4	String	APN_SP_ADDR1_TYPE_4 value for this subscription
APN_SP_ADDR1_TYPE_5	String	APN_SP_ADDR1_TYPE_5 value for this subscription
APN_SP_ADDR2_1	String	APN_SP_ADDR2_1 value for this subscription
APN_SP_ADDR2_2	String	APN_SP_ADDR2_2 value for this subscription
APN_SP_ADDR2_3	String	APN_SP_ADDR2_3 value for this subscription
APN_SP_ADDR2_4	String	APN_SP_ADDR2_4 value for this subscription
APN_SP_ADDR2_5	String	APN_SP_ADDR2_5 value for this subscription
APN_SP_ADDR2_HR_1	String	APN_SP_ADDR2_HR_1 value for this subscription
APN_SP_ADDR2_HR_2	String	APN_SP_ADDR2_HR_2 value for this subscription
APN_SP_ADDR2_HR_3	String	APN_SP_ADDR2_HR_3 value for this subscription
APN_SP_ADDR2_HR_4	String	APN_SP_ADDR2_HR_4 value for this subscription
APN_SP_ADDR2_HR_5	String	APN_SP_ADDR2_HR_5 value for this subscription
APN_SP_ADDR2_TYPE_1	String	APN_SP_ADDR2_TYPE_1 value for this subscription
APN_SP_ADDR2_TYPE_2	String	APN_SP_ADDR2_TYPE_2 value for this subscription
APN_SP_ADDR2_TYPE_3	String	APN_SP_ADDR2_TYPE_3 value for this subscription
APN_SP_ADDR2_TYPE_4	String	APN_SP_ADDR2_TYPE_4 value for this subscription
APN_SP_ADDR2_TYPE_5	String	APN_SP_ADDR2_TYPE_5 value for this subscription
APN_SP_ADDR_APN_COS_IDX_1	String	APN_SP_ADDR_APN_COS_IDX_1 value for this subscription
APN_SP_ADDR_APN_COS_IDX_2	String	APN_SP_ADDR_APN_COS_IDX_2 value for this subscription
APN_SP_ADDR_APN_COS_IDX_3	String	APN_SP_ADDR_APN_COS_IDX_3 value for this subscription
APN_SP_ADDR_APN_COS_IDX_4	String	APN_SP_ADDR_APN_COS_IDX_4 value for this subscription

APN_SP_ADDR_APN_COS_IDX_5	String	APN_SP_ADDR_APN_COS_IDX_5 value for this subscription
APN_SP_ADDR_APN_NAME_1	String	APN_SP_ADDR_APN_NAME_1 value for this subscription
APN_SP_ADDR_APN_NAME_2	String	APN_SP_ADDR_APN_NAME_2 value for this subscription
APN_SP_ADDR_APN_NAME_3	String	APN_SP_ADDR_APN_NAME_3 value for this subscription
APN_SP_ADDR_APN_NAME_4	String	APN_SP_ADDR_APN_NAME_4 value for this subscription
APN_SP_ADDR_APN_NAME_5	String	APN_SP_ADDR_APN_NAME_5 value for this subscription
ATTACH_STATUS	String	ATTACH_STATUS value for this subscription
AV_GEN_COUNT	String	AV_GEN_COUNT value for this subscription
CHARGING_CHARACTERISTICS	String	CHARGING_CHARACTERISTICS value for this subscription
CHARGING_CHAR_ENABLED	String	CHARGING_CHAR_ENABLED value for this subscription
DEFAULT_K_PROVISIONED	String	DEFAULT_K_PROVISIONED value for this subscription
DEFAULT_OPC_PROVISIONED	String	DEFAULT_OPC_PROVISIONED value for this subscription
DEFAULT_OP_PROVISIONED	String	DEFAULT_OP_PROVISIONED value for this subscription
DEF_APN_CONFIG_ENTRY_NAME	String	DEF_APN_CONFIG_ENTRY_NAME value for this subscription
DYNAMIC_APN_INFO	String	DYNAMIC_APN_INFO value for this subscription
DYNAMIC_APN_INFO_HR	String	DYNAMIC_APN_INFO_HR value for this subscription
EPS_SUBSCRIPTION_ENABLED	String	EPS_SUBSCRIPTION_ENABLED value for this subscription
E_UTRAN_AKA_SOURCE	String	E_UTRAN_AKA_SOURCE value for this subscription
E_UTRAN_ALLOWED	String	E_UTRAN_ALLOWED value for this subscription
GAN_ALLOWED	String	GAN_ALLOWED value for this subscription
GERAN_ALLOWED	String	GERAN_ALLOWED value for this subscription
GPRS_SUBSCRIPTION_ENABLED	String	GPRS_SUBSCRIPTION_ENABLED value for this subscription
HOME_GMLC_ADDRESS	String	HOME_GMLC_ADDRESS value for this subscription
HOME_GMLC_ADDRESS_HR	String	HOME_GMLC_ADDRESS_HR value for this subscription
HOME_GMLC_ADDR_TYPE	String	HOME_GMLC_ADDR_TYPE value for this subscription
HO_TO_NON_3GPP_ACCESS_ALLOWED	String	HO_TO_NON_3GPP_ACCESS_ALLOWED value for this subscription
HSS_ADDRESS_PROPAGATED	String	HSS_ADDRESS_PROPAGATED value for this subscription

HSS_NAME	String	HSS_NAME value for this subscription
IMEI	String	IMEI value for this subscription
IMSI	String	IMSI value for this subscription
I_HSPA_EVOLUTION_ALLOWED	String	I_HSPA_EVOLUTION_ALLOWED value for this subscription
KEY	String	KEY value for this subscription
K_ENCRYPT_ALG_VER	String	K_ENCRYPT_ALG_VER value for this subscription
K_ENCRYPT_KEY_INDEX	String	K_ENCRYPT_KEY_INDEX value for this subscription
K_INTEGRITY_VALUE	String	K_INTEGRITY_VALUE value for this subscription
LAST_AV_GEN_TIME	String	LAST_AV_GEN_TIME value for this subscription
LAST_AV_GEN_TIME_LOCAL	String	LAST_AV_GEN_TIME_LOCAL value for this subscription
LAST_MODIFIED	String	LAST_MODIFIED value for this subscription
LAST_MODIFIED_LOCAL	String	LAST_MODIFIED_LOCAL value for this subscription
LAST_MOD_SCC_AS_TIME	String	LAST_MOD_SCC_AS_TIME value for this subscription
LAST_MOD_USER_ACTION	String	LAST_MOD_USER_ACTION value for this subscription
LAST_MOD_USER_ID	String	LAST_MOD_USER_ID value for this subscription
LAST_MOD_USER_TIME	String	LAST_MOD_USER_TIME value for this subscription
LAST_MOD_USER_TIME_LOCAL	String	LAST_MOD_USER_TIME_LOCAL value for this subscription
LOG_DIAMETER_COMMANDS	String	LOG_DIAMETER_COMMANDS value for this subscription
MME_APN_SCREENING_COS	String	MME_APN_SCREENING_COS value for this subscription
MME_HOMGNS_SUPPORT_IMS_VOPSS	String	MME_HOMGNS_SUPPORT_IMS_VOPSS value for this subscription
MME_RAT_TYPE	String	MME_RAT_TYPE value for this subscription
MME_STATE_CHANGE_TS	String	MME_STATE_CHANGE_TS value for this subscription
MME_STATE_CHANGE_TS_LOCAL	String	MME_STATE_CHANGE_TS_LOCAL value for this subscription
MME_VISITED_GMLC_ADDRESS	String	MME_VISITED_GMLC_ADDRESS value for this subscription
MME_VISITED_GMLC_ADDRESS_HR	String	MME_VISITED_GMLC_ADDRESS_HR value for this subscription
MSISDN	String	MSISDN value for this subscription
NAM	String	NAM value for this subscription
ODB_ALL_APN_ENABLED	String	ODB_ALL_APN_ENABLED value for this subscription
ODB_HPLMN_APN_ENABLED	String	ODB_HPLMN_APN_ENABLED value for this subscription
ODB_HPLMN_TYPE1_ENABLED	String	ODB_HPLMN_TYPE1_ENABLED value for this subscription
ODB_HPLMN_TYPE2_ENABLED	String	ODB_HPLMN_TYPE2_ENABLED value for this subscription

ODB_HPLMN_TYPE3_ENABLED	String	ODB_HPLMN_TYPE3_ENABLED value for this subscription
ODB_HPLMN_TYPE4_ENABLED	String	ODB_HPLMN_TYPE4_ENABLED value for this subscription
ODB_VPLMN_APN_ENABLED	String	ODB_VPLMN_APN_ENABLED value for this subscription
OPC_ENCRYPT_ALG_VER	String	OPC_ENCRYPT_ALG_VER value for this subscription
OPC_ENCRYPT_KEY_INDEX	String	OPC_ENCRYPT_KEY_INDEX value for this subscription
OPC_INTEGRITY_VALUE	String	OPC_INTEGRITY_VALUE value for this subscription
OP_ENCRYPT_ALG_VER	String	OP_ENCRYPT_ALG_VER value for this subscription
OP_ENCRYPT_KEY_INDEX	String	OP_ENCRYPT_KEY_INDEX value for this subscription
OP_INTEGRITY_VALUE	String	OP_INTEGRITY_VALUE value for this subscription
PDP_CTX_COS_NAMES	String	PDP_CTX_COS_NAMES value for this subscription
PDP_CTX_COS_NAME_1	String	PDP_CTX_COS_NAME_1 value for this subscription
PDP_CTX_COS_NAME_10	String	PDP_CTX_COS_NAME_10 value for this subscription
PDP_CTX_COS_NAME_11	String	PDP_CTX_COS_NAME_11 value for this subscription
PDP_CTX_COS_NAME_12	String	PDP_CTX_COS_NAME_12 value for this subscription
PDP_CTX_COS_NAME_13	String	PDP_CTX_COS_NAME_13 value for this subscription
PDP_CTX_COS_NAME_14	String	PDP_CTX_COS_NAME_14 value for this subscription
PDP_CTX_COS_NAME_15	String	PDP_CTX_COS_NAME_15 value for this subscription
PDP_CTX_COS_NAME_16	String	PDP_CTX_COS_NAME_16 value for this subscription
PDP_CTX_COS_NAME_17	String	PDP_CTX_COS_NAME_17 value for this subscription
PDP_CTX_COS_NAME_18	String	PDP_CTX_COS_NAME_18 value for this subscription
PDP_CTX_COS_NAME_19	String	PDP_CTX_COS_NAME_19 value for this subscription
PDP_CTX_COS_NAME_2	String	PDP_CTX_COS_NAME_2 value for this subscription
PDP_CTX_COS_NAME_20	String	PDP_CTX_COS_NAME_20 value for this subscription
PDP_CTX_COS_NAME_21	String	PDP_CTX_COS_NAME_21 value for this subscription
PDP_CTX_COS_NAME_22	String	PDP_CTX_COS_NAME_22 value for this subscription
PDP_CTX_COS_NAME_23	String	PDP_CTX_COS_NAME_23 value for this subscription

PDP_CTX_COS_NAME_24	String	PDP_CTX_COS_NAME_24 value for this subscription
PDP_CTX_COS_NAME_25	String	PDP_CTX_COS_NAME_25 value for this subscription
PDP_CTX_COS_NAME_26	String	PDP_CTX_COS_NAME_26 value for this subscription
PDP_CTX_COS_NAME_27	String	PDP_CTX_COS_NAME_27 value for this subscription
PDP_CTX_COS_NAME_28	String	PDP_CTX_COS_NAME_28 value for this subscription
PDP_CTX_COS_NAME_29	String	PDP_CTX_COS_NAME_29 value for this subscription
PDP_CTX_COS_NAME_3	String	PDP_CTX_COS_NAME_3 value for this subscription
PDP_CTX_COS_NAME_30	String	PDP_CTX_COS_NAME_30 value for this subscription
PDP_CTX_COS_NAME_31	String	PDP_CTX_COS_NAME_31 value for this subscription
PDP_CTX_COS_NAME_32	String	PDP_CTX_COS_NAME_32 value for this subscription
PDP_CTX_COS_NAME_33	String	PDP_CTX_COS_NAME_33 value for this subscription
PDP_CTX_COS_NAME_34	String	PDP_CTX_COS_NAME_34 value for this subscription
PDP_CTX_COS_NAME_35	String	PDP_CTX_COS_NAME_35 value for this subscription
PDP_CTX_COS_NAME_36	String	PDP_CTX_COS_NAME_36 value for this subscription
PDP_CTX_COS_NAME_37	String	PDP_CTX_COS_NAME_37 value for this subscription
PDP_CTX_COS_NAME_38	String	PDP_CTX_COS_NAME_38 value for this subscription
PDP_CTX_COS_NAME_39	String	PDP_CTX_COS_NAME_39 value for this subscription
PDP_CTX_COS_NAME_4	String	PDP_CTX_COS_NAME_4 value for this subscription
PDP_CTX_COS_NAME_40	String	PDP_CTX_COS_NAME_40 value for this subscription
PDP_CTX_COS_NAME_41	String	PDP_CTX_COS_NAME_41 value for this subscription
PDP_CTX_COS_NAME_42	String	PDP_CTX_COS_NAME_42 value for this subscription
PDP_CTX_COS_NAME_43	String	PDP_CTX_COS_NAME_43 value for this subscription
PDP_CTX_COS_NAME_44	String	PDP_CTX_COS_NAME_44 value for this subscription
PDP_CTX_COS_NAME_45	String	PDP_CTX_COS_NAME_45 value for this subscription
PDP_CTX_COS_NAME_46	String	PDP_CTX_COS_NAME_46 value for this subscription

46		
PDP_CTX_COS_NAME_47	String	PDP_CTX_COS_NAME_47 value for this subscription
PDP_CTX_COS_NAME_48	String	PDP_CTX_COS_NAME_48 value for this subscription
PDP_CTX_COS_NAME_49	String	PDP_CTX_COS_NAME_49 value for this subscription
PDP_CTX_COS_NAME_5	String	PDP_CTX_COS_NAME_5 value for this subscription
PDP_CTX_COS_NAME_50	String	PDP_CTX_COS_NAME_50 value for this subscription
PDP_CTX_COS_NAME_6	String	PDP_CTX_COS_NAME_6 value for this subscription
PDP_CTX_COS_NAME_7	String	PDP_CTX_COS_NAME_7 value for this subscription
PDP_CTX_COS_NAME_8	String	PDP_CTX_COS_NAME_8 value for this subscription
PDP_CTX_COS_NAME_9	String	PDP_CTX_COS_NAME_9 value for this subscription
PPR_ADDRESS	String	PPR_ADDRESS value for this subscription
PPR_ADDRESS_HR	String	PPR_ADDRESS_HR value for this subscription
PPR_ADDRESS_TYPE	String	PPR_ADDRESS_TYPE value for this subscription
PREVIOUS_SERVING_MME_NAME	String	PREVIOUS_SERVING_MME_NAME value for this subscription
PREVIOUS_SERVING_SGSN_NAME	String	PREVIOUS_SERVING_SGSN_NAME value for this subscription
PREVIOUS_SERVING_SGSN_NUMBER	String	PREVIOUS_SERVING_SGSN_NUMBER value for this subscription
PREVIOUS_SERVING_SGSN_NUM_MME	String	PREVIOUS_SERVING_SGSN_NUM_MME value for this subscription
PREVIOUS_SGSN_ADDRESS	String	PREVIOUS_SGSN_ADDRESS value for this subscription
PREVIOUS_SGSN_ADDRESS_HR	String	PREVIOUS_SGSN_ADDRESS_HR value for this subscription
PURGED_IN_MME	String	PURGED_IN_MME value for this subscription
PURGED_IN_SGSN	String	PURGED_IN_SGSN value for this subscription
REGION_NAME	String	REGION_NAME value for this subscription
RFSP	String	RFSP value for this subscription
ROAM_RESTRICT_NAME	String	ROAM_RESTRICT_NAME value for this subscription
ROAM_REST_UNSUPPORTED_FEAT	String	ROAM_REST_UNSUPPORTED_FEAT value for this subscription
SEQ	String	SEQ value for this subscription
SERVING_MME_DEST_REALM	String	SERVING_MME_DEST_REALM value for this subscription
SERVING_MME_NAME	String	SERVING_MME_NAME value for this subscription
SERVING_SGSN_DEST_	String	SERVING_SGSN_DEST_REALM value for this subscription

REALM		
SERVING_SGSN_NAME	String	SERVING_SGSN_NAME value for this subscription
SERVING_SGSN_NUMBER	String	SERVING_SGSN_NUMBER value for this subscription
SERVING_SGSN_NUM_MME	String	SERVING_SGSN_NUM_MME value for this subscription
SGSN_ADDRESS	String	SGSN_ADDRESS value for this subscription
SGSN_ADDRESS_HR	String	SGSN_ADDRESS_HR value for this subscription
SGSN_APN_SCREENING_COS	String	SGSN_APN_SCREENING_COS value for this subscription
SGSN_AREA_RESTRICTED	String	SGSN_AREA_RESTRICTED value for this subscription
SGSN_ATTACH_INTERFACE	String	SGSN_ATTACH_INTERFACE value for this subscription
SGSN_ATTACH_STATUS	String	SGSN_ATTACH_STATUS value for this subscription
SGSN_HOMGNS_SUPPORT_IMS_VOPSS	String	SGSN_HOMGNS_SUPPORT_IMS_VOPSS value for this subscription
SGSN_RAT_TYPE	String	SGSN_RAT_TYPE value for this subscription
SGSN_ROAM_REST_UN_SUPPORT_FEAT	String	SGSN_ROAM_REST_UN_SUPPORT_FEAT value for this subscription
SGSN_STATE_CHANGE_TS	String	SGSN_STATE_CHANGE_TS value for this subscription
SGSN_STATE_CHANGE_TS_LOCAL	String	SGSN_STATE_CHANGE_TS_LOCAL value for this subscription
SGSN_T_ADS_DATA_RET_SUPPORTED	String	SGSN_T_ADS_DATA_RET_SUPPORTED value for this subscription
SGSN_ULR_FEATURE_LIST	String	SGSN_ULR_FEATURE_LIST value for this subscription
SGSN_ULR_FLAGS	String	SGSN_ULR_FLAGS value for this subscription
SGSN_VISITED_PLMN_ID_MCC	String	SGSN_VISITED_PLMN_ID_MCC value for this subscription
SGSN_VISITED_PLMN_ID_MNC	String	SGSN_VISITED_PLMN_ID_MNC value for this subscription
SIM_TYPE	String	SIM_TYPE value for this subscription
SINGLE_REG_ACTIVE	String	SINGLE_REG_ACTIVE value for this subscription
SOFTWARE_VERSION	String	SOFTWARE_VERSION value for this subscription
SQNEPS	String	SQNEPS value for this subscription
SQNPS	String	SQNPS value for this subscription
STN_SR	String	STN_SR value for this subscription
SUBSCRIBER_ID	String	SUBSCRIBER_ID value for this subscription
SUBSCRIBER_STATUS	String	SUBSCRIBER_STATUS value for this subscription
T_ADS_APPLICABLE_VPLMNS_COS	String	T_ADS_APPLICABLE_VPLMNS_COS value for this subscription
ULR_FEATURE_LIST1	String	ULR_FEATURE_LIST1 value for this subscription
ULR_FLAGS	String	ULR_FLAGS value for this subscription

UTRAN_ALLOWED	String	UTRAN_ALLOWED value for this subscription
VISITED_PLMN_ID_MCC	String	VISITED_PLMN_ID_MCC value for this subscription
VISITED_PLMN_ID_MNC	String	VISITED_PLMN_ID_MNC value for this subscription

2.2.1.5 HSS Error Management

These are the errors returned by the HSS platform and the translation that MSA will applied.

Platform type	Service	Operation	Ne_code	Return_code	Return_description	Action	Number_of_retries	Timeout	Number_of_exists	Number_of_not_exists
HSS	DEFAULT	DEFAULT	-1	-1	Execution Failed	RETURN			0	0

2.3 Voice Mail service

This service is implemented over the platform ZTE. See in the next sections the parameters involved for service action.

2.3.1 Voice Mail Create Subscriber Operation

The next tables show the input and output parameters defined in the target for each operation. These are the expected parameters to activate this service. The means of each column in this table is:

- Field: name of the parameters expected for the target.
- Type: expected type of the parameters in the target.
- Mandatory: indicate if the parameter is mandatory or not.
- Description: meaningful description of the parameter.

METHOD NAME: CreateUser			
INPUT			
Field	Type	Mandatory	Description
BoxNumber	string(25)	Yes	Mailbox number that should be created.
OperID	string(30)	Yes	Operator name assigned for BOSS by VMS administrator
OperPwd	string(30)	Yes	Password of this operator set by VMS administrator,

			Not encrypted
ServiceClass	string(5)	No	Service class code of mailbox, it is numerical string which is defined by system operator. Default value is 1.
Language	string(5)	No	The prompt language of mailbox, it is numerical: 1 is English 2 is local language Default is 1.
Password	string(6)	No	The plain password of mailbox which is numeric number and length is 4 to 6 digits. Default password is 8888. When one mailbox's subscriber first enters her or his mailbox, system will ask her or him to input a new password.
EntryAuthen	string(5)	No	Whether user is required to input password when entering mailbox to retrieve message through registered phone, it is numerical: 1 activate password authentication 0 deactivate password authentication Default is 1.
MessageNotify	string(5)	No	Notification modes when new message is received. This field is three-digit value A1A2A3, in which the A1 digit indicates whether this mailbox uses MWN mode, the A2 digit indicates whether this mailbox uses Email notification mode and the

			<p>A3 digit indicates whether this mailbox uses dial-out notification mode. If one digit is 1, it means the corresponding notification mode is activated for this mailbox, if one digit is 0 means the corresponding notification mode is deactivated for this mailbox.</p> <p>This parameter's default value is 100 i.e. mailbox uses the MWN notification mode.</p> <p>For example, the parameter's value 101 means that a mailbox uses both MWN and dial-out notification mode but no Email notification. The value 100 means that a mailbox uses only MWN notification mode. The value 000 means that a mailbox doesn't use any new message notification mode.</p>
UserName	string(50)	No	<p>User name of mailbox owner can be numeric number and letters.</p> <p>Default is null.</p>
Email	string(75)	No	<p>Email address of mailbox owner; if provided it is required to be valid email format.</p> <p>Default is null.</p>
ZipCode	string(15)	No	<p>Postal code of mailbox owner can be numeric number and letters.</p> <p>Default is null.</p>
IDNumber	string(30)	No	<p>ID number of mailbox owner.</p>

			Default is null.
MWNTType	string(5)	No	The new voicemail notification type: 0 Normal Text 1 GSM SMPP 2 CDMA SMPP 3 EPI Command 4 IS41 SMSREQ
MWNDest	string(25)	No	The notification number for new voice mail. Default is the same with the BoxNumber
LDOperatorCode	String(10)	No	The long-distance operator access code for call back number. Default value is system parameter
OUTPUT			
Field	Type	Value	Description
Code	int	0	Succeed
		1	Mailbox number is not supplied
		3	Mailbox number has registered
		5	No available license
		6	Password format is wrong. It shall be a numeric number.
		7	Failure in operating database
		8	Undefined message type
		9	Wrong parameter format
		10	System failure

		11	Nonsupport notification mode
		12	Email address is not provided when choose email notification
		13	Operator does not exist or password is wrong
		14	Not right of this operator
		15	ServiceClass is not defined
		16	Certain parameter is out of valid range

The next table has the input parameters defined for this service in the Service Catalog. These are the parameters that need to be sent to the MSA northbound interface to activate this service.

The means of each column in this table is:

- Name: Name of the parameter in the northbound interface.
- Type: Type of the parameters.
- Format: is a regular expression used to validate the value of the parameter, if the value received in the northbound interfaces does not match this regular expression an error will be returned indicating the error.
- Mandatory: indicates is the parameters is mandatory for this service.
- Default Value: indicate a default value set for this parameters is case that it is not received in the service request.

INPUT				
Name	Type	Format	Mandatory	Default Value
MSISDN	String	.{1,25}	Yes	
SERVICECLASS	String	.{1, 5}	No	1
LANGUAGE	String	.{1, 5}	No	1
PASSWORD	String	.{1,6}	No	8888
ENTRYAUTHEN	String	.{1, 5}	No	1
MESSAGENOTIFY	String	[0 1][0 1][0 1]	No	100
USERNAME	String	.{1, 50}	No	
EMAIL	String	^[_A-Za-z0-9.]+(\.[_A-Za-z0-9.]*)@[A-Za-z0-9.]+(\.[A-Za-z0-9.]*)*\.[A-Za-z]{2,}\$	No	

ZIPCODE	String	.{1, 15}	No	
IDNUMBER	String	.{1, 30}	No	
MWNTYPE	String	[0 1 2 3 4]	No	0
MWNDEST	String	.{1, 25}	No	
LDOPERATORCODE	String	.{1, 10}	No	

The next table has the values returned in the northbound interface as a response for this service request.

OUTPUT		
Name	Type	Description
S_SOSA_CODE	String	SOSA internal output, indicated is the was ok or not
S_SOSA_DESCRIPTION	String	SOSA internal description
S_CODE	String	Represent the output code returned by this action
S_DESCRIPTION	String	Represent the output description for this action
NE_CODE	String	Code returned by the target
NE_DESCRIPTION	String	Description returned by the target
NE_OUTPUT	String	Exactly output returned by the target
NE_ACT_TOTAL_TIME	String	Time taken to perform the activation only in the target (in milliseconds)
NETWORKELEMENT	String	Name of the target where the activation have been done
COMMANDS_SENT	String	Command sent to the target
WF_INSTANCE	String	Name of the HPSA workflow manager that executed this action

2.3.2 Voice Mail Delete Subscriber Operation

The next tables show the input and output parameters defined in the target for each operation. These are the expected parameters to activate this service. The means of each column in this table is:

- Field: name of the parameters expected for the target.
- Type: expected type of the parameters in the target.
- Mandatory: indicate if the parameter is mandatory or not.
- Description: meaningful description of the parameter.

METHOD NAME: DeleteUser			
INPUT			
Field	Type	Mandatory	Description
BoxNumber	string(25)	Yes	Mailbox Number. Default is null.
OperID	string(30)	Yes	Operator name assigned for BOSS. Default is null.
OperPwd	String(30)	Yes	Password of this operator. Not encrypted. Default is null.
OUTPUT			
Field	Type	Value	Description
code	int	0	Succeed
		1	Mailbox number is not supplied
		4	Mailbox does not exist
		7	Failure in operating database
		8	Undefined message type
		9	Wrong parameter format
		10	System failure
		13	Operator does not exist or password is wrong
		14	Not right of this operator

The next table has the input parameters defined for this service in the Service Catalog. These are the parameters that need to be sent to the MSA northbound interface to activate this service.

The means of each column in this table is:

- Name: Name of the parameter in the northbound interface.
- Type: Type of the parameters.
- Format: is a regular expression used to validate the value of the parameter, if the value received in the northbound interfaces does not match this regular expression an error will be returned indicating the error.

- **Mandatory:** indicates is the parameters is mandatory for this service.
- **Default Value:** indicate a default value set for this parameters is case that it is not received in the service request.

INPUT				
Name	Type	Format	Mandatory	Default Value
MSISDN	String	.{1, 25}	Yes	

The next table has the values returned in the northbound interface as a response for this service request.

OUTPUT		
Name	Type	Description
S_SOSA_CODE	String	SOSA internal output, indicated is the was ok or not
S_SOSA_DESCRIPTION	String	SOSA internal description
S_CODE	String	Represent the output code returned by this action
S_DESCRIPTION	String	Represent the output description for this action
NE_CODE	String	Code returned by the target
NE_DESCRIPTION	String	Description returned by the target
NE_OUTPUT	String	Exactly output returned by the target
NE_ACT_TOTAL_TIME	String	Time taken to perform the activation only in the target (in milliseconds)
NETWORKELEMENT	String	Name of the target where the activation have been done
COMMANDS_SENT	String	Command sent to the target
WF_INSTANCE	String	Name of the HPSA workflow manager that executed this action

2.3.3 Voice Mail Set Subscriber Operation

The next tables show the input and output parameters defined in the target for each operation. These are the expected parameters to activate this service. The means of each column in this table is:

- **Field:** name of the parameters expected for the target.
- **Type:** expected type of the parameters in the target.
- **Mandatory:** indicate if the parameter is mandatory or not.
- **Description:** meaningful description of the parameter.

METHOD NAME: ModifyUser			
INPUT			
Field	Type	Mandatory	Description
BoxNumber	string(25)	No	Mailbox number that should be created.
OperID	string(30)	No	Operator name assigned for BOSS by VMS administrator
OperPwd	string(30)	No	Password of this operator set by VMS administrator, Not encrypted
ServiceClass	string(5)	No	Service class code of mailbox, it is numerical string which is defined by system operator. Default value is 1.
Language	string(5)	No	The prompt language of mailbox, it is numerical: 1 is English 2 is local language Default is 1.
Password	string(6)	No	The plain password of mailbox which is numeric number and length is 4 to 6 digits. Default password is 8888. When one mailbox's subscriber first enters her or his mailbox, system will ask her or him to input a new password.
EntryAuthen	string(5)	No	Whether user is required to input password when entering mailbox to retrieve message through registered phone, it is numerical: 1 activate password authentication 0 deactivate password authentication

			Default is 1.
MessageNotify	string(5)	No	<p>Notification modes when new message is received. This field is three-digit value A1A2A3, in which the A1 digit indicates whether this mailbox uses MWN mode, the A2 digit indicates whether this mailbox uses Email notification mode and the A3 digit indicates whether this mailbox uses dial-out notification mode. If one digit is 1, it means the corresponding notification mode is activated for this mailbox, if one digit is 0 means the corresponding notification mode is deactivated for this mailbox.</p> <p>This parameter's default value is 100 i.e. mailbox uses the MWN notification mode.</p> <p>For example, the parameter's value 101 means that a mailbox uses both MWN and dial-out notification mode but no Email notification. The value 100 means that a mailbox uses only MWN notification mode. The value 000 means that a mailbox doesn't use any new message notification mode.</p>
UserName	string(50)	No	<p>User name of mailbox owner can be numeric number and letters.</p> <p>Default is null.</p>
Email	string(75)	No	<p>Email address of mailbox owner; if provided it is required to be valid email</p>

			format. Default is null.
ZipCode	string(15)	No	Postal code of mailbox owner can be numeric number and letters. Default is null.
IDNumber	string(30)	No	ID number of mailbox owner. Default is null.
MWNTType	string(5)	No	The new voicemail notification type: 0 Normal Text 1 GSM SMPP 2 CDMA SMPP 3 EPI Command 4 IS41 SMSREQ
MWNDest	string(25)	No	The notification number for new voice mail. Default is the same with the BoxNumber
LDOperatorCode	String(10)	No	The long-distance operator access code for call back number. Default value is system parameter
OUTPUT			
Field	Type	Value	Description
code	int	0	Succeed
		1	Mailbox number is not provided
		4	Mailbox number does not exist
		5	No available license
		6	Password is wrong. It shall be a numeric number.
		7	Failure in operating database
		8	Undefined message

			type
		9	Wrong parameter format
		10	System failure
		11	Nonsupport notification mode
		12	Email address is not provided when choose email notification
		13	Operator does not exist or password is wrong
		14	Not right of this operator
		15	ServiceClass is not defined
		16	Certain parameter is out of valid range

The next table has the input parameters defined for this service in the Service Catalog. These are the parameters that need to be sent to the MSA northbound interface to activate this service.

The means of each column in this table is:

- Name: Name of the parameter in the northbound interface.
- Type: Type of the parameters.
- Format: is a regular expression used to validate the value of the parameter, if the value received in the northbound interfaces does not match this regular expression an error will be returned indicating the error.
- Mandatory: indicates is the parameters is mandatory for this service.
- Default Value: indicate a default value set for this parameters is case that it is not received in the service request.

INPUT				
Name	Type	Format	Mandatory	Default Value
MSISDN	String	.{1, 25}	Yes	
SERVICECLASS	String	.{1, 5}	No	
LANGUAGE	String	.{1, 5}	No	
PASSWORD	String	.{1, 6}	No	8888
ENTRYAUTHEN	String	.{1, 5}	No	
MESSAGENOTIFY	String	[0 1][0 1][0 1]	No	
USERNAME	String	.{1, 50}	No	

EMAIL	String	^[A-Za-z0-9]+(\.[A-Za-z0-9]+)*@[A-Za-z0-9]+(\.[A-Za-z0-9]+)*(\.[A-Za-z]{2,})\$	No	
ZIPCODE	String	{1, 15}	No	
IDNUMBER	String	{1, 30}	No	
MWNTYPE	String	[0 1 2 3 4]	No	
MWNDEST	String	{1, 25}	No	
LDOPERATORCODE	String	{1, 10}	No	

The next table has the values returned in the northbound interface as a response for this service request.

OUTPUT		
Name	Type	Description
S_SOSA_CODE	String	SOSA internal output, indicated is the was ok or not
S_SOSA_DESCRIPTION	String	SOSA internal description
S_CODE	String	Represent the output code returned by this action
S_DESCRIPTION	String	Represent the output description for this action
NE_CODE	String	Code returned by the target
NE_DESCRIPTION	String	Description returned by the target
NE_OUTPUT	String	Exactly output returned by the target
NE_ACT_TOTAL_TIME	String	Time taken to perform the activation only in the target (in milliseconds)
NETWORKELEMENT	String	Name of the target where the activation have been done
COMMANDS_SENT	String	Command sent to the target
WF_INSTANCE	String	Name of the HPSA workflow manager that executed this action

2.3.4 Voice Mail Query Subscriber Operation

The next tables show the input and output parameters defined in the target for each operation. These are the expected parameters to activate this service. The means of each column in this table is:

- Field: name of the parameters expected for the target.
- Type: expected type of the parameters in the target.
- Mandatory: indicate if the parameter is mandatory or not.
- Description: meaningful description of the parameter.

METHOD NAME: QueryUser			
INPUT			
Field	Type	Mandatory	Description
BoxNumber	String(25)	No	Mailbox Number
OperID	string(30)	Yes	Operator name assigned for BOSS
OperPwd	String(30)	Yes	Password of this operator. Not encrypted.
OUTPUT			
Field	Type	Value	Description
BoxNumber	string(25)		Mailbox number that should be created.
OperID	string(30)		Operator name assigned for BOSS by VMS administrator
OperPwd	string(30)		Password of this operator set by VMS administrator, Not encrypted
ServiceClass	string(5)		Service class code of mailbox, it is numerical string which is defined by system operator. Default value is 1.
Language	string(5)		The prompt language of mailbox, it is numerical: 1 is English 2 is local language Default is 1.
Password	string(6)		The plain password of mailbox, which is numeric number and length is 4 to 6 digits. Default password is 8888. When one mailbox's subscriber first enters her or his mailbox, system will ask her or him to input a new password.

EntryAuthen	string(5)		<p>Whether user is required to input password when entering mailbox to retrieve message through registered phone, it is numerical:</p> <p>1 activate password authentication</p> <p>0 deactivate password authentication default is 1.</p>
MessageNotify	string(5)		<p>Notification modes when new message is received. This field is three-digit value A1A2A3, in which the A1 digit indicates whether this mailbox uses MWN mode, the A2 digit indicates whether this mailbox uses Email notification mode and the A3 digit indicates whether this mailbox uses dial-out notification mode. If one digit is 1, it means the corresponding notification mode is activated for this mailbox, if one digit is 0 means the corresponding notification mode is deactivated for this mailbox.</p> <p>This parameter's default value is 100 i.e. mailbox uses the MWN notification mode.</p> <p>For example, the parameter's value 101 means that a mailbox uses both MWN and dial-out notification mode but no Email</p>

			notification. The value 100 means that a mailbox uses only MVN notification mode. The value 000 means that a mailbox doesn't use any new message notification mode.
UserName	string(50)		User name of mailbox owner can be numeric number and letters. Default is null.
Email	string(75)		Email address of mailbox owner; if provided it is required to be valid email format. Default is null.
ZipCode	string(15)		Postal code of mailbox owner can be numeric number and letters. Default is null.
IDNumber	string(30)		ID number of mailbox owner. Default is null.
MWNTType	string(5)		The new voicemail notification type: 0 Normal Text 1 GSM SMPP 2 CDMA SMPP 3 EPI Command 4 IS41 SMSREQ
MWNDest	string(25)		The notification number for new voice mail. Default is the same with the BoxNumber

The next table has the input parameters defined for this service in the Service Catalog. These are the parameters that need to be sent to the MSA northbound interface to activate this service.

The means of each column in this table is:

- Name: Name of the parameter in the northbound interface.
- Type: Type of the parameters.
- Format: is a regular expression used to validate the value of the parameter, if the value received in the northbound interfaces does not match this regular expression an error will be returned indicating the error.
- Mandatory: indicates is the parameters is mandatory for this service.
- Default Value: indicate a default value set for this parameters is case that it is not received in the service request.

INPUT				
Name	Type	Format	Mandatory	Default Value
MSISDN	String	.[1, 25}	Yes	

The next table has the values returned in the northbound interface as a response for this service request.

OUTPUT		
Name	Type	Description
S_SOSA_CODE	String	SOSA internal output, indicated is the was ok or not
S_SOSA_DESCRIPTION	String	SOSA internal description
S_CODE	String	Represent the output code returned by this action
S_DESCRIPTION	String	Represent the output description for this action
NE_CODE	String	Code returned by the target
NE_DESCRIPTION	String	Description returned by the target
NE_OUTPUT	String	Exactly output returned by the target
NE_ACT_TOTAL_TIME	String	Time taken to perform the activation only in the target (in milliseconds)
NETWORKELEMENT	String	Name of the target where the activation have been done
COMMANDS_SENT	String	Command sent to the target
WF_INSTANCE	String	Name of the HPSA workflow manager that executed this action
PASSWORD	String	PASSWORD value of this subscription
ENTRYAUTHEN	String	ENTRYAUTHEN value of this subscription
MESSAGENOTIFY	String	MESSAGENOTIFY value of this

		subscription
USERNAME	String	USERNAME value of this subscription
EMAIL	String	EMAIL value of this subscription
ZIPCODE	String	ZIPCODE value of this subscription
IDNUMBER	String	IDNUMBER value of this subscription
MWNTYPE	String	MWNTYPE value of this subscription
MWNDEST	String	MWNDEST value of this subscription
USERSTATUS	String	USERSTATUS value of this subscription
SERVICECLASS	String	SERVICECLASS value of this subscription
MSISDN	String	MSISDN value of this subscription
LANGUAGE	String	LANGUAGE value of this subscription

2.3.5 Voice Mail Error Management

These are the errors returned by the VoiceMail platform and the translation that MSA will applied.

Platform type	Service	Operation	Ne_code	Return_code	Return_description	Action	Number_retrieves	Time out	Number_exists	Number_not_exists
ZTE	VOICEMAIL	DEFAULT	1	1	mailbox number is not provided	RETURN			No	No
ZTE	VOICEMAIL	DEFAULT	4	4	mailbox does not exist	RETURN			Yes	No
ZTE	VOICEMAIL	DEFAULT	5	5	no available license	RETURN			No	No
ZTE	VOICEMAIL	DEFAULT	6	6	password is wrong; not all are numeric number	RETURN			No	No
ZTE	VOICEMAIL	DEFAULT	7	7	failure in operating database	RETURN			No	Yes
ZTE	VOICEMAIL	DEFAULT	8	8	undefined message type	RETURN			No	No
ZTE	VOICEMAIL	DEFAULT	9	9	wrong parameter format	RETURN			No	No
ZTE	VOICEMAIL	DEFAULT	10	10	system failure	RETURN			No	No
ZTE	VOICEMAIL	DEFAULT	11	11	Nonsupport notification	RETURN			No	No

					mode					
ZTE	VOICEMAIL	DEFAULT	12	12	Email address is not provided when choose email notification	RETURN			No	No
ZTE	VOICEMAIL	DEFAULT	13	13	operator does not exist or password is wrong	RETURN			No	No
ZTE	VOICEMAIL	DEFAULT	14	14	not right of this operator	RETURN			No	No
ZTE	VOICEMAIL	DEFAULT	15	15	ServiceClass is not defined	RETURN			No	No
ZTE	VOICEMAIL	DEFAULT	16	16	Certain parameter is out of valid range.	RETURN			No	No

2.4 Missed Call Alerts (MCA) service

This service is implemented over the platform ZTE. See in the next sections the parameters involved for service action

2.4.1 MCA Create Subscriber Operation

The next tables show the input and output parameters defined in the target for each operation. These are the expected parameters to activate this service. The means of each column in this table is:

- Field: name of the parameters expected for the target.
- Type: expected type of the parameters in the target.
- Mandatory: indicate if the parameter is mandatory or not.
- Description: meaningful description of the parameter.

METHOD NAME: CreateUser			
INPUT			
Field	Type	Mandatory	Description
UserNumber	string(25)	Yes	Phone number that registers the MCA service
OperID	string(30)	Yes	Operator name assigned for BOSS by VMS administrator

OperPwd	string(30)	Yes	Password of this operator set by VMS administrator. Not encrypted
Language	string(5)	No	IVR prompt language, it is numerical: 1 is English 2 is local language Default is 1.
Password	string(6)	No	The plain password of the subscriber which is a numeric data whose length is between 4 to 6 digits. Default password is 8888.
NotifyPhone	string(25)	No	Phone number that receives the missing call alerts. If it is null, the default notification phone number is the same as the UserNumber.
ServiceClass	string(5)	No	Service class code of MCA subscriber, it is numerical string which is defined by system operator. Default value is 1.
LDOperatorCode	string(10)	No	Long-distance operator access code for calling back. Default value is the system parameter.
OUTPUT			
Field	Type	Value	Description
Out	int	0	Succeed
		1	UserNumber is not provided
		2	UserNumber has existed
		3	Wrong format of user number
		4	Not available license

		7	Failure in operating database
		8	Undefined message type
		9	Wrong parameter format
		10	System failure
		13	Operator does not exist or password is wrong
		14	Not right of this operator
		15	NotifyPhone is not allowable
		16	LDOperatorCode is not in the valid LDOperatorCode list

The next table has the input parameters defined for this service in the Service Catalog. These are the parameters that need to be sent to the MSA northbound interface to activate this service.

The means of each column in this table is:

- Name: Name of the parameter in the northbound interface.
- Type: Type of the parameters.
- Format: is a regular expression used to validate the value of the parameter, if the value received in the northbound interfaces does not match this regular expression an error will be returned indicating the error.
- Mandatory: indicates is the parameters is mandatory for this service.
- Default Value: indicate a default value set for this parameters is case that it is not received in the service request.

INPUT				
Name	Type	Format	Mandatory	Default Value
MSISDN	String	.{1,25}	Yes	
SERVICECLASS	String	.{1, 5}	No	1
LANGUAGE	String	.{1, 5}	No	1
PASSWORD	String	.{4,6}	No	8888
NOTIFYPHONE	String	.{1,25}	No	
LDOPERATORCODE	String	.{1,10}	No	

The next table has the values returned in the northbound interface as a response for this service request.

OUTPUT		
Name	Type	Description
S_SOSA_CODE	String	SOSA internal output, indicated is the was ok or not
S_SOSA_DESCRIPTION	String	SOSA internal description
S_CODE	String	Represent the output code returned by this action
S_DESCRIPTION	String	Represent the output description for this action
NE_CODE	String	Code returned by the target
NE_DESCRIPTION	String	Description returned by the target
NE_OUTPUT	String	Exactly output returned by the target
NE_ACT_TOTAL_TIME	String	Time taken to perform the activation only in the target (in milliseconds)
NETWORKELEMENT	String	Name of the target where the activation have been done
COMMANDS_SENT	String	Command sent to the target
WF_INSTANCE	String	Name of the HPSA workflow manager that executed this action

2.4.2 MCA Delete Subscriber Operation

The next tables show the input and output parameters defined in the target for each operation. These are the expected parameters to activate this service. The means of each column in this table is:

- Field: name of the parameters expected for the target.
- Type: expected type of the parameters in the target.
- Mandatory: indicate if the parameter is mandatory or not.
- Description: meaningful description of the parameter.

METHOD NAME: DeleteUser			
INPUT			
Field	Type	Mandatory	Description
UserNumber	string(25)	Yes	Phone number that cancels the MCA Service
OperID	string(30)	Yes	Operator name assigned for BOSS
OperPwd	string(30)	Yes	Operator password, not encrypted
OUTPUT			
Field	Type	Value	Description

Out	int	0	Succeed
		1	UserNumber is not provided
		3	Wrong format of user number
		5	Subscriber has not existed
		7	Failure in operating database
		8	Undefined message type
		9	Wrong parameter format
		10	System failure
		13	Operator does not exist or password is wrong
		14	Not right of this operator

The next table has the input parameters defined for this service in the Service Catalog. These are the parameters that need to be sent to the MSA northbound interface to activate this service.

The means of each column in this table is:

- Name: Name of the parameter in the northbound interface.
- Type: Type of the parameters.
- Format: is a regular expression used to validate the value of the parameter, if the value received in the northbound interfaces does not match this regular expression an error will be returned indicating the error.
- Mandatory: indicates is the parameters is mandatory for this service.
- Default Value: indicate a default value set for this parameters is case that it is not received in the service request.

INPUT				
Name	Type	Format	Mandatory	Default Value
MSISDN	String	.{1,25}	Yes	

The next table has the values returned in the northbound interface as a response for this service request.

OUTPUT		
Name	Type	Description

S_SOSA_CODE	String	SOSA internal output, indicated is the was ok or not
S_SOSA_DESCRIPTION	String	SOSA internal description
S_CODE	String	Represent the output code returned by this action
S_DESCRIPTION	String	Represent the output description for this action
NE_CODE	String	Code returned by the target
NE_DESCRIPTION	String	Description returned by the target
NE_OUTPUT	String	Exactly output returned by the target
NE_ACT_TOTAL_TIME	String	Time taken to perform the activation only in the target (in milliseconds)
NETWORKELEMENT	String	Name of the target where the activation have been done
COMMANDS_SENT	String	Command sent to the target
WF_INSTANCE	String	Name of the HPSA workflow manager that executed this action

2.4.3 MCA Set Subscriber Operation

The next tables show the input and output parameters defined in the target for each operation. These are the expected parameters to activate this service. The means of each column in this table is:

- Field: name of the parameters expected for the target.
- Type: expected type of the parameters in the target.
- Mandatory: indicate if the parameter is mandatory or not.
- Description: meaningful description of the parameter.

METHOD NAME: ModifyUser			
INPUT			
Field	Type	Mandatory	Description
UserNumber	String(25)	Yes	Phone number that is modified
OperID	String(30)	Yes	Operator name assigned for BOSS
OperPwd	String(30)	Yes	Operator password
Language	String(5)	No	If provided, it is the new language
Password	String(6)	No	If provided, it is the new password
NotifyPhone	String(25)	No	If provided, it is the phone number that receives the

			missing call alerts
ServiceClass	String(5)	No	Service class code of MCA subscriber. It is a numerical string which is defined by system operator
LDOperatorCode	String(10)	No	The long-distance operator access code for calling back
UserStatus	String(5)	No	Status of the subscriber. It is a numerical data: 1 in use 2 suspended
OUTPUT			
Field	Type	Value	Description
Out	int	0	Succeed
		1	UserNumber is not provided
		3	Wrong format of user number
		5	Subscriber has not existed
		7	Failure in operating database
		8	Undefined message type
		9	Wrong parameter format
		10	System failure
		13	Operator does not exist or password is wrong
		14	Not right of this operator
		15	NotifyPhone is not allowable
		16	ServiceClass is not defined
17	LDOperatorCode is not in the valid LDOperatorCode list		

The next table has the input parameters defined for this service in the Service Catalog. These are the parameters that need to be sent to the MSA northbound interface to activate this service.

The means of each column in this table is:

- Name: Name of the parameter in the northbound interface.
- Type: Type of the parameters.
- Format: is a regular expression used to validate the value of the parameter, if the value received in the northbound interfaces does not match this regular expression an error will be returned indicating the error.
- Mandatory: indicates is the parameters is mandatory for this service.
- Default Value: indicate a default value set for this parameters is case that it is not received in the service request.

INPUT				
Name	Type	Format	Mandatory	Default Value
MSISDN	String	.{1,25}	Yes	
SERVICECLASS	String	.{1, 5}	No	1
LANGUAGE	String	.{1, 5}	No	1
PASSWORD	String	.{4,6}	No	8888
NOTIFYPHONE	String	.{1,25}	No	
LDOPERATORCODE	String	.{1,10}	No	
USERSTATUS	String	.{1, 5}	No	

The next table has the values returned in the northbound interface as a response for this service request.

OUTPUT		
Name	Type	Description
S_SOSA_CODE	String	SOSA internal output, indicated is the was ok or not
S_SOSA_DESCRIPTION	String	SOSA internal description
S_CODE	String	Represent the output code returned by this action
S_DESCRIPTION	String	Represent the output description for this action
NE_CODE	String	Code returned by the target
NE_DESCRIPTION	String	Description returned by the target
NE_OUTPUT	String	Exactly output returned by the target
NE_ACT_TOTAL_TIME	String	Time taken to perform the activation only in the target (in milliseconds)
NETWORKELEMENT	String	Name of the target where the activation have been done
COMMANDS_SENT	String	Command sent to the target
WF_INSTANCE	String	Name of the HPSA workflow manager that executed this action

2.4.4 MCA Query Subscriber Operation

The next tables show the input and output parameters defined in the target for each operation. These are the expected parameters to activate this service. The means of each column in this table is:

- Field: name of the parameters expected for the target.
- Type: expected type of the parameters in the target.
- Mandatory: indicate if the parameter is mandatory or not.
- Description: meaningful description of the parameter.

METHOD NAME: QueryUser			
INPUT			
Field	Type	Mandatory	Description
BoxNumber	String(25)	No	Mailbox Number
OperID	string(30)	Yes	Operator name assigned for BOSS
OperPwd	String(30)	Yes	Password of this operator. Not encrypted.
OUTPUT			
Field	Type	Value	Description
BoxNumber	string(25)		Mailbox number that should be created.
OperID	string(30)		Operator name assigned for BOSS by VMS administrator
OperPwd	string(30)		Password of this operator set by VMS administrator, Not encrypted
ServiceClass	string(5)		Service class code of mailbox, it is numerical string which is defined by system operator. Default value is 1.
Language	string(5)		The prompt language of mailbox, it is numerical: 1 is English 2 is local language Default is 1.
Password	string(6)		The plain password of mailbox, which is

			numeric number and length is 4 to 6 digits. Default password is 8888. When one mailbox's subscriber first enters her or his mailbox, system will ask her or him to input a new password.
UserName	string(50)		User name of mailbox owner can be numeric number and letters. Default is null.
NOTIFYPHONE	string(25)		Mailbox Number
USERSTATUS	string(5)		Status of the user

The next table has the input parameters defined for this service in the Service Catalog. These are the parameters that need to be sent to the MSA northbound interface to activate this service.

The means of each column in this table is:

- Name: Name of the parameter in the northbound interface.
- Type: Type of the parameters.
- Format: is a regular expression used to validate the value of the parameter, if the value received in the northbound interfaces does not match this regular expression an error will be returned indicating the error.
- Mandatory: indicates is the parameters is mandatory for this service.
- Default Value: indicate a default value set for this parameters is case that it is not received in the service request.

INPUT				
Name	Type	Format	Mandatory	Default Value
MSISDN	String	.{1,25}	Yes	

The next table has the values returned in the northbound interface as a response for this service request.

OUTPUT		
Name	Type	Description
S_SOSA_CODE	String	SOSA internal output, indicated is the was ok or not
S_SOSA_DESCRIPTION	String	SOSA internal description
S_CODE	String	Represent the output code returned by this action
S_DESCRIPTION	String	Represent the output description for this action
NE_CODE	String	Code returned by the target
NE_DESCRIPTION	String	Description returned by the target
NE_OUTPUT	String	Exactly output returned by the target
NE_ACT_TOTAL_TIME	String	Time taken to perform the activation only in the target (in milliseconds)
NETWORKELEMENT	String	Name of the target where the activation have been done
COMMANDS_SENT	String	Command sent to the target
WF_INSTANCE	String	Name of the HPSA workflow manager that executed this action
MSISDN	String	MSISDN value of this subscription
SERVICECLASS	String	SERVICECLASS value of this subscription
LANGUAGE	String	LANGUAGE value of this subscription
PASSWORD	String	PASSWORD value of this subscription
NOTIFYPHONE	String	NOTIFYPHONE value of this subscription
LDOPERATORCODE	String	LDOPERATORCODE value of this subscription
USERSTATUS	String	USERSTATUS value of this subscription

2.4.5 MCA Error Management

These are the errors returned by the MCA platform and the translation that MSA will applied.

Platf orm type	Service	Operat ion	Ne_c ode	Retur n _code	Return_descri ption	Action	Nu mber_ ret rie s	Ti me out	Nu mber exis t	Nu mber not exis t
ZTE	MCA	DEFAUL T	1	1	User Number is not provided	RETURN			No	No
ZTE	MCA	DEFAUL T	2	2	User Number has existed	RETURN			Yes	No
ZTE	MCA	DEFAUL T	3	3	Wrong format of user number	RETURN			No	No
ZTE	MCA	DEFAUL T	4	4	No available license	RETURN			No	No

ZTE	MCA	DEFAULT	5	5	Subscriber has not existed	RETURN			No	Yes
ZTE	MCA	DEFAULT	7	7	Failure in operating database	RETURN			No	No
ZTE	MCA	DEFAULT	8	8	Undefined message type	RETURN			No	No
ZTE	MCA	DEFAULT	9	9	Wrong parameter format	RETURN			No	No
ZTE	MCA	DEFAULT	10	10	System failure	RETURN			No	No
ZTE	MCA	DEFAULT	13	13	Operator does not exist or password is wrong	RETURN			No	No
ZTE	MCA	DEFAULT	14	14	Not right of this operator	RETURN			No	No
ZTE	MCA	DEFAULT	15	15	Notify Phone is not allowable	RETURN			No	No
ZTE	MCA	DEFAULT	16	16	ServiceClass is not defined	RETURN			No	No
ZTE	MCA	DEFAULT	17	17	LDOperatorCode is not in the valid LDOperatorCode list	RETURN			No	No

2.5 Service Manager Service

This service is implemented over the platform GEMALTO. See in the next sections the parameters involved for service action.

2.5.1 SM AddService

The next tables show the input and output parameters defined in the target for each operation. These are the expected parameters to activate this service. The means of each column in this table is:

- Field: name of the parameters expected for the target.
- Type: expected type of the parameters in the target.
- Mandatory: indicate if the parameter is mandatory or not.
- Description: meaningful description of the parameter.

METHOD NAME: addService			
METHOD DESCRIPTION: This service allows adding a service of the given subscriber into the SimCard menu. This service is added into the main menu.			
INPUT			
Field	Type	Mandatory	Description
msisdn	String(12)	Yes	(Mobile Subscriber ISDN) MSISDN of a subscriber
service	String(50)	Yes	The name of the service to be added
position	int	Yes	Position in the page where the service will be installed
servicePackage	String(20)	Yes	ServicePackage of the service to be installed
OUTPUT			
Field	Type	Description	
transactionId	long	Identification of the transaction. It could be useful to track the transaction status	

The next table has the input parameters defined for this service in the Service Catalog. These are the parameters that need to be sent to the MSA northbound interface to activate this service.

The means of each column in this table is:

- Name: Name of the parameter in the northbound interface.
- Type: Type of the parameters.
- Format: is a regular expression used to validate the value of the parameter, if the value received in the northbound interfaces does not match this regular expression an error will be returned indicating the error.
- Mandatory: indicates is the parameters is mandatory for this service.
- Default Value: indicate a default value set for this parameters is case that it is not received in the service request.

INPUT				
Name	Type	Format	Mandatory	Default Value
MSISDN	String		Yes	
SERVICE	String		Yes	
POSITION	String		Yes	
SERVICEPACKAGE	String		Yes	
SERVICENAME	String		No	addService

The next table has the values returned in the northbound interface as a response for this service request.

OUTPUT		
Name	Type	Description
S_SOSA_CODE	String	SOSA internal output, indicated is the was ok or not
S_SOSA_DESCRIPTION	String	SOSA internal description
S_CODE	String	Represent the output code returned by this action
S_DESCRIPTION	String	Represent the output description for this action
NE_CODE	String	Code returned by the target
NE_DESCRIPTION	String	Description returned by the target
NE_OUTPUT	String	Exactly output returned by the target
NE_ACT_TOTAL_TIME	String	Time taken to perform the activation only in the target (in milliseconds)
NETWORKELEMENT	String	Name of the target where the activation have been done
COMMANDS_SENT	String	Command sent to the target
WF_INSTANCE	String	Name of the HPSA workflow manager that executed this action
TRANSACTIONID	String	Identification of the transaction. It could be useful to track the transaction status

2.5.2 SM AssociatePortal

The next tables show the input and output parameters defined in the target for each operation. These are the expected parameters to activate this service. The means of each column in this table is:

- Field: name of the parameters expected for the target.
- Type: expected type of the parameters in the target.
- Mandatory: indicate if the parameter is mandatory or not.
- Description: meaningful description of the parameter.

METHOD NAME: associatePortal			
METHOD DESCRIPTION: This service allows associating a portal to the given subscriber.			
INPUT			
Field	Type	Mandatory	Description
msisdn	String(12)	Yes	(Mobile Subscriber ISDN) MSISDN

			of a subscriber
portal	String(12)	No	Portal to be associated to the subscriber
OUTPUT			
No output parameters.			

The next table has the input parameters defined for this service in the Service Catalog. These are the parameters that need to be sent to the MSA northbound interface to activate this service.

The means of each column in this table is:

- Name: Name of the parameter in the northbound interface.
- Type: Type of the parameters.
- Format: is a regular expression used to validate the value of the parameter, if the value received in the northbound interfaces does not match this regular expression an error will be returned indicating the error.
- Mandatory: indicates is the parameters is mandatory for this service.
- Default Value: indicate a default value set for this parameters is case that it is not received in the service request.

INPUT				
Name	Type	Format	Mandatory	Default Value
MSISDN	String		Yes	
PORTAL	String		Yes	
SERVICENAME	String		No	associatePortal

The next table has the values returned in the northbound interface as a response for this service request.

OUTPUT		
Name	Type	Description
S_SOSA_CODE	String	SOSA internal output, indicated is the was ok or not
S_SOSA_DESCRIPTION	String	SOSA internal description
S_CODE	String	Represent the output code returned by this action
S_DESCRIPTION	String	Represent the output description for this action
NE_CODE	String	Code returned by the target

NE_DESCRIPTION	String	Description returned by the target
NE_OUTPUT	String	Exactly output returned by the target
NE_ACT_TOTAL_TIME	String	Time taken to perform the activation only in the target (in milliseconds)
NETWORKELEMENT	String	Name of the target where the activation have been done
COMMANDS_SENT	String	Command sent to the target
WF_INSTANCE	String	Name of the HPSA workflow manager that executed this action

2.5.3 SM AttachNewPage

The next tables show the input and output parameters defined in the target for each operation. These are the expected parameters to activate this service. The means of each column in this table is:

- Field: name of the parameters expected for the target.
- Type: expected type of the parameters in the target.
- Mandatory: indicate if the parameter is mandatory or not.
- Description: meaningful description of the parameter.

METHOD NAME: addAttachmentPage			
METHOD DESCRIPTION: This service allows adding an enclosed page to the given subscriber. This service is added into the main menu.			
INPUT			
Field	Type	Mandatory	Description
msisdn	String(12)	Yes	(Mobile Subscriber ISDN) MSISDN of a subscriber
pageDesc	String(20)	Yes	The name of the page to be added
position	int	Yes	Position in the page where the page will be installed
servicePackage	String(20)	Yes	ServicePackage of the page to be installed
OUTPUT			
Field	Type	Description	
transactionId	long	Identification of the transaction. It could be useful to track the transaction status	

The next table has the input parameters defined for this service in the Service Catalog. These are the parameters that need to be sent to the MSA northbound interface to activate this service.

The means of each column in this table is:

- Name: Name of the parameter in the northbound interface.
- Type: Type of the parameters.
- Format: is a regular expression used to validate the value of the parameter, if the value received in the northbound interfaces does not match this regular expression an error will be returned indicating the error.
- Mandatory: indicates is the parameters is mandatory for this service.
- Default Value: indicate a default value set for this parameters is case that it is not received in the service request.

INPUT				
Name	Type	Format	Mandatory	Default Value
MSISDN	String		Yes	
PAGEDESCRIPTION	String		Yes	
POSITION	String		Yes	
SERVICEPACKAGE	String		Yes	
SERVICENAME	String		No	addAttachmentPage

The next table has the values returned in the northbound interface as a response for this service request.

OUTPUT		
Name	Type	Description
S_SOSA_CODE	String	SOSA internal output, indicated is the was ok or not
S_SOSA_DESCRIPTION	String	SOSA internal description
S_CODE	String	Represent the output code returned by this action
S_DESCRIPTION	String	Represent the output description for this action
NE_CODE	String	Code returned by the target
NE_DESCRIPTION	String	Description returned by the target
NE_OUTPUT	String	Exactly output returned by the target
NE_ACT_TOTAL_TIME	String	Time taken to perform the activation only in the target (in milliseconds)
NETWORKELEMENT	String	Name of the target where the activation have been done
COMMANDS_SENT	String	Command sent to the target
WF_INSTANCE	String	Name of the HPSA workflow manager that executed this action
TRANSACTIONID	String	Identification of the transaction. It could be

		useful to track the transaction status
--	--	--

2.5.4 SM DeleteService

The next tables show the input and output parameters defined in the target for each operation. These are the expected parameters to activate this service. The means of each column in this table is:

- Field: name of the parameters expected for the target.
- Type: expected type of the parameters in the target.
- Mandatory: indicate if the parameter is mandatory or not.
- Description: meaningful description of the parameter.

METHOD NAME: deleteService			
METHOD DESCRIPTION: This service allows deleting a service of the given subscriber from the SimCard menu.			
INPUT			
Field	Type	Mandatory	Description
msisdn	String(12)	Yes	(Mobile Subscriber ISDN) MSISDN of a subscriber
service	String(50)	No	The name of the service to delete
OUTPUT			
Field	Type	Description	
transactionId	long	Identification of the transaction. It could be useful to track the transaction status	

The next table has the input parameters defined for this service in the Service Catalog. These are the parameters that need to be sent to the MSA northbound interface to activate this service.

The means of each column in this table is:

- Name: Name of the parameter in the northbound interface.
- Type: Type of the parameters.
- Format: is a regular expression used to validate the value of the parameter, if the value received in the northbound interfaces does not match this regular expression an error will be returned indicating the error.
- Mandatory: indicates is the parameters is mandatory for this service.
- Default Value: indicate a default value set for this parameters is case that it is not received in the service request.

INPUT				
Name	Type	Format	Mandatory	Default Value
MSISDN	String		Yes	
SERVICE	String		Yes	
SERVICENAME	String		No	deleteService

The next table has the values returned in the northbound interface as a response for this service request.

OUTPUT		
Name	Type	Description
S_SOSA_CODE	String	SOSA internal output, indicated is the was ok or not
S_SOSA_DESCRIPTION	String	SOSA internal description
S_CODE	String	Represent the output code returned by this action
S_DESCRIPTION	String	Represent the output description for this action
NE_CODE	String	Code returned by the target
NE_DESCRIPTION	String	Description returned by the target
NE_OUTPUT	String	Exactly output returned by the target
NE_ACT_TOTAL_TIME	String	Time taken to perform the activation only in the target (in milliseconds)
NETWORKELEMENT	String	Name of the target where the activation have been done
COMMANDS_SENT	String	Command sent to the target
WF_INSTANCE	String	Name of the HPSA workflow manager that executed this action
TRANSACTIONID	String	Identification of the transaction. It could be useful to track the transaction status

2.5.5 SM DeleteAttachedPage

The next tables show the input and output parameters defined in the target for each operation. These are the expected parameters to activate this service. The means of each column in this table is:

- Field: name of the parameters expected for the target.
- Type: expected type of the parameters in the target.
- Mandatory: indicate if the parameter is mandatory or not.
- Description: meaningful description of the parameter.

METHOD NAME: deleteAttachmentPage			
METHOD DESCRIPTION: This service permits to delete an attachment page of the given subscriber from the SimCard menu.			
INPUT			
Field	Type	Mandatory	Description
msisdn	String(12)	Yes	(Mobile Subscriber ISDN) MSISDN of a subscriber
strPage	String(20)	No	The name of the page to delete
OUTPUT			
Field	Type	Description	
transactionId	long	Identification of the transaction. It could be useful to track the transaction status	

The next table has the input parameters defined for this service in the Service Catalog. These are the parameters that need to be sent to the MSA northbound interface to activate this service.

The means of each column in this table is:

- Name: Name of the parameter in the northbound interface.
- Type: Type of the parameters.
- Format: is a regular expression used to validate the value of the parameter, if the value received in the northbound interfaces does not match this regular expression an error will be returned indicating the error.
- Mandatory: indicates is the parameters is mandatory for this service.
- Default Value: indicate a default value set for this parameters is case that it is not received in the service request.

INPUT				
Name	Type	Format	Mandatory	Default Value
MSISDN	String		Yes	
PAGENAME	String		Yes	
SERVICENAME	String		No	deleteAttachmentPage

The next table has the values returned in the northbound interface as a response for this service request.

OUTPUT		
Name	Type	Description
S_SOSA_CODE	String	SOSA internal output, indicated is the was

		ok or not
S_SOSA_DESCRIPTION	String	SOSA internal description
S_CODE	String	Represent the output code returned by this action
S_DESCRIPTION	String	Represent the output description for this action
NE_CODE	String	Code returned by the target
NE_DESCRIPTION	String	Description returned by the target
NE_OUTPUT	String	Exactly output returned by the target
NE_ACT_TOTAL_TIME	String	Time taken to perform the activation only in the target (in milliseconds)
NETWORKELEMENT	String	Name of the target where the activation have been done
COMMANDS_SENT	String	Command sent to the target
WF_INSTANCE	String	Name of the HPSA workflow manager that executed this action
TRANSACTIONID	String	Identification of the transaction. It could be useful to track the transaction status

2.5.6 SM UnlockService

The next tables show the input and output parameters defined in the target for each operation. These are the expected parameters to activate this service. The means of each column in this table is:

- Field: name of the parameters expected for the target.
- Type: expected type of the parameters in the target.
- Mandatory: indicate if the parameter is mandatory or not.
- Description: meaningful description of the parameter.

METHOD NAME: unlockService			
METHOD DESCRIPTION: This service allows to call the unlock service of the GCSM platform. It is used for transactions that are locked in GCSM.			
INPUT			
Field	Type	Mandatory	Description
msisdn	String(12)	Yes	(Mobile Subscriber ISDN) MSISDN of a subscriber
OUTPUT			
Field	Type	Description	
transactionId	long	Identification of the transaction. It could be useful to track the transaction status	

The next table has the input parameters defined for this service in the Service Catalog. These are the parameters that need to be sent to the MSA northbound interface to activate this service.

The means of each column in this table is:

- Name: Name of the parameter in the northbound interface.
- Type: Type of the parameters.
- Format: is a regular expression used to validate the value of the parameter, if the value received in the northbound interfaces does not match this regular expression an error will be returned indicating the error.
- Mandatory: indicates is the parameters is mandatory for this service.
- Default Value: indicate a default value set for this parameters is case that it is not received in the service request.

INPUT				
Name	Type	Format	Mandatory	Default Value
MSISDN	String		Yes	
SERVICENAME	String		No	unlockService

The next table has the values returned in the northbound interface as a response for this service request.

OUTPUT		
Name	Type	Description
S_SOSA_CODE	String	SOSA internal output, indicated is the was ok or not
S_SOSA_DESCRIPTION	String	SOSA internal description
S_CODE	String	Represent the output code returned by this action
S_DESCRIPTION	String	Represent the output description for this action
NE_CODE	String	Code returned by the target
NE_DESCRIPTION	String	Description returned by the target
NE_OUTPUT	String	Exactly output returned by the target
NE_ACT_TOTAL_TIME	String	Time taken to perform the activation only in the target (in milliseconds)
NETWORKELEMENT	String	Name of the target where the activation have been done
COMMANDS_SENT	String	Command sent to the target
WF_INSTANCE	String	Name of the HPSA workflow manager that executed this action
TRANSACTIONID	String	Identification of the transaction. It could be

		useful to track the transaction status
--	--	--

2.5.7 SM SwitchPortal

The next tables show the input and output parameters defined in the target for each operation. These are the expected parameters to activate this service. The means of each column in this table is:

- Field: name of the parameters expected for the target.
- Type: expected type of the parameters in the target.
- Mandatory: indicate if the parameter is mandatory or not.
- Description: meaningful description of the parameter.

METHOD NAME: switchPortal			
METHOD DESCRIPTION: This service allows switching the SimCard to another portal.			
INPUT			
Field	Type	Mandatory	Description
msisdn	String(12)	Yes	(Mobile Subscriber ISDN) MSISDN of a subscriber
portal	String(12)	Yes	The name of the portal to be switched
OUTPUT			
Field	Type	Description	
transactionId	long	Identification of the transaction. It could be useful to track the transaction status	

The next table has the input parameters defined for this service in the Service Catalog. These are the parameters that need to be sent to the MSA northbound interface to activate this service.

The means of each column in this table is:

- Name: Name of the parameter in the northbound interface.
- Type: Type of the parameters.
- Format: is a regular expression used to validate the value of the parameter, if the value received in the northbound interfaces does not match this regular expression an error will be returned indicating the error.
- Mandatory: indicates is the parameters is mandatory for this service.
- Default Value: indicate a default value set for this parameters is case that it is not received in the service request.

INPUT				
Name	Type	Format	Mandatory	Default Value
MSISDN	String		Yes	
PORTAL	String		Yes	
SERVICENAME	String		No	switchPortal

The next table has the values returned in the northbound interface as a response for this service request.

OUTPUT		
Name	Type	Description
S_SOSA_CODE	String	SOSA internal output, indicated is the was ok or not
S_SOSA_DESCRIPTION	String	SOSA internal description
S_CODE	String	Represent the output code returned by this action
S_DESCRIPTION	String	Represent the output description for this action
NE_CODE	String	Code returned by the target
NE_DESCRIPTION	String	Description returned by the target
NE_OUTPUT	String	Exactly output returned by the target
NE_ACT_TOTAL_TIME	String	Time taken to perform the activation only in the target (in milliseconds)
NETWORKELEMENT	String	Name of the target where the activation have been done
COMMANDS_SENT	String	Command sent to the target
WF_INSTANCE	String	Name of the HPSA workflow manager that executed this action
TRANSACTIONID	String	Identification of the transaction. It could be useful to track the transaction status

2.5.8 SM GetMenu

The next tables show the input and output parameters defined in the target for each operation. These are the expected parameters to activate this service. The means of each column in this table is:

- Field: name of the parameters expected for the target.
- Type: expected type of the parameters in the target.
- Mandatory: indicate if the parameter is mandatory or not.
- Description: meaningful description of the parameter.

METHOD NAME: getMenu			
METHOD DESCRIPTION: This service allows getting the SIMCard menu for a subscriber.			
INPUT			
Field	Type	Mandatory	Description
Msisdn	string	Yes	(Mobile Subscriber ISDN) MSISDN of a subscriber
OUTPUT			
Field	Type	Description	
Data	string	Contains an xml with the Menu	

The next table has the input parameters defined for this service in the Service Catalog. These are the parameters that need to be sent to the MSA northbound interface to activate this service.

The means of each column in this table is:

- Name: Name of the parameter in the northbound interface.
- Type: Type of the parameters.
- Format: is a regular expression used to validate the value of the parameter, if the value received in the northbound interfaces does not match this regular expression an error will be returned indicating the error.
- Mandatory: indicates is the parameters is mandatory for this service.
- Default Value: indicate a default value set for this parameters is case that it is not received in the service request.

INPUT				
Name	Type	Format	Mandatory	Default Value
MSISDN	String		Yes	
SERVICENAME	String		No	getMenu

The next table has the values returned in the northbound interface as a response for this service request.

OUTPUT		
Name	Type	Description
S_SOSA_CODE	String	SOSA internal output, indicated is the was ok or not
S_SOSA_DESCRIPTION	String	SOSA internal description
S_CODE	String	Represent the output code returned by this action

S_DESCRIPTION	String	Represent the output description for this action
NE_CODE	String	Code returned by the target
NE_DESCRIPTION	String	Description returned by the target
NE_OUTPUT	String	Exactly output returned by the target
NE_ACT_TOTAL_TIME	String	Time taken to perform the activation only in the target (in milliseconds)
NETWORKELEMENT	String	Name of the target where the activation have been done
COMMANDS_SENT	String	Command sent to the target
WF_INSTANCE	String	Name of the HPSA workflow manager that executed this action
MENU	String	Contains an xml with the Menu

2.5.9 SM GetTransactionStatus

The next tables show the input and output parameters defined in the target for each operation. These are the expected parameters to activate this service. The means of each column in this table is:

- Field: name of the parameters expected for the target.
- Type: expected type of the parameters in the target.
- Mandatory: indicate if the parameter is mandatory or not.
- Description: meaningful description of the parameter.

METHOD NAME: getTransactionStatus			
METHOD DESCRIPTION: This service allows getting the status of a current transaction in the target.			
INPUT			
Field	Type	Mandatory	Description
InvocationID	long	Yes	Contains the invocation id of a transaction
OUTPUT			
Field	Type	Description	
status	string	String data. Contains the transaction status. Possible values: SUCCEEDED FAILED EXPIRED DELETED SUPPRESSED	

		REJECTED UNREEXECUTABLE ABANDONED MISSING_TARGET
--	--	---

The next table has the input parameters defined for this service in the Service Catalog. These are the parameters that need to be sent to the MSA northbound interface to activate this service.

The means of each column in this table is:

- Name: Name of the parameter in the northbound interface.
- Type: Type of the parameters.
- Format: is a regular expression used to validate the value of the parameter, if the value received in the northbound interfaces does not match this regular expression an error will be returned indicating the error.
- Mandatory: indicates is the parameters is mandatory for this service.
- Default Value: indicate a default value set for this parameters is case that it is not received in the service request.

INPUT				
Name	Type	Format	Mandatory	Default Value
INVOCATIONID	String		Yes	
SERVICENAME	String		No	getTransactionStatus

The next table has the values returned in the northbound interface as a response for this service request.

OUTPUT		
Name	Type	Description
S_SOSA_CODE	String	SOSA internal output, indicated is the was ok or not
S_SOSA_DESCRIPTION	String	SOSA internal description
S_CODE	String	Represent the output code returned by this action
S_DESCRIPTION	String	Represent the output description for this action
NE_CODE	String	Code returned by the target
NE_DESCRIPTION	String	Description returned by the target
NE_OUTPUT	String	Exactly output returned by the target
NE_ACT_TOTAL_TIME	String	Time taken to perform the activation only

		in the target (in milliseconds)
NETWORKELEMENT	String	Name of the target where the activation have been done
COMMANDS_SENT	String	Command sent to the target
WF_INSTANCE	String	Name of the HPSA workflow manager that executed this action
STATUS	String	String data. Contains the transaction status. Possible values: SUCCEEDED FAILED EXPIRED DELETED SUPPRESSED REJECTED UNREEXECUTABLE ABANDONED MISSING_TARGET

2.5.10 SM GetAvailableServices

The next tables show the input and output parameters defined in the target for each operation. These are the expected parameters to activate this service. The means of each column in this table is:

- Field: name of the parameters expected for the target.
- Type: expected type of the parameters in the target.
- Mandatory: indicate if the parameter is mandatory or not.
- Description: meaningful description of the parameter.

METHOD NAME: getAvailableServices			
INPUT			
Field	Type	Mandatory	Description
servicePackage	string	Yes	Contains the service package name
OUTPUT			
Field	Type	Description	
services	object	This is a list of services, each service have the next parameters: servicePackageLabel name	

		description minorVersion majorVersion fees
--	--	---

The next table has the input parameters defined for this service in the Service Catalog. These are the parameters that need to be sent to the MSA northbound interface to activate this service.

The means of each column in this table is:

- Name: Name of the parameter in the northbound interface.
- Type: Type of the parameters.
- Format: is a regular expression used to validate the value of the parameter, if the value received in the northbound interfaces does not match this regular expression an error will be returned indicating the error.
- Mandatory: indicates is the parameters is mandatory for this service.
- Default Value: indicate a default value set for this parameters is case that it is not received in the service request.

INPUT				
Name	Type	Format	Mandatory	Default Value
SERVICEPACKAGE	String		Yes	
SERVICENAME	String		No	getAvailableServices

The next table has the values returned in the northbound interface as a response for this service request.

OUTPUT		
Name	Type	Description
S_SOSA_CODE	String	SOSA internal output, indicated is the was ok or not
S_SOSA_DESCRIPTION	String	SOSA internal description
S_CODE	String	Represent the output code returned by this action
S_DESCRIPTION	String	Represent the output description for this action
NE_CODE	String	Code returned by the target
NE_DESCRIPTION	String	Description returned by the target
NE_OUTPUT	String	Exactly output returned by the target
NE_ACT_TOTAL_TIME	String	Time taken to perform the activation only in the target (in milliseconds)
NETWORKELEMENT	String	Name of the target where the activation have been done

COMMANDS_SENT	String	Command sent to the target
WF_INSTANCE	String	Name of the HPSA workflow manager that executed this action
SERVICES	String	List of services, serialized in a string with the next format: servicePackageLabel=<value>,name=<value>,description=<value>, minorVersion=<value>,majorVersion=<value>,fees=<value> ,servicePackageLabel=<value>,name=<value>,description=<value>, minorVersion=<value>,majorVersion=<value>,fees=<value>, ...

2.5.11 SM GetAvailableAttachmentPages

The next tables show the input and output parameters defined in the target for each operation. These are the expected parameters to activate this service. The means of each column in this table is:

- Field: name of the parameters expected for the target.
- Type: expected type of the parameters in the target.
- Mandatory: indicate if the parameter is mandatory or not.
- Description: meaningful description of the parameter.

METHOD NAME: getAvailableAttachmentPages			
INPUT			
Field	Type	Mandatory	Description
servicePackage	string	Yes	Contains the service package name
OUTPUT			
Field	Type	Description	
services	object	This is a list of attachments, each attachment have the next parameters: servicePackageLabel label description size minorVersion majorVersion maxNumberOfItems	

		hasChildren isWebSelfcareAllowed
--	--	-------------------------------------

The next table has the input parameters defined for this service in the Service Catalog. These are the parameters that need to be sent to the MSA northbound interface to activate this service.

The means of each column in this table is:

- Name: Name of the parameter in the northbound interface.
- Type: Type of the parameters.
- Format: is a regular expression used to validate the value of the parameter, if the value received in the northbound interfaces does not match this regular expression an error will be returned indicating the error.
- Mandatory: indicates is the parameters is mandatory for this service.
- Default Value: indicate a default value set for this parameters is case that it is not received in the service request.

INPUT				
Name	Type	Format	Mandatory	Default Value
SERVICEPACKAGE	String		Yes	
SERVICENAME	String		No	getAvailableAttachmentPages

The next table has the values returned in the northbound interface as a response for this service request.

OUTPUT		
Name	Type	Description
S_SOSA_CODE	String	SOSA internal output, indicated is the was ok or not
S_SOSA_DESCRIPTION	String	SOSA internal description
S_CODE	String	Represent the output code returned by this action
S_DESCRIPTION	String	Represent the output description for this action
NE_CODE	String	Code returned by the target
NE_DESCRIPTION	String	Description returned by the target
NE_OUTPUT	String	Exactly output returned by the target
NE_ACT_TOTAL_TIME	String	Time taken to perform the activation only in the target (in milliseconds)
NETWORKELEMENT	String	Name of the target where the activation have been done
COMMANDS_SENT	String	Command sent to the target

WF_INSTANCE	String	Name of the HPSA workflow manager that executed this action
SERVICES	String	List of services, serialized in an string with the next format: servicePackagelabel=<value>,label=<value>,description=<value>, size=<value>,minorVersion=<value>,majorVersion=<value>, maxNumberOfItems=<value>,hasChildren=<value>, isWebSelfcareAllowed=<value>, <servicePackagelabel=<value>,label=<value>,description=<value>, size=<value>,minorVersion=<value>,majorVersion=<value>, maxNumberOfItems=<value>,hasChildren=<value>, isWebSelfcareAllowed=<value>,

2.5.12 SM Error Management

These are the errors returned by the SM platform and the translation that MSA will applied.

Platform type	Service	Operation	Ne_c ode	Retur n _code	Return_descri ption	Action	Nu mb er_ ret rie s	Ti me out	Nu mbe r exis t	Nu mbe r not exis t
GEM ALTO	SM	DEFAU LT	2000	2000	GCSM platform unavailable.	RETURN			0	0
GEM ALTO	SM	DEFAU LT	2001	2001	Input parameters for GCSM services cannot be null.	RETURN			0	0
GEM ALTO	SM	DEFAU LT	2002	2002	Suscriber does not exist in the GCSM platform.	RETURN			0	1
GEM ALTO	SM	DEFAU LT	2003	2003	Portal does not exist.	RETURN			0	0
GEM ALTO	SM	DEFAU LT	2004	2004	Attachment page does not exist.	RETURN			0	0
GEM ALTO	SM	DEFAU LT	2005	2005	Service does not exist.	RETURN			0	0

GEM ALTO	SM	DEFAU LT	2006	2006	Cannot launch transaction in the GCSM platform.	RETURN			0	0
GEM ALTO	SM	DEFAU LT	2007	2007	ServiceContent already defined.	RETURN			0	0
GEM ALTO	SM	DEFAU LT	2008	2008	Too many portals associated to this simcard.	RETURN			0	0
GEM ALTO	SM	DEFAU LT	2009	2009	Transaction does not exist in the GCSM platform.	RETURN			0	0
GEM ALTO	SM	DEFAU LT	2010	2010	ServicePackage does not exist.	RETURN			0	0
GEM ALTO	SM	DEFAU LT	2100	2100	Generic GCSM error.	RETURN			0	0

2.6 Device Manager Service

This service is implemented over the platform GEMALTO. See in the next sections the parameters involved for service action.

2.6.1 DM ActivateSubscriber

The next tables show the input and output parameters defined in the target for each operation. These are the expected parameters to activate this service. The means of each column in this table is:

- Field: name of the parameters expected for the target.
- Type: expected type of the parameters in the target.
- Mandatory: indicate if the parameter is mandatory or not.
- Description: meaningful description of the parameter.

METHOD NAME: activateSubscriber			
METHOD DESCRIPTION: This service permits to activate a subscriber in the GCDM platform. The service just change the status to active.			
INPUT			
Field	Type	Mandatory	Description
msisdn	String(12)	Yes	(Mobile Subscriber ISDN) The Msisdn of a subscriber
OUTPUT			
No output parameters.			

The next table has the input parameters defined for this service in the Service Catalog. These are the parameters that need to be sent to the MSA northbound interface to activate this service.

The means of each column in this table is:

- Name: Name of the parameter in the northbound interface.
- Type: Type of the parameters.
- Format: is a regular expression used to validate the value of the parameter, if the value received in the northbound interfaces does not match this regular expression an error will be returned indicating the error.
- Mandatory: indicates is the parameters is mandatory for this service.
- Default Value: indicate a default value set for this parameters is case that it is not received in the service request.

INPUT				
Name	Type	Format	Mandatory	Default Value
MSISDN	String	\d{12}	Yes	
SERVICENAME	String		No	activateSubscriber

The next table has the values returned in the northbound interface as a response for this service request.

OUTPUT		
Name	Type	Description
S_SOSA_CODE	String	SOSA internal output, indicated is the was ok or not
S_SOSA_DESCRIPTION	String	SOSA internal description
S_CODE	String	Represent the output code returned by this action
S_DESCRIPTION	String	Represent the output description for this action
NE_CODE	String	Code returned by the target
NE_DESCRIPTION	String	Description returned by the target
NE_OUTPUT	String	Exactly output returned by the target
NE_ACT_TOTAL_TIME	String	Time taken to perform the activation only in the target (in milliseconds)
NETWORKELEMENT	String	Name of the target where the activation have been done
COMMANDS_SENT	String	Command sent to the target
WF_INSTANCE	String	Name of the HPSA workflow manager that executed this action

2.6.2 DM AddTac

The next tables show the input and output parameters defined in the target for each operation. These are the expected parameters to activate this service. The means of each column in this table is:

- Field: name of the parameters expected for the target.
- Type: expected type of the parameters in the target.
- Mandatory: indicate if the parameter is mandatory or not.
- Description: meaningful description of the parameter.

METHOD NAME: addTac			
METHOD DESCRIPTION: This service permits to add a new TAC to the DM platform.			
INPUT			
Field	Type	Mandatory	Description
modelName	String(50)	Yes	The modelName of the handset
manufacturerName	String(30)	Yes	The manufacturer name of handset
tac	String(50)	Yes	The Tac of Handset
OUTPUT			
No output parameters.			

The next table has the input parameters defined for this service in the Service Catalog. These are the parameters that need to be sent to the MSA northbound interface to activate this service.

The means of each column in this table is:

- Name: Name of the parameter in the northbound interface.
- Type: Type of the parameters.
- Format: is a regular expression used to validate the value of the parameter, if the value received in the northbound interfaces does not match this regular expression an error will be returned indicating the error.
- Mandatory: indicates is the parameters is mandatory for this service.
- Default Value: indicate a default value set for this parameters is case that it is not received in the service request.

INPUT				
Name	Type	Format	Mandatory	Default Value
MODELNAME	String		Yes	
MANUFACTURENAME	String		Yes	

TAC	String		Yes	
SERVICENAME	String		No	addTac

The next table has the values returned in the northbound interface as a response for this service request.

OUTPUT		
Name	Type	Description
S_SOSA_CODE	String	SOSA internal output, indicated is the was ok or not
S_SOSA_DESCRIPTION	String	SOSA internal description
S_CODE	String	Represent the output code returned by this action
S_DESCRIPTION	String	Represent the output description for this action
NE_CODE	String	Code returned by the target
NE_DESCRIPTION	String	Description returned by the target
NE_OUTPUT	String	Exactly output returned by the target
NE_ACT_TOTAL_TIME	String	Time taken to perform the activation only in the target (in milliseconds)
NETWORKELEMENT	String	Name of the target where the activation have been done
COMMANDS_SENT	String	Command sent to the target
WF_INSTANCE	String	Name of the HPSA workflow manager that executed this action

2.6.3 DM LinkToGroup

The next tables show the input and output parameters defined in the target for each operation. These are the expected parameters to activate this service. The means of each column in this table is:

- Field: name of the parameters expected for the target.
- Type: expected type of the parameters in the target.
- Mandatory: indicate if the parameter is mandatory or not.
- Description: meaningful description of the parameter.

METHOD NAME: linkToGroup			
METHOD DESCRIPTION: This service permits to associate a subscriber to the given group in the DM platform.			
INPUT			
Field	Type	Mandatory	Description
msisdn	String(12)	Yes	(Mobile Subscriber ISDN)

			Msisdn of a subscriber
groupName	String(50)	Yes	GroupName of subscriber
OUTPUT			
No output parameters.			

The next table has the input parameters defined for this service in the Service Catalog. These are the parameters that need to be sent to the MSA northbound interface to activate this service.

The means of each column in this table is:

- Name: Name of the parameter in the northbound interface.
- Type: Type of the parameters.
- Format: is a regular expression used to validate the value of the parameter, if the value received in the northbound interfaces does not match this regular expression an error will be returned indicating the error.
- Mandatory: indicates is the parameters is mandatory for this service.
- Default Value: indicate a default value set for this parameters is case that it is not received in the service request.

INPUT				
Name	Type	Format	Mandatory	Default Value
MSISDN	String	\d{12}	Yes	
GROUPNAME	String		Yes	
SERVICENAME	String		No	linkToGroup

The next table has the values returned in the northbound interface as a response for this service request.

OUTPUT		
Name	Type	Description
S_SOSA_CODE	String	SOSA internal output, indicated is the was ok or not
S_SOSA_DESCRIPTION	String	SOSA internal description
S_CODE	String	Represent the output code returned by this action
S_DESCRIPTION	String	Represent the output description for this action
NE_CODE	String	Code returned by the target
NE_DESCRIPTION	String	Description returned by the target
NE_OUTPUT	String	Exactly output returned by the target
NE_ACT_TOTAL_TIME	String	Time taken to perform the activation only in the target

		(in milliseconds)
NETWORKELEMENT	String	Name of the target where the activation have been done
COMMANDS_SENT	String	Command sent to the target
WF_INSTANCE	String	Name of the HPSA workflow manager that executed this action

2.6.4 DM DeactivateSubscriber

The next tables show the input and output parameters defined in the target for each operation. These are the expected parameters to activate this service. The means of each column in this table is:

- Field: name of the parameters expected for the target.
- Type: expected type of the parameters in the target.
- Mandatory: indicate if the parameter is mandatory or not.
- Description: meaningful description of the parameter.

METHOD NAME: deactivateSubscriber			
METHOD DESCRIPTION: This service permits to deactivate a subscriber in the GCDM platform.			
INPUT			
Field	Type	Mandatory	Description
msisdn	String(12)	Yes	(Mobile Subscriber ISDN) The Msisdn of a subscriber
OUTPUT			
No output parameters.			

The next table has the input parameters defined for this service in the Service Catalog. These are the parameters that need to be sent to the MSA northbound interface to activate this service.

The means of each column in this table is:

- Name: Name of the parameter in the northbound interface.
- Type: Type of the parameters.
- Format: is a regular expression used to validate the value of the parameter, if the value received in the northbound interfaces does not match this regular expression an error will be returned indicating the error.
- Mandatory: indicates is the parameters is mandatory for this service.
- Default Value: indicate a default value set for this parameters is case that it is not received in the service request.

INPUT				
Name	Type	Format	Mandatory	Default Value
MSISDN	String	\d{12}	Yes	
SERVICENAME	String		No	deactivateSubscriber

The next table has the values returned in the northbound interface as a response for this service request.

OUTPUT		
Name	Type	Description
S_SOSA_CODE	String	SOSA internal output, indicated is the was ok or not
S_SOSA_DESCRIPTION	String	SOSA internal description
S_CODE	String	Represent the output code returned by this action
S_DESCRIPTION	String	Represent the output description for this action
NE_CODE	String	Code returned by the target
NE_DESCRIPTION	String	Description returned by the target
NE_OUTPUT	String	Exactly output returned by the target
NE_ACT_TOTAL_TIME	String	Time taken to perform the activation only in the target (in milliseconds)
NETWORKELEMENT	String	Name of the target where the activation have been done
COMMANDS_SENT	String	Command sent to the target
WF_INSTANCE	String	Name of the HPSA workflow manager that executed this action

2.6.5 DM UnlinkToGroup

The next tables show the input and output parameters defined in the target for each operation. These are the expected parameters to activate this service. The means of each column in this table is:

- Field: name of the parameters expected for the target.
- Type: expected type of the parameters in the target.
- Mandatory: indicate if the parameter is mandatory or not.
- Description: meaningful description of the parameter.

METHOD NAME: unlinkToGroup
METHOD DESCRIPTION: This service permits to dissociate a subscriber from the given group in the DM platform.
INPUT

Field	Type	Mandatory	Description
msisdn	String(12)	Yes	(Mobile Subscriber ISDN) Msisdn of a subscriber
groupName	String(50)	Yes	GroupName of subscriber
OUTPUT			
No output parameters.			

The next table has the input parameters defined for this service in the Service Catalog. These are the parameters that need to be sent to the MSA northbound interface to activate this service.

The means of each column in this table is:

- Name: Name of the parameter in the northbound interface.
- Type: Type of the parameters.
- Format: is a regular expression used to validate the value of the parameter, if the value received in the northbound interfaces does not match this regular expression an error will be returned indicating the error.
- Mandatory: indicates is the parameters is mandatory for this service.
- Default Value: indicate a default value set for this parameters is case that it is not received in the service request.

INPUT				
Name	Type	Format	Mandatory	Default Value
MSISDN	String	\d{12}	Yes	
GROUPNAME	String		Yes	
SERVICENAME	String		No	unlinkToGroup

The next table has the values returned in the northbound interface as a response for this service request.

OUTPUT		
Name	Type	Description
S_SOSA_CODE	String	SOSA internal output, indicated is the was ok or not
S_SOSA_DESCRIPTION	String	SOSA internal description
S_CODE	String	Represent the output code returned by this action
S_DESCRIPTION	String	Represent the output description for this action
NE_CODE	String	Code returned by the target
NE_DESCRIPTION	String	Description returned by the target
NE_OUTPUT	String	Exactly output returned by the target

NE_ACT_TOTAL_TIME	String	Time taken to perform the activation only in the target (in milliseconds)
NETWORKELEMENT	String	Name of the target where the activation have been done
COMMANDS_SENT	String	Command sent to the target
WF_INSTANCE	String	Name of the HPSA workflow manager that executed this action

2.6.6 DM UpdateModelOfSubscriber

The next tables show the input and output parameters defined in the target for each operation. These are the expected parameters to activate this service. The means of each column in this table is:

- Field: name of the parameters expected for the target.
- Type: expected type of the parameters in the target.
- Mandatory: indicate if the parameter is mandatory or not.
- Description: meaningful description of the parameter.

METHOD NAME: updateModelOfSubscriber			
METHOD DESCRIPTION: This service permits to update the handset model/manufacture associated to the given subscriber.			
INPUT			
Field	Type	Mandatory	Description
modelName	String(50)	Yes	Contains the modelName of the handset.
manufacturerName	String(30)	Yes	Manufacture name of handset
msisdn	String(12)	Yes	(Mobile Subscriber ISDN) Msisdn of a subscriber
OUTPUT			
No output parameters.			

The next table has the input parameters defined for this service in the Service Catalog. These are the parameters that need to be sent to the MSA northbound interface to activate this service.

The means of each column in this table is:

- Name: Name of the parameter in the northbound interface.
- Type: Type of the parameters.
- Format: is a regular expression used to validate the value of the parameter, if the value received in the northbound interfaces does not match this regular expression an error will be returned indicating the error.

- **Mandatory:** indicates is the parameters is mandatory for this service.
- **Default Value:** indicate a default value set for this parameters is case that it is not received in the service request.

INPUT				
Name	Type	Format	Mandatory	Default Value
MSISDN	String	\d{12}	Yes	
MODELNAME	String		Yes	
MANUFACTURERNAME	String		Yes	
SERVICENAME	String		No	updateModelOfSubscriber

The next table has the values returned in the northbound interface as a response for this service request.

OUTPUT		
Name	Type	Description
S_SOSA_CODE	String	SOSA internal output, indicated is the was ok or not
S_SOSA_DESCRIPTION	String	SOSA internal description
S_CODE	String	Represent the output code returned by this action
S_DESCRIPTION	String	Represent the output description for this action
NE_CODE	String	Code returned by the target
NE_DESCRIPTION	String	Description returned by the target
NE_OUTPUT	String	Exactly output returned by the target
NE_ACT_TOTAL_TIME	String	Time taken to perform the activation only in the target (in milliseconds)
NETWORKELEMENT	String	Name of the target where the activation have been done
COMMANDS_SENT	String	Command sent to the target
WF_INSTANCE	String	Name of the HPSA workflow manager that executed this action

2.6.7 DM CheckInvocation

The next tables show the input and output parameters defined in the target for each operation. These are the expected parameters to activate this service. The means of each column in this table is:

- **Field:** name of the parameters expected for the target.
- **Type:** expected type of the parameters in the target.
- **Mandatory:** indicate if the parameter is mandatory or not.

- Description: meaningful description of the parameter.

METHOD NAME: checkInvocation			
METHOD DESCRIPTION: This service permits to checks the invocation status for a given transaction.			
INPUT			
Field	Type	Mandatory	Description
invocationID	long	Yes	The ID of a current invocation.
OUTPUT			
Field	Type	Description	
submitDate	string	Date when the transaction was submitted format: yyyy-MM-dd HH:mm:ss	
execDate	string	Date when the transaction was executed format: yyyy-MM-dd HH:mm:ss	
endExecDate	string	Date when the transaction end format: yyyy-MM-dd HH:mm:ss	
expirationDate	string	Expiration date of the transaction format: yyyy-MM-dd HH:mm:ss	
userName	string	Username who launch the transaction	
serviceName	string	ServiceName invoked in this transaction	
destination	string	Destination of the transaction	
invocationId	string	InvocationId	
transactionId	string	TransactionID	
endingStatus	string	Ending status of the transaction Possible values: <ul style="list-style-type: none"> • NOT_AVAILABLE • SUCCEEDED • FAILED • EXPIRED • DELETED • SUPPRESSED • REJECTED • UNREEXECUTABLE • ABANDONED • MISSING_TARGET 	
state	string	State of the invocation Possible values: <ul style="list-style-type: none"> • CREATED • SUBMITTED • IN_PROCESS • TRYING_TO_DEL • TRYING_TO_SUP • TERMINATED • ARCHIVED • COMPLETED 	

		<ul style="list-style-type: none"> UNKNOWN
guaranteeOfExecution	Boolean	Indicate if the transaction was set with the guaranteeOfExecution Possible values: <ul style="list-style-type: none"> True False

The next table has the input parameters defined for this service in the Service Catalog. These are the parameters that need to be sent to the MSA northbound interface to activate this service.

The means of each column in this table is:

- Name: Name of the parameter in the northbound interface.
- Type: Type of the parameters.
- Format: is a regular expression used to validate the value of the parameter, if the value received in the northbound interfaces does not match this regular expression an error will be returned indicating the error.
- Mandatory: indicates is the parameters is mandatory for this service.
- Default Value: indicate a default value set for this parameters is case that it is not received in the service request.

INPUT				
Name	Type	Format	Mandatory	Default Value
INVOCATIONID	String		Yes	
SERVICENAME	String		No	checkInvocation

The next table has the values returned in the northbound interface as a response for this service request.

OUTPUT		
Name	Type	Description
S_SOSA_CODE	String	SOSA internal output, indicated is the was ok or not
S_SOSA_DESCRIPTION	String	SOSA internal description
S_CODE	String	Represent the output code returned by this action
S_DESCRIPTION	String	Represent the output description for this action
NE_CODE	String	Code returned by the target
NE_DESCRIPTION	String	Description returned by the target
NE_OUTPUT	String	Exactly output returned by the target
NE_ACT_TOTAL_TIME	String	Time taken to perform the activation only in the target (in milliseconds)
NETWORKELEMENT	String	Name of the target where the activation have been

		done
COMMANDS_SENT	String	Command sent to the target
WF_INSTANCE	String	Name of the HPSA workflow manager that executed this action
SUBMITDATE	String	SUBMITDATE value of the current activation
EXECDATE	String	EXECDATE value of the current activation
ENDEXECDATE	String	ENDEXECDATE value of the current activation
EXPIRATIONDATE	String	EXPIRATIONDATE value of the current activation
USERNAME	String	USERNAME value of the current activation
SERVICENAME	String	SERVICENAME value of the current activation
DESTINATION	String	DESTINATION value of the current activation
INVOCATIONID	String	INVOCATIONID value of the current activation
TRANSACTIONID	String	TRANSACTIONID value of the current activation
ENDINGSTATUS	String	ENDINGSTATUS value of the current activation
STATE	String	STATE value of the current activation
GUARANTEE OF EXECUTION	Boolean	GUARANTEE OF EXECUTION

2.6.8 DM SendSettingSets

The next tables show the input and output parameters defined in the target for each operation. These are the expected parameters to activate this service. The means of each column in this table is:

- Field: name of the parameters expected for the target.
- Type: expected type of the parameters in the target.
- Mandatory: indicate if the parameter is mandatory or not.
- Description: meaningful description of the parameter.

METHOD NAME: sendSettingSets			
METHOD DESCRIPTION: This service permits to send the setting sets to the given subscriber.			
INPUT			
Field	Type	Mandatory	Description
msisdn	String(12)	Yes	(Mobile Subscriber ISDN) Msisdn of a subscriber
settingSetName	String(35)	Yes	SettingSet to send
OUTPUT			
Field	Type	Description	
transactionId	long	It will be useful to track the status of the transaction	

The next table has the input parameters defined for this service in the Service Catalog. These are the parameters that need to be sent to the MSA northbound interface to activate this service.

The means of each column in this table is:

- Name: Name of the parameter in the northbound interface.
- Type: Type of the parameters.
- Format: is a regular expression used to validate the value of the parameter, if the value received in the northbound interfaces does not match this regular expression an error will be returned indicating the error.
- Mandatory: indicates is the parameters is mandatory for this service.
- Default Value: indicate a default value set for this parameters is case that it is not received in the service request.

INPUT				
Name	Type	Format	Mandatory	Default Value
MSISDN	String	\d{12}	Yes	
SETTINGSETNAME	String		Yes	
SERVICENAME	String		No	sendSettingSets

The next table has the values returned in the northbound interface as a response for this service request.

OUTPUT		
Name	Type	Description
S_SOSA_CODE	String	SOSA internal output, indicated is the was ok or not
S_SOSA_DESCRIPTION	String	SOSA internal description
S_CODE	String	Represent the output code returned by this action
S_DESCRIPTION	String	Represent the output description for this action
NE_CODE	String	Code returned by the target
NE_DESCRIPTION	String	Description returned by the target
NE_OUTPUT	String	Exactly output returned by the target
NE_ACT_TOTAL_TIME	String	Time taken to perform the activation only in the target (in milliseconds)
NETWORKELEMENT	String	Name of the target where the activation have been done
COMMANDS_SENT	String	Command sent to the target
WF_INSTANCE	String	Name of the HPSA workflow manager that executed this action
TRANSACTIONID	String	The transactionId will be useful to track the status of the transaction

2.6.9 DM SendAllSettingSets

The next tables show the input and output parameters defined in the target for each operation. These are the expected parameters to activate this service. The means of each column in this table is:

- Field: name of the parameters expected for the target.
- Type: expected type of the parameters in the target.
- Mandatory: indicate if the parameter is mandatory or not.
- Description: meaningful description of the parameter.

METHOD NAME: sendAllSettingSets			
METHOD DESCRIPTION: This service permits to send the setting sets to the given subscriber.			
INPUT			
Field	Type	Mandatory	Description
msisdn	String(12)	Yes	(Mobile Subscriber ISDN) The Msisdn of a subscriber
OUTPUT			
Field	Type	Description	
InvocationList	Object	List that contains all the invocation information. Each invocation object have the next information: submitDate execDate endExecDate expirationDate userName serviceName destination invocationId transactionId endingStatus state guaranteeOfExecution	

The next table has the input parameters defined for this service in the Service Catalog. These are the parameters that need to be sent to the MSA northbound interface to activate this service.

The means of each column in this table is:

- Name: Name of the parameter in the northbound interface.
- Type: Type of the parameters.
- Format: is a regular expression used to validate the value of the parameter, if the value received in the northbound interfaces does not match this regular expression an error will be returned indicating the error.
- Mandatory: indicates is the parameters is mandatory for this service.
- Default Value: indicate a default value set for this parameters is case that it is not received in the service request.

INPUT				
Name	Type	Format	Mandatory	Default Value
MSISDN	String	\d{12}	Yes	
SERVICENAME	String		No	sendAllSettingSets

The next table has the values returned in the northbound interface as a response for this service request.

OUTPUT		
Name	Type	Description
S_SOSA_CODE	String	SOSA internal output, indicated is the was ok or not
S_SOSA_DESCRIPTION	String	SOSA internal description
S_CODE	String	Represent the output code returned by this action
S_DESCRIPTION	String	Represent the output description for this action
NE_CODE	String	Code returned by the target
NE_DESCRIPTION	String	Description returned by the target
NE_OUTPUT	String	Exactly output returned by the target
NE_ACT_TOTAL_TIME	String	Time taken to perform the activation only in the target (in milliseconds)
NETWORKELEMENT	String	Name of the target where the activation have been done
COMMANDS_SENT	String	Command sent to the target
WF_INSTANCE	String	Name of the HPSA workflow manager that executed this action
INVOCATIONLIST	String	List of invocation, serialized in an string with the next format: invocationId=<value>, serviceType=<value>, settingSet=<value>,...

2.6.10 DM SendAllSettingSetsBR

The next tables show the input and output parameters defined in the target for each operation. These are the expected parameters to activate this service. The means of each column in this table is:

- Field: name of the parameters expected for the target.
- Type: expected type of the parameters in the target.
- Mandatory: indicate if the parameter is mandatory or not.
- Description: meaningful description of the parameter.

METHOD NAME: sendAllSettingSetsBR			
METHOD DESCRIPTION: The service triggers the execution of the business rules configured in the Automatic Device Detection of the Device Manager.			
INPUT			
Field	Type	Mandatory	Description
msisdn	String(12)	Yes	(Mobile Subscriber ISDN) The Msisdn of a subscriber
OUTPUT			
No output parameters.			

The next table has the input parameters defined for this service in the Service Catalog. These are the parameters that need to be sent to the MSA northbound interface to activate this service.

The means of each column in this table is:

- Name: Name of the parameter in the northbound interface.
- Type: Type of the parameters.
- Format: is a regular expression used to validate the value of the parameter, if the value received in the northbound interfaces does not match this regular expression an error will be returned indicating the error.
- Mandatory: indicates is the parameters is mandatory for this service.
- Default Value: indicate a default value set for this parameters is case that it is not received in the service request.

INPUT				
Name	Type	Format	Mandatory	Default Value
MSISDN	String	\d{12}	Yes	
SERVICENAME	String		No	sendAllSettingSetsBR

The next table has the values returned in the northbound interface as a response for this service request.

OUTPUT		
Name	Type	Description
S_SOSA_CODE	String	SOSA internal output, indicated is the was ok or not
S_SOSA_DESCRIPTION	String	SOSA internal description
S_CODE	String	Represent the output code returned by this action
S_DESCRIPTION	String	Represent the output description for this action
NE_CODE	String	Code returned by the target
NE_DESCRIPTION	String	Description returned by the target
NE_OUTPUT	String	Exactly output returned by the target
NE_ACT_TOTAL_TIME	String	Time taken to perform the activation only in the target (in milliseconds)
NETWORKELEMENT	String	Name of the target where the activation have been done
COMMANDS_SENT	String	Command sent to the target
WF_INSTANCE	String	Name of the HPSA workflow manager that executed this action

2.6.11 DM DownloadHandsetConfig

The next tables show the input and output parameters defined in the target for each operation. These are the expected parameters to activate this service. The means of each column in this table is:

- Field: name of the parameters expected for the target.
- Type: expected type of the parameters in the target.
- Mandatory: indicate if the parameter is mandatory or not.
- Description: meaningful description of the parameter.

METHOD NAME: downloadHandsetConfig			
METHOD DESCRIPTION: The service triggers the execution of the business rules configured in the Automatic Device Detection of the Device Manager. Insert the new subscriber in the Device Tracking Manager if the user is not provisioned in the Device Tracking Manager.			
INPUT			
Field	Type	Mandatory	Description
imei	String(50)	Yes	Imei number of the handset
msisdn	String(12)	Yes	The MSISDN of a suscriber
OUTPUT			

No output parameters.

The next table has the input parameters defined for this service in the Service Catalog. These are the parameters that need to be sent to the MSA northbound interface to activate this service.

The means of each column in this table is:

- Name: Name of the parameter in the northbound interface.
- Type: Type of the parameters.
- Format: is a regular expression used to validate the value of the parameter, if the value received in the northbound interfaces does not match this regular expression an error will be returned indicating the error.
- Mandatory: indicates is the parameters is mandatory for this service.
- Default Value: indicate a default value set for this parameters is case that it is not received in the service request.

INPUT				
Name	Type	Format	Mandatory	Default Value
MSISDN	String	\d{12}	Yes	
IMEI	String		Yes	
SERVICENAME	String		No	downloadHandsetConfig

The next table has the values returned in the northbound interface as a response for this service request.

OUTPUT		
Name	Type	Description
S_SOSA_CODE	String	SOSA internal output, indicated is the was ok or not
S_SOSA_DESCRIPTION	String	SOSA internal description
S_CODE	String	Represent the output code returned by this action
S_DESCRIPTION	String	Represent the output description for this action
NE_CODE	String	Code returned by the target
NE_DESCRIPTION	String	Description returned by the target
NE_OUTPUT	String	Exactly output returned by the target
NE_ACT_TOTAL_TIME	String	Time taken to perform the activation only in the target (in milliseconds)
NETWORKELEMENT	String	Name of the target where the activation have been done
COMMANDS_SENT	String	Command sent to the target
WF_INSTANCE	String	Name of the HPSA workflow manager that executed

		this action
--	--	-------------

2.6.12 DM GetSettingsSet

The next tables show the input and output parameters defined in the target for each operation. These are the expected parameters to activate this service. The means of each column in this table is:

- Field: name of the parameters expected for the target.
- Type: expected type of the parameters in the target.
- Mandatory: indicate if the parameter is mandatory or not.
- Description: meaningful description of the parameter.

METHOD NAME: getSettingsSet			
METHOD DESCRIPTION: The service returns the list of settings by capability.			
INPUT			
Field	Type	Mandatory	Description
ServiceType	String(20)	Yes	Name of the capability
OUTPUT			
Field	Type	Description	
settingsSets	Object list	List of strings of the settingsSets by capability. If no settings sets are found, an array of size 0 is returned. Each object of the array have the next parameters: name serviceType state	

The next table has the input parameters defined for this service in the Service Catalog. These are the parameters that need to be sent to the MSA northbound interface to activate this service.

The means of each column in this table is:

- Name: Name of the parameter in the northbound interface.
- Type: Type of the parameters.
- Format: is a regular expression used to validate the value of the parameter, if the value received in the northbound interfaces does not match this regular expression an error will be returned indicating the error.
- Mandatory: indicates is the parameters is mandatory for this service.
- Default Value: indicate a default value set for this parameters is case that it is not received in the service request.

INPUT				
Name	Type	Format	Mandatory	Default Value
SERVICETYPE	String		Yes	
SERVICENAME	String		No	getSettingsSet

The next table has the values returned in the northbound interface as a response for this service request.

OUTPUT		
Name	Type	Description
S_SOSA_CODE	String	SOSA internal output, indicated is the was ok or not
S_SOSA_DESCRIPTION	String	SOSA internal description
S_CODE	String	Represent the output code returned by this action
S_DESCRIPTION	String	Represent the output description for this action
NE_CODE	String	Code returned by the target
NE_DESCRIPTION	String	Description returned by the target
NE_OUTPUT	String	Exactly output returned by the target
NE_ACT_TOTAL_TIME	String	Time taken to perform the activation only in the target (in milliseconds)
NETWORKELEMENT	String	Name of the target where the activation have been done
COMMANDS_SENT	String	Command sent to the target
WF_INSTANCE	String	Name of the HPSA workflow manager that executed this action
SETTINGSETLIS	String	List of settingset, serialized in an string with the next format: name =<value>, serviceType =<value>, state =<value>,...

2.6.13 DM GetHistory

The next tables show the input and output parameters defined in the target for each operation. These are the expected parameters to activate this service. The means of each column in this table is:

- Field: name of the parameters expected for the target.
- Type: expected type of the parameters in the target.
- Mandatory: indicate if the parameter is mandatory or not.
- Description: meaningful description of the parameter.

METHOD NAME: getHistory

METHOD DESCRIPTION: This service permits to get the history and corresponding models for a given msisdn. The service gets all the changes of model/manufacturer of the suscriber.			
INPUT			
Field	Type	Mandatory	Description
msisdn	String(12)	Yes	The msisdn of the subscriber
OUTPUT			
Field	Type	Description	
historylist	Object list	List of devices associates with the msisdn. Each object of the list have the next parameters: date: Date of the modification. Format: yyyy-MM-dd, hh:mm:ss model: Model registered in the event manufacturer: Manufacturer registered in the event origin: Origin of the event. Who was the user who changes msisdn	

The next table has the input parameters defined for this service in the Service Catalog. These are the parameters that need to be sent to the MSA northbound interface to activate this service.

The means of each column in this table is:

- Name: Name of the parameter in the northbound interface.
- Type: Type of the parameters.
- Format: is a regular expression used to validate the value of the parameter, if the value received in the northbound interfaces does not match this regular expression an error will be returned indicating the error.
- Mandatory: indicates is the parameters is mandatory for this service.
- Default Value: indicate a default value set for this parameters is case that it is not received in the service request.

INPUT				
Name	Type	Format	Mandatory	Default Value
MSISDN	String	\d{12}	Yes	
SERVICENAME	String		No	getHistory

The next table has the values returned in the northbound interface as a response for this service request.

OUTPUT		
Name	Type	Description
S_SOSA_CODE	String	SOSA internal output, indicated is the was ok or not
S_SOSA_DESCRIPTION	String	SOSA internal description
S_CODE	String	Represent the output code returned by this action
S_DESCRIPTION	String	Represent the output description for this action
NE_CODE	String	Code returned by the target
NE_DESCRIPTION	String	Description returned by the target
NE_OUTPUT	String	Exactly output returned by the target
NE_ACT_TOTAL_TIME	String	Time taken to perform the activation only in the target (in milliseconds)
NETWORKELEMENT	String	Name of the target where the activation have been done
COMMANDS_SENT	String	Command sent to the target
WF_INSTANCE	String	Name of the HPSA workflow manager that executed this action
DATE	String	Date of the modification. Format: yyyy-MM-dd, hh:mm:ss
DEVICELIST	String	List of devices, serialized in an string with the next format: date =<value>, model =<value>, manufacturer =<value>, origin =<value>, msisdn=<value>,...

2.6.14 DM GetHistoryMSISDN

The next tables show the input and output parameters defined in the target for each operation. These are the expected parameters to activate this service. The means of each column in this table is:

- Field: name of the parameters expected for the target.
- Type: expected type of the parameters in the target.
- Mandatory: indicate if the parameter is mandatory or not.
- Description: meaningful description of the parameter.

METHOD NAME: getHistoryMSISDN
METHOD DESCRIPTION: This service permits to get the history and corresponding models for a given msisdn. The service gets all the changes of model/manufacturer of the suscriber.
INPUT

Field	Type	Mandatory	Description
msisdn	String(12)	Yes	The msisdn of the subscriber
OUTPUT			
Field	Type	Description	
historylist	Object list	List of devices associates with the msisdn. Each object of the list have the next parameters: date: Date of the modification. Format: yyyy-MM-dd, hh:mm:ss model: Model registered in the event manufacturer: Manufacturer registered in the event origin: Origin of the event. Who was the user who changes msisdn	

The next table has the input parameters defined for this service in the Service Catalog. These are the parameters that need to be sent to the MSA northbound interface to activate this service.

The means of each column in this table is:

- Name: Name of the parameter in the northbound interface.
- Type: Type of the parameters.
- Format: is a regular expression used to validate the value of the parameter, if the value received in the northbound interfaces does not match this regular expression an error will be returned indicating the error.
- Mandatory: indicates is the parameters is mandatory for this service.
- Default Value: indicate a default value set for this parameters is case that it is not received in the service request.

INPUT				
Name	Type	Format	Mandatory	Default Value
MSISDN	String	\d{12}	Yes	
OPTION	String	\d{12}	Yes	
SERVICENAME	String		No	getHistoryIMEI

The next table has the values returned in the northbound interface as a response for this service request.

OUTPUT		
Name	Type	Description
S_SOSA_CODE	String	SOSA internal output, indicated is the was ok or not
S_SOSA_DESCRIPTION	String	SOSA internal description
S_CODE	String	Represent the output code returned by this action
S_DESCRIPTION	String	Represent the output description for this action
NE_CODE	String	Code returned by the target
NE_DESCRIPTION	String	Description returned by the target
NE_OUTPUT	String	Exactly output returned by the target
NE_ACT_TOTAL_TIME	String	Time taken to perform the activation only in the target (in milliseconds)
NETWORKELEMENT	String	Name of the target where the activation have been done
COMMANDS_SENT	String	Command sent to the target
WF_INSTANCE	String	Name of the HPSA workflow manager that executed this action
DEVICELIST	String	List of devices, serialized in a string with the next format: date =<value>, model =<value>, manufacturer =<value>, origin =<value>, msisdn=<value>,...

2.6.15 DM GetHistoryIMEI

The next tables show the input and output parameters defined in the target for each operation. These are the expected parameters to activate this service. The means of each column in this table is:

- Field: name of the parameters expected for the target.
- Type: expected type of the parameters in the target.
- Mandatory: indicate if the parameter is mandatory or not.
- Description: meaningful description of the parameter.

METHOD NAME: getHistoryIMEI			
METHOD DESCRIPTION: The service gets the historic information from the Device tracking and Device Manager. The information consists in all different IMEIs that had been associated with the msisdn.			
INPUT			
Field	Type	Mandatory	Description
imei	String(50)	Yes	Imei number of the handset

option	String(20)	Yes	Contains an option with three possible values: All Last First
OUTPUT			
Field	Type	Description	
historylist	Object list	List of msisdn associates with the imei. Each object of the list have the next parameters: date: Date of the modification. Format: yyyy-MM-dd, hh:mm:ss model: Model registered in the event manufacturer: Manufacturer registered in the event origin: Origin of the event. Who was the user who changes msisdn	

The next table has the input parameters defined for this service in the Service Catalog. These are the parameters that need to be sent to the MSA northbound interface to activate this service.

The means of each column in this table is:

- Name: Name of the parameter in the northbound interface.
- Type: Type of the parameters.
- Format: is a regular expression used to validate the value of the parameter, if the value received in the northbound interfaces does not match this regular expression an error will be returned indicating the error.
- Mandatory: indicates is the parameters is mandatory for this service.
- Default Value: indicate a default value set for this parameters is case that it is not received in the service request.

INPUT				
Name	Type	Format	Mandatory	Default Value
IMEI	String		Yes	
OPTION	String	\d{12}	Yes	
SERVICENAME	String		No	getHistoryMSISDN

The next table has the values returned in the northbound interface as a response for this service request.

OUTPUT		
Name	Type	Description
S_SOSA_CODE	String	SOSA internal output, indicated is the was ok or not
S_SOSA_DESCRIPTION	String	SOSA internal description
S_CODE	String	Represent the output code returned by this action
S_DESCRIPTION	String	Represent the output description for this action
NE_CODE	String	Code returned by the target
NE_DESCRIPTION	String	Description returned by the target
NE_OUTPUT	String	Exactly output returned by the target
NE_ACT_TOTAL_TIME	String	Time taken to perform the activation only in the target (in milliseconds)
NETWORKELEMENT	String	Name of the target where the activation have been done
COMMANDS_SENT	String	Command sent to the target
WF_INSTANCE	String	Name of the HPSA workflow manager that executed this action
MSISDNLIST	String	List of msisdn, serialized in an string with the next format: date =<value>, model =<value>, manufacturer =<value>, origin =<value>, msisdn=<value>,imei=<value>,...

2.6.16 DM RequestDMProvision

The next tables show the input and output parameters defined in the target for each operation. These are the expected parameters to activate this service. The means of each column in this table is:

- Field: name of the parameters expected for the target.
- Type: expected type of the parameters in the target.
- Mandatory: indicate if the parameter is mandatory or not.
- Description: meaningful description of the parameter.

METHOD NAME: requestDMProvision			
METHOD DESCRIPTION: This service permits to provision the GCDM/DT platform with the IMEI information of the user. When called, this service sends a S@T push with a page that sends back an SMS containing the IMEI information. When the SMS returns the user must be provisioned in the DT platform. The SMS may be a S@T request (without return), or an ordinary SMS to the OTA.			
INPUT			
Field	Type	Mandatory	Description

msisdn	String(12)	Yes	The MSISDN of a subscriber
OUTPUT			
Field	Type	Description	
operationResult	string	Operation result for sending the S@T push	

The next table has the input parameters defined for this service in the Service Catalog. These are the parameters that need to be sent to the MSA northbound interface to activate this service.

The means of each column in this table is:

- Name: Name of the parameter in the northbound interface.
- Type: Type of the parameters.
- Format: is a regular expression used to validate the value of the parameter, if the value received in the northbound interfaces does not match this regular expression an error will be returned indicating the error.
- Mandatory: indicates is the parameters is mandatory for this service.
- Default Value: indicate a default value set for this parameters is case that it is not received in the service request.

INPUT				
Name	Type	Format	Mandatory	Default Value
MSISDN	String	\d{12}	Yes	
SERVICENAME	String		No	requestDMProvision

The next table has the values returned in the northbound interface as a response for this service request.

OUTPUT		
Name	Type	Description
S_SOSA_CODE	String	SOSA internal output, indicated is the was ok or not
S_SOSA_DESCRIPTION	String	SOSA internal description
S_CODE	String	Represent the output code returned by this action
S_DESCRIPTION	String	Represent the output description for this action
NE_CODE	String	Code returned by the target
NE_DESCRIPTION	String	Description returned by the target
NE_OUTPUT	String	Exactly output returned by the target
NE_ACT_TOTAL_TIME	String	Time taken to perform the activation only in the target (in milliseconds)

NETWORKELEMENT	String	Name of the target where the activation have been done
COMMANDS_SENT	String	Command sent to the target
WF_INSTANCE	String	Name of the HPSA workflow manager that executed this action
RESULT	String	Operation result for sending the S@T push

2.6.17 DM GetExtraHandsetCapabilities

The next tables show the input and output parameters defined in the target for each operation. These are the expected parameters to activate this service. The means of each column in this table is:

- Field: name of the parameters expected for the target.
- Type: expected type of the parameters in the target.
- Mandatory: indicate if the parameter is mandatory or not.
- Description: meaningful description of the parameter.

METHOD NAME: getExtraHandsetCapabilities			
METHOD DESCRIPTION: Returns the extra capabilities of the device.			
INPUT			
Field	Type	Mandatory	Description
msisdn	String(12)	Yes	The MSISDN of a subscriber
OUTPUT			
Field	Type	Description	
extracapabilities	Object	This object contains the next parameters: <ul style="list-style-type: none"> • BipSupport • Bluetooth • CameraResolution • CameraSecondary • Colors • Dimensions • Gprs • Gps • Infrared • IntegratedCamera • InternalMemory 	

		<ul style="list-style-type: none"> • Java • Manufacturer • MmsMemory • Model • NetworkBand • Refresh • Screen • ScreenSize • Serialversionuid • SmartPhoneOS • Usb • Ussd • Wap • Weight • Wifi
--	--	--

The next table has the input parameters defined for this service in the Service Catalog. These are the parameters that need to be sent to the MSA northbound interface to activate this service.

The means of each column in this table is:

- Name: Name of the parameter in the northbound interface.
- Type: Type of the parameters.
- Format: is a regular expression used to validate the value of the parameter, if the value received in the northbound interfaces does not match this regular expression an error will be returned indicating the error.
- Mandatory: indicates is the parameters is mandatory for this service.
- Default Value: indicate a default value set for this parameters is case that it is not received in the service request.

INPUT				
Name	Type	Format	Mandatory	Default Value
MSISDN	String	\d{12}	Yes	
SERVICENAME	String		No	getExtraHandsetCapabilities

The next table has the values returned in the northbound interface as a response for this service request.

OUTPUT		
Name	Type	Description
S_SOSA_CODE	String	SOSA internal output, indicated is the was ok or not
S_SOSA_DESCRIPTION	String	SOSA internal description
S_CODE	String	Represent the output code returned by this action
S_DESCRIPTION	String	Represent the output description for this action
NE_CODE	String	Code returned by the target
NE_DESCRIPTION	String	Description returned by the target
NE_OUTPUT	String	Exactly output returned by the target
NE_ACT_TOTAL_TIME	String	Time taken to perform the activation only in the target (in milliseconds)
NETWORKELEMENT	String	Name of the target where the activation have been done
COMMANDS_SENT	String	Command sent to the target
WF_INSTANCE	String	Name of the HPSA workflow manager that executed this action
BIPSUPPORT	String	BIPSUPPORT value of the device
BLUETOOTH	String	BLUETOOTH value of the device
CAMERARESOLUTION	String	CAMERARESOLUTION value of the device
CAMERASECONDARY	String	CAMERASECONDARY value of the device
COLORS	String	COLORS value of the device
DIMENSIONS	String	DIMENSIONS value of the device
GPRS	String	GPRS value of the device
GPS	String	GPS value of the device
INFRARED	String	INFRARED value of the device
INTEGRATEDCAMERA	String	INTEGRATEDCAMERA value of the device
INTERNALMEMORY	String	INTERNALMEMORY value of the device
JAVA	String	JAVA value of the device
MANUFACTURER	String	MANUFACTURER value of the device
MMSMEMORY	String	MMSMEMORY value of the device
MODEL	String	MODEL value of the device
NETWORKBAND	String	NETWORKBAND value of the device
REFRESH	String	REFRESH value of the device
SCREEN	String	SCREEN value of the device
SCREENSIZE	String	SCREENSIZE value of the device
SMARTPHONEOS	String	SMARTPHONEOS value of the device
USB	String	USB value of the device
USSD	String	USSD value of the device
WAP	String	WAP value of the device
WEIGHT	String	WEIGHT value of the device
WIFI	String	WIFI value of the device

2.6.18 DM GetHandsetCapabilities

The next tables show the input and output parameters defined in the target for each operation. These are the expected parameters to activate this service. The means of each column in this table is:

- Field: name of the parameters expected for the target.
- Type: expected type of the parameters in the target.
- Mandatory: indicate if the parameter is mandatory or not.
- Description: meaningful description of the parameter.

METHOD NAME: getHandsetCapabilities			
METHOD DESCRIPTION: This service permits to get the handset capabilities and general information of the given suscriber.			
INPUT			
Field	Type	Mandatory	Description
msisdn	String(12)	Yes	Msisdn of the subscriber
OUTPUT			
Field	Type	Description	
Capabilities	object	ModelName ManufacturerName SupportedServices:get the supported services by the model Possible values for each supported Service string: BOOKMARK DATA DATACSD DATAGPRS EMAIL IMGPRS MMSCSD MMSGPRS POCGPRS SYNCML SYNCMLCSD SYNCMLGPRS WAPCSD	

		WAPGPRS WAPHSCSD WEB State: state of the subscriber. Possible values: 1 ACTIVE 0 INACTIVE
--	--	--

The next table has the input parameters defined for this service in the Service Catalog. These are the parameters that need to be sent to the MSA northbound interface to activate this service.

The means of each column in this table is:

- Name: Name of the parameter in the northbound interface.
- Type: Type of the parameters.
- Format: is a regular expression used to validate the value of the parameter, if the value received in the northbound interfaces does not match this regular expression an error will be returned indicating the error.
- Mandatory: indicates is the parameters is mandatory for this service.
- Default Value: indicate a default value set for this parameters is case that it is not received in the service request.

INPUT				
Name	Type	Format	Mandatory	Default Value
MSISDN	String	\d{12}	Yes	
SERVICENAME	String		No	getHandsetCapabilities

The next table has the values returned in the northbound interface as a response for this service request.

OUTPUT		
Name	Type	Description
S_SOSA_CODE	String	SOSA internal output, indicated is the was ok or not
S_SOSA_DESCRIPTION	String	SOSA internal description
S_CODE	String	Represent the output code returned by this action
S_DESCRIPTION	String	Represent the output description for this action
NE_CODE	String	Code returned by the target
NE_DESCRIPTION	String	Description returned by the target
NE_OUTPUT	String	Exactly output returned by the target

NE_ACT_TOTAL_TIME	String	Time taken to perform the activation only in the target (in milliseconds)
NETWORKELEMENT	String	Name of the target where the activation have been done
COMMANDS_SENT	String	Command sent to the target
WF_INSTANCE	String	Name of the HPSA workflow manager that executed this action
MODELNAME	String	Model of the handset
MANUFACTURERNAME	String	Manufacturer of the handset
SUPPORTEDSERVICES	String	List of the supported services serialized as a string: Service1, service2, service3,....
STATE	String	State of the subscriber

2.6.19 DM Error Management

These are the errors returned by the DM platform and the translation that MSA will applied.

Platform type	Service	Operation	Ne_code	Return_code	Return_description	Action	Number_retrievals	Timeout	Number_exists	Number_not_exists
GEMALTO	DM	DEFAULT	3000	3000	GDM platform unavailable.	RETURN			0	0
GEMALTO	DM	DEFAULT	3001	3001	Model and Manufacturer does not exist in the GDM platform.	RETURN			0	0
GEMALTO	DM	DEFAULT	3002	3002	Suscriber does not exist in the GDM platform.	RETURN			0	1
GEMALTO	DM	DEFAULT	3003	3003	Transaction does not exist in the GDM platform.	RETURN			0	0
GEMALTO	DM	DEFAULT	3004	3004	Cannot launch transaction in the GDM platform.	RETURN			0	0
GEMALTO	DM	DEFAULT	3005	3005	Tac already defined.	RETURN			0	0
GEMALTO	DM	DEFAULT	3006	3006	Input Parameters for GDM Services cannot be null.	RETURN			0	0
GEMALTO	DM	DEFAULT	3007	3007	Group not found.	RETURN			0	0
GEMALTO	DM	DEFAULT	3008	3008	Group already defined.	RETURN			0	0
GEMALTO	DM	DEFAULT	3009	3009	SettingSet does not exist.	RETURN			0	0
GEMALTO	DM	DEFAULT	3010	3010	Service not supported by the	RETURN			0	0

					subscriber handset.					
GEMALTO	DM	DEFAULT	3011	3011	Invocation not found.	RETURN			0	0
GEMALTO	DM	DEFAULT	3012	3012	Unable to retrieve the IMEI for MSISDN.	RETURN			0	0
GEMALTO	DM	DEFAULT	3013	3013	Unknown host to connector.	RETURN			0	0
GEMALTO	DM	DEFAULT	3014	3014	Could not get I/O for the connector. Server socket unavailable.	RETURN			0	0
GEMALTO	DM	DEFAULT	3100	3100	Generic GDM error.	RETURN			0	0

2.7 OTA Service

This service is implemented over the platform GEMALTO. See in the next sections the parameters involved for service action.

2.7.1 OTA ChangeMSISDN

The next tables show the input and output parameters defined in the target for each operation. These are the expected parameters to activate this service. The means of each column in this table is:

- Field: name of the parameters expected for the target.
- Type: expected type of the parameters in the target.
- Mandatory: indicate if the parameter is mandatory or not.
- Description: meaningful description of the parameter.

This operation has three different request configurations.

METHOD NAME: changeMSISDN			
METHOD DESCRIPTION: Given the iccid parameter, the service allows to change the MSISDN of a subscriber in the OTA Platform.			
INPUT			
Field	Type	Mandatory	Description
iccid	string(20)	Yes	(Integrated Circuit Card ID) ICCID of a subscriber
newMsisdn	string(13)	Yes	The new msisdn that is going to be assigned to the given iccid.
OUTPUT			
No output parameters.			

METHOD NAME: changeMSISDN			
METHOD DESCRIPTION: Given the imsi parameter, the service allows to change the MSISDN of a subscriber in the OTA Platform.			
INPUT			
Field	Type	Mandatory	Description
imsi	string(15)	Yes	(International Mobile Subscriber Identity) imsi of the subscriber.
newMsisdn	string(13)	Yes	The new msisdn that is going to be assigned to the given imsi.
OUTPUT			
No output parameters.			

METHOD NAME: changeMSISDN			
METHOD DESCRIPTION: Given the msisdn parameter, the service allows to change it in the OTA Platform.			
INPUT			
Field	Type	Mandatory	Description
msisdn	string(13)	Yes	(Mobile Subscriber ISDN) MSISDN of a subscriber
newMsisdn	string(13)	Yes	The new msisdn that is going to be assigned to the given imsi.
OUTPUT			
No output parameters.			

The next table has the input parameters defined for this service in the Service Catalog. These are the parameters that need to be sent to the MSA northbound interface to activate this service.

The means of each column in this table is:

- Name: Name of the parameter in the northbound interface.
- Type: Type of the parameters.
- Format: is a regular expression used to validate the value of the parameter, if the value received in the northbound interfaces does not match this regular expression an error will be returned indicating the error.
- Mandatory: indicates is the parameters is mandatory for this service.
- Default Value: indicate a default value set for this parameters is case that it is not received in the service request.

INPUT				
Name	Type	Format	Mandatory	Default Value
NEWMSISDN	String	\d{12,13}	Yes	
MSISDN	String	\d{12,13}	No	
IMSI	String	\d{15}	No	
ICCID	String	\d{1,20}	No	
SERVICENAME	String		No	changeMSISDN

The next table has the values returned in the northbound interface as a response for this service request.

OUTPUT		
Name	Type	Description
S_SOSA_CODE	String	SOSA internal output, indicated is the was ok or not
S_SOSA_DESCRIPTION	String	SOSA internal description
S_CODE	String	Represent the output code returned by this action
S_DESCRIPTION	String	Represent the output description for this action
NE_CODE	String	Code returned by the target
NE_DESCRIPTION	String	Description returned by the target
NE_OUTPUT	String	Exactly output returned by the target
NE_ACT_TOTAL_TIME	String	Time taken to perform the activation only in the target (in milliseconds)
NETWORKELEMENT	String	Name of the target where the activation have been done
COMMANDS_SENT	String	Command sent to the target
WF_INSTANCE	String	Name of the HPSA workflow manager that executed this action

2.7.2 OTA NewMSISDN

The next tables show the input and output parameters defined in the target for each operation. These are the expected parameters to activate this service. The means of each column in this table is:

- Field: name of the parameters expected for the target.
- Type: expected type of the parameters in the target.
- Mandatory: indicate if the parameter is mandatory or not.
- Description: meaningful description of the parameter.

This operation has two different request configurations.

METHOD NAME: newMSISDN
METHOD DESCRIPTION: Given the ICCID, this operation allows to assign an msisdn and

activate the SimCard of a subscriber in the OTA platform.			
INPUT			
Field	Type	Mandatory	Description
iccid	string(20)	Yes	(Integrated Circuit Card ID) iccid of the subscriber.
msisdn	string(13)	Yes	(Mobile Subscriber ISDN). The new msisdn that is going to be assigned to the given iccid.
OUTPUT			
No output parameters.			

METHOD NAME: newMSISDN			
METHOD DESCRIPTION: Given the IMSI, this operation allows to assign an msisdn and activate the SimCard of a subscriber in the OTA platform.			
INPUT			
Field	Type	Mandatory	Description
imsi	string(15)	Yes	(International Mobile Subscriber Identity) imsi of the subscriber.
msisdn	string(13)	Yes	(Mobile Subscriber ISDN). The new msisdn that is going to be assigned to the given imsi.
OUTPUT			
No output parameters.			

The next table has the input parameters defined for this service in the Service Catalog. These are the parameters that need to be sent to the MSA northbound interface to activate this service.

The means of each column in this table is:

- Name: Name of the parameter in the northbound interface.
- Type: Type of the parameters.
- Format: is a regular expression used to validate the value of the parameter, if the value received in the northbound interfaces does not match this regular expression an error will be returned indicating the error.
- Mandatory: indicates is the parameters is mandatory for this service.
- Default Value: indicate a default value set for this parameters is case that it is not received in the service request.

INPUT				
Name	Type	Format	Mandatory	Default Value
MSISDN	String	\d{12,13}	Yes	
IMSI	String	\d{15}	No	
ICCID	String	\d{1,20}	No	
SERVICENAME	String		No	newMSISDN

The next table has the values returned in the northbound interface as a response for this service request.

OUTPUT		
Name	Type	Description
S_SOSA_CODE	String	SOSA internal output, indicated is the was ok or not
S_SOSA_DESCRIPTION	String	SOSA internal description
S_CODE	String	Represent the output code returned by this action
S_DESCRIPTION	String	Represent the output description for this action
NE_CODE	String	Code returned by the target
NE_DESCRIPTION	String	Description returned by the target
NE_OUTPUT	String	Exactly output returned by the target
NE_ACT_TOTAL_TIME	String	Time taken to perform the activation only in the target (in milliseconds)
NETWORKELEMENT	String	Name of the target where the activation have been done
COMMANDS_SENT	String	Command sent to the target
WF_INSTANCE	String	Name of the HPSA workflow manager that executed this action

2.7.3 OTA GenericCardUpdate

The next tables show the input and output parameters defined in the target for each operation. These are the expected parameters to activate this service. The means of each column in this table is:

- Field: name of the parameters expected for the target.
- Type: expected type of the parameters in the target.
- Mandatory: indicate if the parameter is mandatory or not.
- Description: meaningful description of the parameter.

METHOD NAME: genericCardUpdate			
METHOD DESCRIPTION: This service executes a selected subscription. The script has to be in the configured path.			
INPUT			
Field	Type	Mandatory	Description

msisdn	string(13)	Yes	(Mobile Subscriber ISDN) msisdn of the subscriber.
script	String	No	String with the name of the script to append to the configured path
OUTPUT			
Field	Type	Description	
invocationId	string	Contains the invocation Id of the transaction. It is useful to get the final status of the operation using the checkTransaction service.	

The next table has the input parameters defined for this service in the Service Catalog. These are the parameters that need to be sent to the MSA northbound interface to activate this service.

The means of each column in this table is:

- Name: Name of the parameter in the northbound interface.
- Type: Type of the parameters.
- Format: is a regular expression used to validate the value of the parameter, if the value received in the northbound interfaces does not match this regular expression an error will be returned indicating the error.
- Mandatory: indicates is the parameters is mandatory for this service.
- Default Value: indicate a default value set for this parameters is case that it is not received in the service request.

INPUT				
Name	Type	Format	Mandatory	Default Value
MSISDN	String	\d{12,13}	Yes	
SCRIPT	String		No	
SERVICENAME	String		No	genericCardUpdate

The next table has the values returned in the northbound interface as a response for this service request.

OUTPUT		
Name	Type	Description
S_SOSA_CODE	String	SOSA internal output, indicated is the was ok or not
S_SOSA_DESCRIPTION	String	SOSA internal description
S_CODE	String	Represent the output code returned by this action
S_DESCRIPTION	String	Represent the output description for this action
NE_CODE	String	Code returned by the target

NE_DESCRIPTION	String	Description returned by the target
NE_OUTPUT	String	Exactly output returned by the target
NE_ACT_TOTAL_TIME	String	Time taken to perform the activation only in the target (in milliseconds)
NETWORKELEMENT	String	Name of the target where the activation have been done
COMMANDS_SENT	String	Command sent to the target
WF_INSTANCE	String	Name of the HPSA workflow manager that executed this action
INVOCATIONID	String	This string contains the invocation Id of the transaction

2.7.4 OTA DeleteSimCard

The next tables show the input and output parameters defined in the target for each operation. These are the expected parameters to activate this service. The means of each column in this table is:

- Field: name of the parameters expected for the target.
- Type: expected type of the parameters in the target.
- Mandatory: indicate if the parameter is mandatory or not.
- Description: meaningful description of the parameter.

This operation has three different request configurations.

METHOD NAME: deleteSimCard			
METHOD DESCRIPTION: This service deletes the SimCard of the OTA platform. The service deletes CardContent.			
INPUT			
Field	Type	Mandatory	Description
iccid	string(20)	Yes	(Integrated Circuit Card ID) iccid of the subscriber.
OUTPUT			
No output parameters.			

METHOD NAME: deleteSimCard			
METHOD DESCRIPTION: This service deletes the SimCard of the OTA platform. The service deletes CardContent.			
INPUT			
Field	Type	Mandatory	Description
imsi	string(15)	Yes	(International Mobile Subscriber Identity) imsi of the subscriber.
OUTPUT			

No output parameters.

METHOD NAME: deleteSimCard			
METHOD DESCRIPTION: This service deletes the SimCard of the OTA platform. The service deletes CardContent.			
INPUT			
Field	Type	Mandatory	Description
msisdn	string(13)	Yes	(Mobile Subscriber ISDN) msisdn of the subscriber.
OUTPUT			
No output parameters.			

The next table has the input parameters defined for this service in the Service Catalog. These are the parameters that need to be sent to the MSA northbound interface to activate this service.

The means of each column in this table is:

- Name: Name of the parameter in the northbound interface.
- Type: Type of the parameters.
- Format: is a regular expression used to validate the value of the parameter, if the value received in the northbound interfaces does not match this regular expression an error will be returned indicating the error.
- Mandatory: indicates is the parameters is mandatory for this service.
- Default Value: indicate a default value set for this parameters is case that it is not received in the service request.

INPUT				
Name	Type	Format	Mandatory	Default Value
MSISDN	String	\d{12,13}	No	
IMSI	String	\d{15}	No	
ICCID	String	\d{1,20}	No	
SERVICENAME	String		No	deleteSimCard

The next table has the values returned in the northbound interface as a response for this service request.

OUTPUT		
Name	Type	Description
S_SOSA_CODE	String	SOSA internal output, indicated is the was ok or not

S_SOSA_DESCRIPTION	String	SOSA internal description
S_CODE	String	Represent the output code returned by this action
S_DESCRIPTION	String	Represent the output description for this action
NE_CODE	String	Code returned by the target
NE_DESCRIPTION	String	Description returned by the target
NE_OUTPUT	String	Exactly output returned by the target
NE_ACT_TOTAL_TIME	String	Time taken to perform the activation only in the target (in milliseconds)
NETWORKELEMENT	String	Name of the target where the activation have been done
COMMANDS_SENT	String	Command sent to the target
WF_INSTANCE	String	Name of the HPSA workflow manager that executed this action

2.7.5 OTA DeactivateSimCard

The next tables show the input and output parameters defined in the target for each operation. These are the expected parameters to activate this service. The means of each column in this table is:

- Field: name of the parameters expected for the target.
- Type: expected type of the parameters in the target.
- Mandatory: indicate if the parameter is mandatory or not.
- Description: meaningful description of the parameter.

This operation has three different request configurations.

METHOD NAME: deactivateSimCard			
METHOD DESCRIPTION: This service deactivates a SimCard and removes the assigned msisdh. This service also deactivates the SimCard from the GCSM platform.			
INPUT			
Field	Type	Mandatory	Description
iccid	string(20)	Yes	(Integrated Circuit Card ID) iccid of the subscriber.
OUTPUT			
No output parameters.			

METHOD NAME: deactivateSimCard			
METHOD DESCRIPTION: This service deactivates a SimCard and removes the assigned msisdh. This service also deactivates the SimCard from the GCSM platform.			
INPUT			
Field	Type	Mandatory	Description

imsi	string(15)	Yes	(International Mobile Subscriber Identity) imsi of the subscriber.
OUTPUT			
No output parameters.			

METHOD NAME: deactivateSimCard			
METHOD DESCRIPTION: This service deactivates a SimCard and removes the assigned msisdn. This service also deactivates the SimCard from the GCSM platform.			
INPUT			
Field	Type	Mandatory	Description
msisdn	string(13)	Yes	(Mobile Subscriber ISDN) msisdn of the subscriber.
OUTPUT			
No output parameters.			

The next table has the input parameters defined for this service in the Service Catalog. These are the parameters that need to be sent to the MSA northbound interface to activate this service.

The means of each column in this table is:

- Name: Name of the parameter in the northbound interface.
- Type: Type of the parameters.
- Format: is a regular expression used to validate the value of the parameter, if the value received in the northbound interfaces does not match this regular expression an error will be returned indicating the error.
- Mandatory: indicates is the parameters is mandatory for this service.
- Default Value: indicate a default value set for this parameters is case that it is not received in the service request.

INPUT				
Name	Type	Format	Mandatory	Default Value
MSISDN	String	\d{12,13}	No	
IMSI	String	\d{15}	No	
ICCID	String	\d{1,20}	No	
SERVICENAME	String		No	deactivateSimCard

The next table has the values returned in the northbound interface as a response for this service request.

OUTPUT		
Name	Type	Description
S_SOSA_CODE	String	SOSA internal output, indicated is the was ok or not
S_SOSA_DESCRIPTION	String	SOSA internal description
S_CODE	String	Represent the output code returned by this action
S_DESCRIPTION	String	Represent the output description for this action
NE_CODE	String	Code returned by the target
NE_DESCRIPTION	String	Description returned by the target
NE_OUTPUT	String	Exactly output returned by the target
NE_ACT_TOTAL_TIME	String	Time taken to perform the activation only in the target (in milliseconds)
NETWORKELEMENT	String	Name of the target where the activation have been done
COMMANDS_SENT	String	Command sent to the target
WF_INSTANCE	String	Name of the HPSA workflow manager that executed this action

2.7.6 OTA DeleteApplet

The next tables show the input and output parameters defined in the target for each operation. These are the expected parameters to activate this service. The means of each column in this table is:

- Field: name of the parameters expected for the target.
- Type: expected type of the parameters in the target.
- Mandatory: indicate if the parameter is mandatory or not.
- Description: meaningful description of the parameter.

METHOD NAME: deleteApplet			
METHOD DESCRIPTION: Delete an applet from the SimCard of the given subscriber.			
INPUT			
Field	Type	Mandatory	Description
msisdn	string(13)	Yes	(Mobile Subscriber ISDN) msisdn of the subscriber.
packageId	string(20)	Yes	Contains the packageId of the applet to delete
appletName	string(20)	Yes	Contains the applet name to delete
instance	string(20)	Yes	Contains the instance name of the applet to delete
OUTPUT			
Field	Type	Description	

invocationId	string	Contains the invocation Id of the transaction. It is useful to get the final status of the operation using the checkTransaction service.
--------------	--------	--

The next table has the input parameters defined for this service in the Service Catalog. These are the parameters that need to be sent to the MSA northbound interface to activate this service.

The means of each column in this table is:

- Name: Name of the parameter in the northbound interface.
- Type: Type of the parameters.
- Format: is a regular expression used to validate the value of the parameter, if the value received in the northbound interfaces does not match this regular expression an error will be returned indicating the error.
- Mandatory: indicates is the parameters is mandatory for this service.
- Default Value: indicate a default value set for this parameters is case that it is not received in the service request.

INPUT				
Name	Type	Format	Mandatory	Default Value
MSISDN	String	\d{12,13}	Yes	
PACKAGEID	String		Yes	
APPLETNAME	String		Yes	
INSTANCE	String		Yes	
SERVICENAME	String		No	deleteApplet

The next table has the values returned in the northbound interface as a response for this service request.

OUTPUT		
Name	Type	Description
S_SOSA_CODE	String	SOSA internal output, indicated is the was ok or not
S_SOSA_DESCRIPTION	String	SOSA internal description
S_CODE	String	Represent the output code returned by this action
S_DESCRIPTION	String	Represent the output description for this action
NE_CODE	String	Code returned by the target
NE_DESCRIPTION	String	Description returned by the target
NE_OUTPUT	String	Exactly output returned by the target
NE_ACT_TOTAL_TIME	String	Time taken to perform the activation only in the target (in milliseconds)
NETWORKELEMENT	String	Name of the target where the activation have been done
COMMANDS_SENT	String	Command sent to the target

WF_INSTANCE	String	Name of the HPSA workflow manager that executed this action
INVOCATIONID	String	This string contains the invocation Id of the transaction.

2.7.7 OTA DownloadApplet

The next tables show the input and output parameters defined in the target for each operation. These are the expected parameters to activate this service. The means of each column in this table is:

- Field: name of the parameters expected for the target.
- Type: expected type of the parameters in the target.
- Mandatory: indicate if the parameter is mandatory or not.
- Description: meaningful description of the parameter.

METHOD NAME: downloadApplet			
METHOD DESCRIPTION: Download an applet to the SimCard of a given subscriber.			
INPUT			
Field	Type	Mandatory	Description
msisdn	string(13)	Yes	(Mobile Subscriber ISDN) msisdn of the subscriber.
packageId	string(20)	Yes	Contains the packageId of the applet to delete
appletName	string(20)	Yes	Contains the applet name to delete
instance	String(20)	Yes	Contains the instance name of the applet to download
OUTPUT			
Field	Type	Description	
invocationId	string	Contains the invocation Id of the transaction. It is useful to get the final status of the operation using the checkTransaction service.	

The next table has the input parameters defined for this service in the Service Catalog. These are the parameters that need to be sent to the MSA northbound interface to activate this service.

The means of each column in this table is:

- Name: Name of the parameter in the northbound interface.
- Type: Type of the parameters.
- Format: is a regular expression used to validate the value of the parameter, if the value received in the northbound interfaces does not match this regular expression an error will be returned indicating the error.

- **Mandatory:** indicates is the parameters is mandatory for this service.
- **Default Value:** indicate a default value set for this parameters is case that it is not received in the service request.

INPUT				
Name	Type	Format	Mandatory	Default Value
MSISDN	String	\d{12,13}	Yes	
PACKAGEID	String		Yes	
APPLETNAME	String		Yes	
INSTANCE	String		Yes	
SERVICENAME	String		No	downloadApplet

The next table has the values returned in the northbound interface as a response for this service request.

OUTPUT		
Name	Type	Description
S_SOSA_CODE	String	SOSA internal output, indicated is the was ok or not
S_SOSA_DESCRIPTION	String	SOSA internal description
S_CODE	String	Represent the output code returned by this action
S_DESCRIPTION	String	Represent the output description for this action
NE_CODE	String	Code returned by the target
NE_DESCRIPTION	String	Description returned by the target
NE_OUTPUT	String	Exactly output returned by the target
NE_ACT_TOTAL_TIME	String	Time taken to perform the activation only in the target (in milliseconds)
NETWORKELEMENT	String	Name of the target where the activation have been done
COMMANDS_SENT	String	Command sent to the target
WF_INSTANCE	String	Name of the HPSA workflow manager that executed this action
INVOCATIONID	String	This string contains the invocation Id of the transaction.

2.7.8 OTA GetSubscriber

The next tables show the input and output parameters defined in the target for each operation. These are the expected parameters to activate this service. The means of each column in this table is:

- **Field:** name of the parameters expected for the target.
- **Type:** expected type of the parameters in the target.
- **Mandatory:** indicate if the parameter is mandatory or not.
- **Description:** meaningful description of the parameter.

This operation has three different request configurations.

METHOD NAME: getSubscriber			
METHOD DESCRIPTION: This service gets the basic information of the given subscriber.			
INPUT			
Field	Type	Mandatory	Description
imsi	string(15)	Yes	(International Mobile Subscriber Identity) imsi of the subscriber.
OUTPUT			
Field	Type	Description	
msisdn	string()	Msisdn of the subscriber	
imsi	string()	Imsi of the subscriber	
iccid	String()	Iccid of the subscriber	
Profile	String()	Simcard profile of the subscriber	
status	String()	Status of the subscriber. Possible values: 0 Inactive 1 Active 2Mark for deleted simcards	

METHOD NAME: getSubscriber			
METHOD DESCRIPTION: This service gets the basic information of the given subscriber.			
INPUT			
Field	Type	Mandatory	Description
iccid	string(20)	Yes	(Integrated Circuit Card ID) ICCID of a subscriber
OUTPUT			
Field	Type	Description	
msisdn	string()	Msisdn of the subscriber	
imsi	string()	Imsi of the subscriber	
iccid	String()	Iccid of the subscriber	
Profile	String()	Simcard profile of the subscriber	
status	String()	Status of the subscriber. Possible values: 0 Inactive 1 Active 2Mark for deleted simcards	

METHOD NAME: getSubscriber			
METHOD DESCRIPTION: This service gets the basic information of the given subscriber.			
INPUT			
Field	Type	Mandatory	Description
msisdn	string(13)	Yes	Object that contains the msisdn of the suscriber.
OUTPUT			
Field	Type	Description	
msisdn	string()	Msisdn of the subscriber	
imsi	string()	Imsi of the subscriber	
iccid	String()	Iccid of the subscriber	
Profile	String()	Simcard profile of the subscriber	
status	String()	Status of the subscriber. Possible values: 0 Inactive 1 Active 2Mark for deleted simcards	

The next table has the input parameters defined for this service in the Service Catalog. These are the parameters that need to be sent to the MSA northbound interface to activate this service.

The means of each column in this table is:

- Name: Name of the parameter in the northbound interface.
- Type: Type of the parameters.
- Format: is a regular expression used to validate the value of the parameter, if the value received in the northbound interfaces does not match this regular expression an error will be returned indicating the error.
- Mandatory: indicates is the parameters is mandatory for this service.
- Default Value: indicate a default value set for this parameters is case that it is not received in the service request.

INPUT				
Name	Type	Format	Mandatory	Default Value
MSISDN	String	\d{12,13}	No	
IMSI	String	\d{15}	No	
ICCID	String	\d{1,20}	No	
SERVICENAME	String		No	getSubscriber

The next table has the values returned in the northbound interface as a response for this service request.

OUTPUT		
Name	Type	Description
S_SOSA_CODE	String	SOSA internal output, indicated is the was ok or not
S_SOSA_DESCRIPTION	String	SOSA internal description
S_CODE	String	Represent the output code returned by this action
S_DESCRIPTION	String	Represent the output description for this action
NE_CODE	String	Code returned by the target
NE_DESCRIPTION	String	Description returned by the target
NE_OUTPUT	String	Exactly output returned by the target
NE_ACT_TOTAL_TIME	String	Time taken to perform the activation only in the target (in milliseconds)
NETWORKELEMENT	String	Name of the target where the activation have been done
COMMANDS_SENT	String	Command sent to the target
WF_INSTANCE	String	Name of the HPSA workflow manager that executed this action
MSISDN	String	Msisdn of the subscriber
IMSI	String	Imsi of the subscriber
ICCID	String	Iccid of the subscriber
PROFILE	String	Simcard profile of the subscriber
STATUS	String	Status of the subscriber. Possible values: 0 Inactive 1 Active 2Mark for deleted simcards

2.7.9 OTA GetApplets

The next tables show the input and output parameters defined in the target for each operation. These are the expected parameters to activate this service. The means of each column in this table is:

- Field: name of the parameters expected for the target.
- Type: expected type of the parameters in the target.
- Mandatory: indicate if the parameter is mandatory or not.
- Description: meaningful description of the parameter.

METHOD NAME: getApplets
METHOD DESCRIPTION: Check the available applets for a given subscriber.
INPUT

Field	Type	Mandatory	Description
msisdn	string()	Yes	Object that contains the msisdn of the subscriber.
OUTPUT			
Field	Type	Description	
applet	Applet() array		
Applet[] object			
Field	Type	Description	
javaAppletId	string()	Java Apple identifier	
description	string()	Description	
label	string()	Apple's name.	
cardDefinitionName	string()	CardDefinition associated to this applet	
appletProviderName	string()	AppletProviderName associated to this applet	
minorVersion	int	Minor version of the applet	
majorVersion	int	Major version of the applet	
appletInstances	AppletInstaces[]	Array of apples instances each object of this array has an String named indentifier	

The next table has the input parameters defined for this service in the Service Catalog. These are the parameters that need to be sent to the MSA northbound interface to activate this service.

The means of each column in this table is:

- Name: Name of the parameter in the northbound interface.
- Type: Type of the parameters.
- Format: is a regular expression used to validate the value of the parameter, if the value received in the northbound interfaces does not match this regular expression an error will be returned indicating the error.
- Mandatory: indicates is the parameters is mandatory for this service.
- Default Value: indicate a default value set for this parameters is case that it is not received in the service request.

INPUT				
Name	Type	Format	Mandatory	Default Value
MSISDN	String	\d{12,13}	Yes	
SERVICENAME	String		No	getApplets

The next table has the values returned in the northbound interface as a response for this service request.

OUTPUT		
Name	Type	Description
S_SOSA_CODE	String	SOSA internal output, indicated is the was ok or not
S_SOSA_DESCRIPTION	String	SOSA internal description
S_CODE	String	Represent the output code returned by this action
S_DESCRIPTION	String	Represent the output description for this action
NE_CODE	String	Code returned by the target
NE_DESCRIPTION	String	Description returned by the target
NE_OUTPUT	String	Exactly output returned by the target
NE_ACT_TOTAL_TIME	String	Time taken to perform the activation only in the target (in milliseconds)
NETWORKELEMENT	String	Name of the target where the activation have been done
COMMANDS_SENT	String	Command sent to the target
WF_INSTANCE	String	Name of the HPSA workflow manager that executed this action
APPLETS	String	List of applets, serialized in an string with the next format: javaAppletId=<value>, description=<value>, label=<value>, cardDefinitionName=<value>, appletProviderName=<value>, minorVersion=<value>, majorVersion=<value>, appletInstances=<value1:value2:value3>,...

2.7.10 OTA GetMaxADNs

The next tables show the input and output parameters defined in the target for each operation. These are the expected parameters to activate this service. The means of each column in this table is:

- Field: name of the parameters expected for the target.
- Type: expected type of the parameters in the target.
- Mandatory: indicate if the parameter is mandatory or not.
- Description: meaningful description of the parameter.

METHOD NAME: getMaxADNs			
METHOD DESCRIPTION: This service permits to get the record number of the ADN file according the msisdn.			
INPUT			
Field	Type	Mandatory	Description

msisdn	string()	Yes	Object that contains the msisdn of the subscriber.
OUTPUT			
Field	Type	Description	
ADNSize	int	Number of ADNs	

The next table has the input parameters defined for this service in the Service Catalog. These are the parameters that need to be sent to the MSA northbound interface to activate this service.

The means of each column in this table is:

- Name: Name of the parameter in the northbound interface.
- Type: Type of the parameters.
- Format: is a regular expression used to validate the value of the parameter, if the value received in the northbound interfaces does not match this regular expression an error will be returned indicating the error.
- Mandatory: indicates is the parameters is mandatory for this service.
- Default Value: indicate a default value set for this parameters is case that it is not received in the service request.

INPUT				
Name	Type	Format	Mandatory	Default Value
MSISDN	String	\d{12,13}	Yes	
SERVICENAME	String		No	getMaxADNs

The next table has the values returned in the northbound interface as a response for this service request.

OUTPUT		
Name	Type	Description
S_SOSA_CODE	String	SOSA internal output, indicated is the was ok or not
S_SOSA_DESCRIPTION	String	SOSA internal description
S_CODE	String	Represent the output code returned by this action
S_DESCRIPTION	String	Represent the output description for this action
NE_CODE	String	Code returned by the target
NE_DESCRIPTION	String	Description returned by the target
NE_OUTPUT	String	Exactly output returned by the target
NE_ACT_TOTAL_TIME	String	Time taken to perform the activation only in the target (in milliseconds)
NETWORKELEMENT	String	Name of the target where the activation have been done
COMMANDS_SENT	String	Command sent to the target

WF_INSTANCE	String	Name of the HPSA workflow manager that executed this action
ADNSIZE	String	Number of ADNs

2.7.11 OTA GetMaxadnNameLength

The next tables show the input and output parameters defined in the target for each operation. These are the expected parameters to activate this service. The means of each column in this table is:

- Field: name of the parameters expected for the target.
- Type: expected type of the parameters in the target.
- Mandatory: indicate if the parameter is mandatory or not.
- Description: meaningful description of the parameter.

METHOD NAME: getMaxadnNameLength			
METHOD DESCRIPTION: This service permits to get the record number of the AND file according the msisdn.			
INPUT			
Field	Type	Mandatory	Description
msisdn	string()	Yes	Object that contains the msisdn of the subscriber.
OUTPUT			
Field	Type	Description	
recordSize	int	Maximum number of ADNs	

The next table has the input parameters defined for this service in the Service Catalog. These are the parameters that need to be sent to the MSA northbound interface to activate this service.

The means of each column in this table is:

- Name: Name of the parameter in the northbound interface.
- Type: Type of the parameters.
- Format: is a regular expression used to validate the value of the parameter, if the value received in the northbound interfaces does not match this regular expression an error will be returned indicating the error.
- Mandatory: indicates is the parameters is mandatory for this service.
- Default Value: indicate a default value set for this parameters is case that it is not received in the service request.

INPUT				
Name	Type	Format	Mandatory	Default Value

MSISDN	String	\d{12,13}	Yes	
SERVICENAME	String		No	getMaxADNNameLength

The next table has the values returned in the northbound interface as a response for this service request.

OUTPUT		
Name	Type	Description
S_SOSA_CODE	String	SOSA internal output, indicated is the was ok or not
S_SOSA_DESCRIPTION	String	SOSA internal description
S_CODE	String	Represent the output code returned by this action
S_DESCRIPTION	String	Represent the output description for this action
NE_CODE	String	Code returned by the target
NE_DESCRIPTION	String	Description returned by the target
NE_OUTPUT	String	Exactly output returned by the target
NE_ACT_TOTAL_TIME	String	Time taken to perform the activation only in the target (in milliseconds)
NETWORKELEMENT	String	Name of the target where the activation have been done
COMMANDS_SENT	String	Command sent to the target
WF_INSTANCE	String	Name of the HPSA workflow manager that executed this action
RECORDSIZE	String	Maximum number of ADNs.

2.7.12 OTA Error Management

These are the errors returned by the OTA platform and the translation that MSA will applied.

Platform type	Service	Operation	Ne_code	Return_code	Return_description	Action	Number_retrieves	Time out	Number exist	Number not exist
GEMAL TO	OTA	DEFAULT	1000	1000	OTA platform unavailable	RETURN			0	0
GEMAL TO	OTA	DEFAULT	1001	1001	Input parameters for OTA services cannot be null	RETURN			0	0
GEMAL TO	OTA	DEFAULT	1002	1002	Suscriber doesn't exist in the OTA platform	RETURN			0	1
GEMAL TO	OTA	DEFAULT	1003	1003	New Msisdn is assigned to another SimCard	RETURN			0	0

GEMALTO	OTA	DEFAULT	1004	1004	Transaction doesn't exist in the OTA platform	RETURN			0	0
GEMALTO	OTA	DEFAULT	1005	1005	Cannot launch transaction in the OTA platform	RETURN			0	0
GEMALTO	OTA	DEFAULT	1100	1100	Generic OTA error	RETURN			0	0

2.8 OTA Backup Service

This service is implemented over the platform GEMALTO. See in the next sections the parameters involved for service action.

2.8.1 OTA Backup startBackup

The next tables show the input and output parameters defined in the target for each operation. These are the expected parameters to activate this service. The means of each column in this table is:

- Field: name of the parameters expected for the target.
- Type: expected type of the parameters in the target.
- Mandatory: indicate if the parameter is mandatory or not.
- Description: meaningful description of the parameter.

METHOD NAME: startBackup			
METHOD DESCRIPTION: It executes a backup operation without asking to the subscriber if he accepts the operation.			
INPUT			
Field	Type	Mandatory	Description
msisdn	string(12)	Yes	(Mobile Subscriber ISDN) msisdn of a subscriber
OUTPUT			
No output parameters.			

The next table has the input parameters defined for this service in the Service Catalog. These are the parameters that need to be sent to the MSA northbound interface to activate this service.

The means of each column in this table is:

- Name: Name of the parameter in the northbound interface.
- Type: Type of the parameters.
- Format: is a regular expression used to validate the value of the parameter, if the value received in the northbound interfaces does not match this regular expression an error will be returned indicating the error.

- **Mandatory:** indicates is the parameters is mandatory for this service.
- **Default Value:** indicate a default value set for this parameters is case that it is not received in the service request.

INPUT				
Name	Type	Format	Mandatory	Default Value
MSISDN	String	\d{12,13}	Yes	
SERVICENAME	String		No	startBackup

The next table has the values returned in the northbound interface as a response for this service request.

OUTPUT		
Name	Type	Description
S_SOSA_CODE	String	SOSA internal output, indicated is the was ok or not
S_SOSA_DESCRIPTION	String	SOSA internal description
S_CODE	String	Represent the output code returned by this action
S_DESCRIPTION	String	Represent the output description for this action
NE_CODE	String	Code returned by the target
NE_DESCRIPTION	String	Description returned by the target
NE_OUTPUT	String	Exactly output returned by the target
NE_ACT_TOTAL_TIME	String	Time taken to perform the activation only in the target (in milliseconds)
NETWORKELEMENT	String	Name of the target where the activation have been done
COMMANDS_SENT	String	Command sent to the target
WF_INSTANCE	String	Name of the HPSA workflow manager that executed this action

2.8.2 OTA Backup startRestore

The next tables show the input and output parameters defined in the target for each operation. These are the expected parameters to activate this service. The means of each column in this table is:

- **Field:** name of the parameters expected for the target.
- **Type:** expected type of the parameters in the target.
- **Mandatory:** indicate if the parameter is mandatory or not.
- **Description:** meaningful description of the parameter.

METHOD NAME: startRestore
METHOD DESCRIPTION: It executes a restore operation without asking to the subscriber if he accepts the operation.

INPUT			
Field	Type	Mandatory	Description
msisdn	string(12)	Yes	(Mobile Subscriber ISDN) msisdn of a subscriber
OUTPUT			
No output parameters.			

The next table has the input parameters defined for this service in the Service Catalog. These are the parameters that need to be sent to the MSA northbound interface to activate this service.

The means of each column in this table is:

- Name: Name of the parameter in the northbound interface.
- Type: Type of the parameters.
- Format: is a regular expression used to validate the value of the parameter, if the value received in the northbound interfaces does not match this regular expression an error will be returned indicating the error.
- Mandatory: indicates is the parameters is mandatory for this service.
- Default Value: indicate a default value set for this parameters is case that it is not received in the service request.

INPUT				
Name	Type	Format	Mandatory	Default Value
MSISDN	String	\d{12,13}	Yes	
SERVICENAME	String		No	startRestore

The next table has the values returned in the northbound interface as a response for this service request.

OUTPUT		
Name	Type	Description
S_SOSA_CODE	String	SOSA internal output, indicated is the was ok or not
S_SOSA_DESCRIPTION	String	SOSA internal description
S_CODE	String	Represent the output code returned by this action
S_DESCRIPTION	String	Represent the output description for this action
NE_CODE	String	Code returned by the target
NE_DESCRIPTION	String	Description returned by the target
NE_OUTPUT	String	Exactly output returned by the target
NE_ACT_TOTAL_TIME	String	Time taken to perform the activation only in the target (in milliseconds)
NETWORKELEMENT	String	Name of the target where the activation have been done

COMMANDS_SENT	String	Command sent to the target
WF_INSTANCE	String	Name of the HPSA workflow manager that executed this action

2.8.3 OTA Backup startSynchronization

The next tables show the input and output parameters defined in the target for each operation. These are the expected parameters to activate this service. The means of each column in this table is:

- Field: name of the parameters expected for the target.
- Type: expected type of the parameters in the target.
- Mandatory: indicate if the parameter is mandatory or not.
- Description: meaningful description of the parameter.

METHOD NAME: startSynchronization			
METHOD DESCRIPTION: It executes a backup synchronization without asking to the subscriber if he accepts the operation.			
INPUT			
Field	Type	Mandatory	Description
msisdn	string(12)	Yes	(Mobile Subscriber ISDN) msisdn of a subscriber
OUTPUT			
No output parameters.			

The next table has the input parameters defined for this service in the Service Catalog. These are the parameters that need to be sent to the MSA northbound interface to activate this service.

The means of each column in this table is:

- Name: Name of the parameter in the northbound interface.
- Type: Type of the parameters.
- Format: is a regular expression used to validate the value of the parameter, if the value received in the northbound interfaces does not match this regular expression an error will be returned indicating the error.
- Mandatory: indicates is the parameters is mandatory for this service.
- Default Value: indicate a default value set for this parameters is case that it is not received in the service request.

INPUT				
Name	Type	Format	Mandatory	Default Value
MSISDN	String	\d{12,13}	Yes	

SERVICENAME	String		No	startSynchronization
-------------	--------	--	----	----------------------

The next table has the values returned in the northbound interface as a response for this service request.

OUTPUT		
Name	Type	Description
S_SOSA_CODE	String	SOSA internal output, indicated is the was ok or not
S_SOSA_DESCRIPTION	String	SOSA internal description
S_CODE	String	Represent the output code returned by this action
S_DESCRIPTION	String	Represent the output description for this action
NE_CODE	String	Code returned by the target
NE_DESCRIPTION	String	Description returned by the target
NE_OUTPUT	String	Exactly output returned by the target
NE_ACT_TOTAL_TIME	String	Time taken to perform the activation only in the target (in milliseconds)
NETWORKELEMENT	String	Name of the target where the activation have been done
COMMANDS_SENT	String	Command sent to the target
WF_INSTANCE	String	Name of the HPSA workflow manager that executed this action

2.8.4 OTA Backup requestBackup

The next tables show the input and output parameters defined in the target for each operation. These are the expected parameters to activate this service. The means of each column in this table is:

- Field: name of the parameters expected for the target.
- Type: expected type of the parameters in the target.
- Mandatory: indicate if the parameter is mandatory or not.
- Description: meaningful description of the parameter.

METHOD NAME: requestBackup			
METHOD DESCRIPTION: It is operation of backup. It includes sending a notification to the subscriber indicating that the operation will be billed.			
INPUT			
Field	Type	Mandatory	Description
msisdn	string(12)	Yes	(Mobile Subscriber ISDN) msisdn of a subscriber
OUTPUT			
No output parameters.			

The next table has the input parameters defined for this service in the Service Catalog. These are the parameters that need to be sent to the MSA northbound interface to activate this service.

The means of each column in this table is:

- Name: Name of the parameter in the northbound interface.
- Type: Type of the parameters.
- Format: is a regular expression used to validate the value of the parameter, if the value received in the northbound interfaces does not match this regular expression an error will be returned indicating the error.
- Mandatory: indicates is the parameters is mandatory for this service.
- Default Value: indicate a default value set for this parameters is case that it is not received in the service request.

INPUT				
Name	Type	Format	Mandatory	Default Value
MSISDN	String	\d{12,13}	Yes	
SERVICENAME	String		No	requestBackup

The next table has the values returned in the northbound interface as a response for this service request.

OUTPUT		
Name	Type	Description
S_SOSA_CODE	String	SOSA internal output, indicated is the was ok or not
S_SOSA_DESCRIPTION	String	SOSA internal description
S_CODE	String	Represent the output code returned by this action
S_DESCRIPTION	String	Represent the output description for this action
NE_CODE	String	Code returned by the target
NE_DESCRIPTION	String	Description returned by the target
NE_OUTPUT	String	Exactly output returned by the target
NE_ACT_TOTAL_TIME	String	Time taken to perform the activation only in the target (in milliseconds)
NETWORKELEMENT	String	Name of the target where the activation have been done
COMMANDS_SENT	String	Command sent to the target
WF_INSTANCE	String	Name of the HPSA workflow manager that executed this action

2.8.5 OTA Backup requestRestore

The next tables show the input and output parameters defined in the target for each operation. These are the expected parameters to activate this service. The means of each column in this table is:

- Field: name of the parameters expected for the target.
- Type: expected type of the parameters in the target.
- Mandatory: indicate if the parameter is mandatory or not.
- Description: meaningful description of the parameter.

METHOD NAME: requestRestore			
METHOD DESCRIPTION: It is an operation of restore. It includes sending a notification to the subscriber indicating that the operation will be billed.			
INPUT			
Field	Type	Mandatory	Description
msisdn	string(12)	Yes	(Mobile Subscriber ISDN) msisdn of a subscriber
OUTPUT			
No output parameters.			

The next table has the input parameters defined for this service in the Service Catalog. These are the parameters that need to be sent to the MSA northbound interface to activate this service.

The means of each column in this table is:

- Name: Name of the parameter in the northbound interface.
- Type: Type of the parameters.
- Format: is a regular expression used to validate the value of the parameter, if the value received in the northbound interfaces does not match this regular expression an error will be returned indicating the error.
- Mandatory: indicates is the parameters is mandatory for this service.
- Default Value: indicate a default value set for this parameters is case that it is not received in the service request.

INPUT				
Name	Type	Format	Mandatory	Default Value
MSISDN	String	\d{12,13}	Yes	
SERVICENAME	String		No	requestRestore

The next table has the values returned in the northbound interface as a response for this service request.

OUTPUT		
Name	Type	Description
S_SOSA_CODE	String	SOSA internal output, indicated is the was ok or not
S_SOSA_DESCRIPTION	String	SOSA internal description
S_CODE	String	Represent the output code returned by this action
S_DESCRIPTION	String	Represent the output description for this action
NE_CODE	String	Code returned by the target
NE_DESCRIPTION	String	Description returned by the target
NE_OUTPUT	String	Exactly output returned by the target
NE_ACT_TOTAL_TIME	String	Time taken to perform the activation only in the target (in milliseconds)
NETWORKELEMENT	String	Name of the target where the activation have been done
COMMANDS_SENT	String	Command sent to the target
WF_INSTANCE	String	Name of the HPSA workflow manager that executed this action

2.8.6 OTA Backup requestSynchronization

The next tables show the input and output parameters defined in the target for each operation. These are the expected parameters to activate this service. The means of each column in this table is:

- Field: name of the parameters expected for the target.
- Type: expected type of the parameters in the target.
- Mandatory: indicate if the parameter is mandatory or not.
- Description: meaningful description of the parameter.

METHOD NAME: requestSynchronization			
METHOD DESCRIPTION: It is operation of synchronization. It includes sending a notification to the subscriber indicating that the operation will be billed.			
INPUT			
Field	Type	Mandatory	Description
msisdn	string(12)	Yes	(Mobile Subscriber ISDN) msisdn of a subscriber
OUTPUT			
No output parameters.			

The next table has the input parameters defined for this service in the Service Catalog. These are the parameters that need to be sent to the MSA northbound interface to activate this service.

The means of each column in this table is:

- Name: Name of the parameter in the northbound interface.

- Type: Type of the parameters.
- Format: is a regular expression used to validate the value of the parameter, if the value received in the northbound interfaces does not match this regular expression an error will be returned indicating the error.
- Mandatory: indicates is the parameters is mandatory for this service.
- Default Value: indicate a default value set for this parameters is case that it is not received in the service request.

INPUT				
Name	Type	Format	Mandatory	Default Value
MSISDN	String	\d{12,13}	Yes	
SERVICENAME	String		No	requestSynchronization

The next table has the values returned in the northbound interface as a response for this service request.

OUTPUT		
Name	Type	Description
S_SOSA_CODE	String	SOSA internal output, indicated is the was ok or not
S_SOSA_DESCRIPTION	String	SOSA internal description
S_CODE	String	Represent the output code returned by this action
S_DESCRIPTION	String	Represent the output description for this action
NE_CODE	String	Code returned by the target
NE_DESCRIPTION	String	Description returned by the target
NE_OUTPUT	String	Exactly output returned by the target
NE_ACT_TOTAL_TIME	String	Time taken to perform the activation only in the target (in milliseconds)
NETWORKELEMENT	String	Name of the target where the activation have been done
COMMANDS_SENT	String	Command sent to the target
WF_INSTANCE	String	Name of the HPSA workflow manager that executed this action

2.8.7 OTA Backup createContact

The next tables show the input and output parameters defined in the target for each operation. These are the expected parameters to activate this service. The means of each column in this table is:

- Field: name of the parameters expected for the target.
- Type: expected type of the parameters in the target.
- Mandatory: indicate if the parameter is mandatory or not.
- Description: meaningful description of the parameter.

METHOD NAME: createContact			
METHOD DESCRIPTION: This service creates a new contact for a given MSISDN.			
INPUT			
Field	Type	Mandatory	Description
msisdn	string(12)	Yes	(Mobile Subscriber ISDN)msisdn of a subscriber
index	int	Yes	Index number of the contact
name	String(50)	Yes	Name of the contact
phoneNumber	String(20)	Yes	Phone number of the contact
OUTPUT			
No output parameters.			

The next table has the input parameters defined for this service in the Service Catalog. These are the parameters that need to be sent to the MSA northbound interface to activate this service.

The means of each column in this table is:

- Name: Name of the parameter in the northbound interface.
- Type: Type of the parameters.
- Format: is a regular expression used to validate the value of the parameter, if the value received in the northbound interfaces does not match this regular expression an error will be returned indicating the error.
- Mandatory: indicates is the parameters is mandatory for this service.
- Default Value: indicate a default value set for this parameters is case that it is not received in the service request.

INPUT				
Name	Type	Format	Mandatory	Default Value
MSISDN	String	\d{12,13}	Yes	
INDEX	Integer		Yes	
NAME	String	.{1,50}	Yes	
PHONENUMBER	String	.{1,20}	Yes	
SERVICENAME	String		No	createContact

The next table has the values returned in the northbound interface as a response for this service request.

OUTPUT		
Name	Type	Description
S_SOSA_CODE	String	SOSA internal output, indicated is the was ok or not
S_SOSA_DESCRIPTION	String	SOSA internal description
S_CODE	String	Represent the output code returned by this action
S_DESCRIPTION	String	Represent the output description for this action
NE_CODE	String	Code returned by the target
NE_DESCRIPTION	String	Description returned by the target
NE_OUTPUT	String	Exactly output returned by the target
NE_ACT_TOTAL_TIME	String	Time taken to perform the activation only in the target (in milliseconds)
NETWORKELEMENT	String	Name of the target where the activation have been done
COMMANDS_SENT	String	Command sent to the target
WF_INSTANCE	String	Name of the HPSA workflow manager that executed this action

2.8.8 OTA Backup updateContact

The next tables show the input and output parameters defined in the target for each operation. These are the expected parameters to activate this service. The means of each column in this table is:

- Field: name of the parameters expected for the target.
- Type: expected type of the parameters in the target.
- Mandatory: indicate if the parameter is mandatory or not.
- Description: meaningful description of the parameter.

METHOD NAME: updateContact			
METHOD DESCRIPTION: Update a contact in the agenda of the given subscriber.			
INPUT			
Field	Type	Mandatory	Description
msisdn	string(12)	Yes	(Mobile Subscriber ISDN) msisdn of a subscriber
index	int	No	Index number of the contact
name	String(50)	No	Name of the contact
phoneNumber	String(20)	No	Phone number of the contact
OUTPUT			
No output parameters.			

The next table has the input parameters defined for this service in the Service Catalog. These are the parameters that need to be sent to the MSA northbound interface to activate this service.

The means of each column in this table is:

- Name: Name of the parameter in the northbound interface.
- Type: Type of the parameters.
- Format: is a regular expression used to validate the value of the parameter, if the value received in the northbound interfaces does not match this regular expression an error will be returned indicating the error.
- Mandatory: indicates is the parameters is mandatory for this service.
- Default Value: indicate a default value set for this parameters is case that it is not received in the service request.

INPUT				
Name	Type	Format	Mandatory	Default Value
MSISDN	String	\d{12,13}	Yes	
INDEX	Integer		Yes	
NAME	String	.{1,50}	Yes	
PHONENUMBER	String	.{1,20}	Yes	
SERVICENAME	String		No	updateContact

The next table has the values returned in the northbound interface as a response for this service request.

OUTPUT		
Name	Type	Description
S_SOSA_CODE	String	SOSA internal output, indicated is the was ok or not
S_SOSA_DESCRIPTION	String	SOSA internal description
S_CODE	String	Represent the output code returned by this action
S_DESCRIPTION	String	Represent the output description for this action
NE_CODE	String	Code returned by the target
NE_DESCRIPTION	String	Description returned by the target
NE_OUTPUT	String	Exactly output returned by the target
NE_ACT_TOTAL_TIME	String	Time taken to perform the activation only in the target (in milliseconds)
NETWORKELEMENT	String	Name of the target where the activation have been done
COMMANDS_SENT	String	Command sent to the target
WF_INSTANCE	String	Name of the HPSA workflow manager that executed this action

2.8.9 OTA Backup deleteContact

The next tables show the input and output parameters defined in the target for each operation. These are the expected parameters to activate this service. The means of each column in this table is:

- Field: name of the parameters expected for the target.
- Type: expected type of the parameters in the target.
- Mandatory: indicate if the parameter is mandatory or not.
- Description: meaningful description of the parameter.

METHOD NAME: deleteContact			
METHOD DESCRIPTION: This service deletes the subscriber for a given MSISDN.			
INPUT			
Field	Type	Mandatory	Description
msisdn	string(12)	Yes	(Mobile Subscriber ISDN) msisdn of a subscriber
OUTPUT			
No output parameters.			

The next table has the input parameters defined for this service in the Service Catalog. These are the parameters that need to be sent to the MSA northbound interface to activate this service.

The means of each column in this table is:

- Name: Name of the parameter in the northbound interface.
- Type: Type of the parameters.
- Format: is a regular expression used to validate the value of the parameter, if the value received in the northbound interfaces does not match this regular expression an error will be returned indicating the error.
- Mandatory: indicates is the parameters is mandatory for this service.
- Default Value: indicate a default value set for this parameters is case that it is not received in the service request.

INPUT				
Name	Type	Format	Mandatory	Default Value
MSISDN	String	\d{12,13}	Yes	
INDEX	Integer		Yes	
SERVICENAME	String		No	deleteContact

The next table has the values returned in the northbound interface as a response for this service request.

OUTPUT		
Name	Type	Description
S_SOSA_CODE	String	SOSA internal output, indicated is the was ok or not
S_SOSA_DESCRIPTION	String	SOSA internal description
S_CODE	String	Represent the output code returned by this action
S_DESCRIPTION	String	Represent the output description for this action
NE_CODE	String	Code returned by the target
NE_DESCRIPTION	String	Description returned by the target
NE_OUTPUT	String	Exactly output returned by the target
NE_ACT_TOTAL_TIME	String	Time taken to perform the activation only in the target (in milliseconds)
NETWORKELEMENT	String	Name of the target where the activation have been done
COMMANDS_SENT	String	Command sent to the target
WF_INSTANCE	String	Name of the HPSA workflow manager that executed this action

2.8.10 OTA Backup getContacts

The next tables show the input and output parameters defined in the target for each operation. These are the expected parameters to activate this service. The means of each column in this table is:

- Field: name of the parameters expected for the target.
- Type: expected type of the parameters in the target.
- Mandatory: indicate if the parameter is mandatory or not.
- Description: meaningful description of the parameter.

METHOD NAME: getContacts			
METHOD DESCRIPTION: Given the msisdn, the number returns the list of contacts.			
INPUT			
Field	Type	Mandatory	Description
msisdn	string()	Yes	Object that contains the msisdn of the subscriber
OUTPUT			
Field	Type	Description	
listOfContacts	Contacts() list		
Contacts[] object			
Field	Type	Description	
recordIndex	int	Internal index of this contact	

name	String	Name
phoneNumber	String	Phone number

The next table has the input parameters defined for this service in the Service Catalog. These are the parameters that need to be sent to the MSA northbound interface to activate this service.

The means of each column in this table is:

- Name: Name of the parameter in the northbound interface.
- Type: Type of the parameters.
- Format: is a regular expression used to validate the value of the parameter, if the value received in the northbound interfaces does not match this regular expression an error will be returned indicating the error.
- Mandatory: indicates is the parameters is mandatory for this service.
- Default Value: indicate a default value set for this parameters is case that it is not received in the service request.

INPUT				
Name	Type	Format	Mandatory	Default Value
MSISDN	String	\d{12,13}	Yes	
SERVICENAME	String		No	getContacts

The next table has the values returned in the northbound interface as a response for this service request.

OUTPUT		
Name	Type	Description
S_SOSA_CODE	String	SOSA internal output, indicated is the was ok or not
S_SOSA_DESCRIPTION	String	SOSA internal description
S_CODE	String	Represent the output code returned by this action
S_DESCRIPTION	String	Represent the output description for this action
NE_CODE	String	Code returned by the target
NE_DESCRIPTION	String	Description returned by the target
NE_OUTPUT	String	Exactly output returned by the target
NE_ACT_TOTAL_TIME	String	Time taken to perform the activation only in the target (in milliseconds)
NETWORKELEMENT	String	Name of the target where the activation have been done
COMMANDS_SENT	String	Command sent to the target
WF_INSTANCE	String	Name of the HPSA workflow manager that executed this action
CONTACTS	String	List of contacts serialized as a string. The format of this

		list is: recordIndex=<value>,name=<value>, phoneNumber=<value>,...
--	--	--

2.8.11 OTA Backup getLastTransactions

The next tables show the input and output parameters defined in the target for each operation. These are the expected parameters to activate this service. The means of each column in this table is:

- Field: name of the parameters expected for the target.
- Type: expected type of the parameters in the target.
- Mandatory: indicate if the parameter is mandatory or not.
- Description: meaningful description of the parameter.

METHOD NAME: getLastTransactions			
METHOD DESCRIPTION: Given the msisdn, the number n of transactions required, returns the n last transactions.			
INPUT			
Field	Type	Mandatory	Description
msisdn	string()	Yes	Object that contains the msisdn of the subscriber
numberOfTrans	int	Yes	The number of transactions to be retrieved
OUTPUT			
Field	Type	Description	
listOfTransactions	string()	Yes	

The next table has the input parameters defined for this service in the Service Catalog. These are the parameters that need to be sent to the MSA northbound interface to activate this service.

The means of each column in this table is:

- Name: Name of the parameter in the northbound interface.
- Type: Type of the parameters.
- Format: is a regular expression used to validate the value of the parameter, if the value received in the northbound interfaces does not match this regular expression an error will be returned indicating the error.
- Mandatory: indicates is the parameters is mandatory for this service.
- Default Value: indicate a default value set for this parameters is case that it is not received in the service request.

INPUT				
Name	Type	Format	Mandatory	Default Value
MSISDN	String	\d{12,13}	Yes	
NUMBEROFTRANSACTION S	Integer		No	
SERVICENAME	String		No	getLastTransactions

The next table has the values returned in the northbound interface as a response for this service request.

OUTPUT		
Name	Type	Description
S_SOSA_CODE	String	SOSA internal output, indicated is the was ok or not
S_SOSA_DESCRIPTION	String	SOSA internal description
S_CODE	String	Represent the output code returned by this action
S_DESCRIPTION	String	Represent the output description for this action
NE_CODE	String	Code returned by the target
NE_DESCRIPTION	String	Description returned by the target
NE_OUTPUT	String	Exactly output returned by the target
NE_ACT_TOTAL_TIME	String	Time taken to perform the activation only in the target (in milliseconds)
NETWORKELEMENT	String	Name of the target where the activation have been done
COMMANDS_SENT	String	Command sent to the target
WF_INSTANCE	String	Name of the HPSA workflow manager that executed this action
TRANSACTIONLIST	String	List of transactions serialized as a string. The format of this string is: source=<value>,operation=<value>,type=<value>, profileName=<value>,status=<value>,errorCode=<value>, errorReport=<value>...

2.8.12 OTA Backup getCurrentTransaction

The next tables show the input and output parameters defined in the target for each operation. These are the expected parameters to activate this service. The means of each column in this table is:

- Field: name of the parameters expected for the target.
- Type: expected type of the parameters in the target.
- Mandatory: indicate if the parameter is mandatory or not.
- Description: meaningful description of the parameter.

METHOD NAME: getCurrentTransaction

METHOD DESCRIPTION: Given the msisdn, the number returns the current transaction.			
INPUT			
Field	Type	Mandatory	Description
msisdn	string()	Yes	Object that contains the msisdn of the subscriber
OUTPUT			
Field	Type	Description	
transaction	Object ()	Object that contains the current transaction retrieved. The fields of the transactions are: source operation type profileName status	

The next table has the input parameters defined for this service in the Service Catalog. These are the parameters that need to be sent to the MSA northbound interface to activate this service.

The means of each column in this table is:

- Name: Name of the parameter in the northbound interface.
- Type: Type of the parameters.
- Format: is a regular expression used to validate the value of the parameter, if the value received in the northbound interfaces does not match this regular expression an error will be returned indicating the error.
- Mandatory: indicates is the parameters is mandatory for this service.
- Default Value: indicate a default value set for this parameters is case that it is not received in the service request.

INPUT				
Name	Type	Format	Mandatory	Default Value
MSISDN	String	\d{12,13}	Yes	
SERVICENAME	String		No	getCurrentTransaction

The next table has the values returned in the northbound interface as a response for this service request.

OUTPUT		
Name	Type	Description
S_SOSA_CODE	String	SOSA internal output, indicated is the was ok or not
S_SOSA_DESCRIPTION	String	SOSA internal description
S_CODE	String	Represent the output code returned by this action
S_DESCRIPTION	String	Represent the output description for this action
NE_CODE	String	Code returned by the target
NE_DESCRIPTION	String	Description returned by the target
NE_OUTPUT	String	Exactly output returned by the target
NE_ACT_TOTAL_TIME	String	Time taken to perform the activation only in the target (in milliseconds)
NETWORKELEMENT	String	Name of the target where the activation have been done
COMMANDS_SENT	String	Command sent to the target
WF_INSTANCE	String	Name of the HPSA workflow manager that executed this action
SOURCE	String	Source of the originator of the transaction
OPERATION	String	operation name
TYPE	String	type of the operation(full or lite)
PROFILENAME	String	Profile name of the target simcard
STATUS	String	Status of the operation. Could be: FAILED SUCCEEDED
ERRORCODE	String	ErrorCode(in case of error, otherwise -1)
ERRORREPORT	String	Error description(in case of error, otherwise null)

2.8.13 OTA Backup deleteSubscriber

The next tables show the input and output parameters defined in the target for each operation. These are the expected parameters to activate this service. The means of each column in this table is:

- Field: name of the parameters expected for the target.
- Type: expected type of the parameters in the target.
- Mandatory: indicate if the parameter is mandatory or not.
- Description: meaningful description of the parameter.

METHOD NAME: deleteSubscriber			
METHOD DESCRIPTION: This service deletes the Contact identified by the index parameter, for a given MSISDN.			
INPUT			
Field	Type	Mandatory	Description
msisdn	string(12)	Yes	(Mobile Subscriber ISDN)

			msisdn of a subscriber
index	int	Yes	Index number of the contact
OUTPUT			
No output parameters.			

The next table has the input parameters defined for this service in the Service Catalog. These are the parameters that need to be sent to the MSA northbound interface to activate this service.

The means of each column in this table is:

- Name: Name of the parameter in the northbound interface.
- Type: Type of the parameters.
- Format: is a regular expression used to validate the value of the parameter, if the value received in the northbound interfaces does not match this regular expression an error will be returned indicating the error.
- Mandatory: indicates is the parameters is mandatory for this service.
- Default Value: indicate a default value set for this parameters is case that it is not received in the service request.

INPUT				
Name	Type	Format	Mandatory	Default Value
MSISDN	String	\d{12,13}	Yes	
SERVICENAME	String		No	deleteSubscriber

The next table has the values returned in the northbound interface as a response for this service request.

OUTPUT		
Name	Type	Description
S_SOSA_CODE	String	SOSA internal output, indicated is the was ok or not
S_SOSA_DESCRIPTION	String	SOSA internal description
S_CODE	String	Represent the output code returned by this action
S_DESCRIPTION	String	Represent the output description for this action
NE_CODE	String	Code returned by the target
NE_DESCRIPTION	String	Description returned by the target
NE_OUTPUT	String	Exactly output returned by the target
NE_ACT_TOTAL_TIME	String	Time taken to perform the activation only in the target (in milliseconds)
NETWORKELEMENT	String	Name of the target where the activation have been done

COMMANDS_SENT	String	Command sent to the target
WF_INSTANCE	String	Name of the HPSA workflow manager that executed this action

2.8.14 OTA Backup changeMsisdn

The next tables show the input and output parameters defined in the target for each operation. These are the expected parameters to activate this service. The means of each column in this table is:

- Field: name of the parameters expected for the target.
- Type: expected type of the parameters in the target.
- Mandatory: indicate if the parameter is mandatory or not.
- Description: meaningful description of the parameter.

METHOD NAME: changeMsisdn			
METHOD DESCRIPTION: This service changes the MSISDN value for a given one.			
INPUT			
Field	Type	Mandatory	Description
msisdn	string(12)	Yes	(Mobile Subscriber ISDN) msisdn of a subscriber
newMsisdn	string(12)	No	New msisdn of a subscriber
OUTPUT			
No output parameters.			

The next table has the input parameters defined for this service in the Service Catalog. These are the parameters that need to be sent to the MSA northbound interface to activate this service.

The means of each column in this table is:

- Name: Name of the parameter in the northbound interface.
- Type: Type of the parameters.
- Format: is a regular expression used to validate the value of the parameter, if the value received in the northbound interfaces does not match this regular expression an error will be returned indicating the error.
- Mandatory: indicates is the parameters is mandatory for this service.
- Default Value: indicate a default value set for this parameters is case that it is not received in the service request.

INPUT				
Name	Type	Format	Mandatory	Default Value
NEWMSISDN	String	\d{12,13}	Yes	
MSISDN	String	\d{12,13}	Yes	
SERVICENAME	String		No	changeMsisdn

The next table has the values returned in the northbound interface as a response for this service request.

OUTPUT		
Name	Type	Description
S_SOSA_CODE	String	SOSA internal output, indicated is the was ok or not
S_SOSA_DESCRIPTION	String	SOSA internal description
S_CODE	String	Represent the output code returned by this action
S_DESCRIPTION	String	Represent the output description for this action
NE_CODE	String	Code returned by the target
NE_DESCRIPTION	String	Description returned by the target
NE_OUTPUT	String	Exactly output returned by the target
NE_ACT_TOTAL_TIME	String	Time taken to perform the activation only in the target (in milliseconds)
NETWORKELEMENT	String	Name of the target where the activation have been done
COMMANDS_SENT	String	Command sent to the target
WF_INSTANCE	String	Name of the HPSA workflow manager that executed this action

2.8.15 OTA Error Management

These are the errors returned by the OTA Backup platform and the translation that MSA will applied.

Platf orm type	Service	Oper ation	Ne_c ode	Retur n _code	Return_descri ption	Action	Nu mb er_ ret rie s	Ti me out	Nu mbe r exis t	Nu mbe r not exis t
GEMAL TO	OTABKP	DEFAULT	4000	4000	Simchronize platform unavailable	RETURN			0	0
GEMAL TO	OTABKP	DEFAULT	4001	4001	Cannot launch transaction in the Simchronize platform	RETURN			0	0
GEMAL TO	OTABKP	DEFAULT	4002	4002	Cannot change the msisdn of the suscriber in the	RETURN			0	1

					Simchronize platform					
GEMAL TO	OTABKP	DEFAULT	4003	4003	Suscriber doesn't exist in the Simchronize platform	RETURN			0	1
GEMAL TO	OTABKP	DEFAULT	4004	4004	Cannot update contact.	RETURN			0	0
GEMAL TO	OTABKP	DEFAULT	4005	4005	Cannot add contact	RETURN			0	0
GEMAL TO	OTABKP	DEFAULT	4006	4006	Cannot delete contact	RETURN			0	0
GEMAL TO	OTABKP	DEFAULT	4007	4007	Cannot delete the suscriber from the Simchronize platform.	RETURN			0	1
GEMAL TO	OTABKP	DEFAULT	4008	4008	Cannot create the suscriber in GCSM platform. MSISDN in not provisioned in the OTA platform	RETURN			0	0
GEMAL TO	OTABKP	DEFAULT	4009	4009	Operation in progress. Cannot launch transaction	RETURN			0	0
GEMAL TO	OTABKP	DEFAULT	4100	4100	Generic Simchronize error	RETURN			0	0

2.9 SDP Service

This service is implemented over the platform SDP (Huawei). See in the next sections the parameters involved for service action.

In this section are described the services provided by the SDP platform.

SDP platform provide only one method in the wsdl: SyncUserData

This is the request format for both of these methods:

Parameter Name	Mandatory	Type	Length	Description	Sample Value
Version	Yes	String	5	Protocol version, fixedly filled with "1.0"	D200
TransactionID	Yes	String	40	Identifier of a transaction not be used now.	20081001122320
MSISDN	Yes	String	21	MSISDN of a subscriber	525555012102

UpdateType	Yes	String	21	Referring the following values: "Add" : Create a new subscriber account "Remove" : Remove a subscriber account "Modify" : Modify user data of the existing subscriber "ModifyMsisDN" : modify user msisdn data of the existing subscriber.	Add Modify ModifyMsisDN Remove
NamedParameterList (userinfo)	Yes	NamedParameterList		List of named parameters which contains available user data. When "UpdateType" is "Add", this parameter MUST NOT be absent. When "UpdateType" is "Modify" and the num of this parameter is 0, the user information will not be modified. When "UpdateType" is "Remove" , the num of this parameter MUST be 0 and namedParameterList must be null. When "UpdateType" is "ModifyMsisDN" , the NEWMSISDN in userinfo MUST NOT be absent.	-
UpdateDescription	Yes	String	255	Simple description of the updating operation in English.	Add a new subscriber
SelfUpdateDescription	Yes	String	255	Simple description of the updating operation in local language.	Añadir un nuevo abonado

The next table has the values for the namedparameters:

Field	Type	Length	Mandatory for create Subscriber	Description	Sample Value
NEWMSISDN	String	21	No	MSISDN of a subscriber	525555012102
IMSI	String	16	No	IMSI of a subscriber	3705231702029138

Field	Type	Length	Mandatory for create Subscriber	Description	Sample Value
payType	Integer	4	Yes	Payment type referring to the following values: 0: Post-paid user 1: Prepaid user	1
userState	Integer	4	Yes	Current user state referring to the following values: 0: Active 1: Inactive 2:suspended	0
SCPID	Integer	4	Yes	The ID of SCP which subscriber belongs to. Only for prepaid subscribers.	1
userCredit	Integer	4	No	User credit, Default -1.	-1
userBrand	Integer	4	No	User brand. Default -1.	-1
gender	Integer	1	No	0:Male1:Female	0
dateofBirth	String	8	No	User date of birth, format: yyyymmdd	19800128
operatorID	String	64	No	Operator ID	0766
zipCode	String	64	No	Zip code	0755
acceptAD	Integer	1	No	Flag Accept AD 0: Agree; 1:Disagree	0
uniqueID	String	20	No	Hash of MSISDN	456789012345 67890
chargeDate	Integer	4	No	Charging date for user every month(1~28)	14

2.9.1 SDP Create Subscriber

The next table has the input parameters defined for this service in the Service Catalog. These are the parameters that need to be sent to the MSA northbound interface to activate this service.

The means of each column in this table is:

- Name: Name of the parameter in the northbound interface.
- Type: Type of the parameters.
- Format: is a regular expression used to validate the value of the parameter, if the value received in the northbound interfaces does not match this regular expression an error will be returned indicating the error.
- Mandatory: indicates is the parameters is mandatory for this service.
- Default Value: indicate a default value set for this parameters is case that it is not received in the service request.

INPUT				
Name	Type	Format	Mandatory	Default Value
VERSION	String	.{1,5}	Yes	
TRANSACTIONID	String	.{1,40}	Yes	
MSISDN	String	\d{12,13}	Yes	
UPDATETYPE	String	.{1,21}	No	Add
UPDATEDDESCRIPTION	String	.{1,255}	No	Add a new subscriber
SELFUPDATEDDESCRIPTION	String	.{1,255}	No	Add a new subscriber
PAYTYPE	Integer	0-9999	Yes	
USERSTATE	Integer	0-9999	Yes	
SCPID	Integer	0-9999	Yes	
IMSI	String	.{1,16}	No	
USERCREDIT	Integer	0-9999	No	
USERBRAND	Integer	0-9999	No	
GENDER	Integer	0-1	No	
DATEOFBIRTH	String	\d{8}	No	
OPERATORID	String	.{1,64}	No	
ZIPCODE	String	.{1,64}	No	
ACCEPTAD	Integer	0-1	No	
UNIQUEID	String	.{1,20}	No	

CHARGEDATE	Integer	0-9999	No	
------------	---------	--------	----	--

The next table has the values returned in the northbound interface as a response for this service request.

OUTPUT		
Name	Type	Description
S_SOSA_CODE	String	SOSA internal output, indicated is the was ok or not
S_SOSA_DESCRIPTION	String	SOSA internal description
S_CODE	String	Represent the output code returned by this action
S_DESCRIPTION	String	Represent the output description for this action
NE_CODE	String	Code returned by the target
NE_DESCRIPTION	String	Description returned by the target
NE_OUTPUT	String	Exactly output returned by the target
NE_ACT_TOTAL_TIME	String	Time taken to perform the activation only in the target (in milliseconds)
NETWORKELEMENT	String	Name of the target where the activation have been done
COMMANDS_SENT	String	Command sent to the target
WF_INSTANCE	String	Name of the HPSA workflow manager that executed this action
RESULT	String	Code returned by the target

2.9.2 SDP Delete Subscriber

The next table has the input parameters defined for this service in the Service Catalog. These are the parameters that need to be sent to the MSA northbound interface to activate this service.

The means of each column in this table is:

- Name: Name of the parameter in the northbound interface.
- Type: Type of the parameters.
- Format: is a regular expression used to validate the value of the parameter, if the value received in the northbound interfaces does not match this regular expression an error will be returned indicating the error.
- Mandatory: indicates is the parameters is mandatory for this service.
- Default Value: indicate a default value set for this parameters is case that it is not received in the service request.

INPUT				
Name	Type	Format	Mandatory	Default Value
VERSION	String	.{1,5}	Yes	

TRANSACTIONID	String	.{1,40}	Yes	
MSISDN	String	\d{12,13}	Yes	
UPDATETYPE	String	.{1,21}	No	Remove
UPDATEDDESCRIPTION	String	.{1,255}	No	Delete subscriber
SELFUPDATEDDESCRIPTION	String	.{1,255}	No	Delete subscriber

The next table has the values returned in the northbound interface as a response for this service request.

OUTPUT		
Name	Type	Description
S_SOSA_CODE	String	SOSA internal output, indicated is the was ok or not
S_SOSA_DESCRIPTION	String	SOSA internal description
S_CODE	String	Represent the output code returned by this action
S_DESCRIPTION	String	Represent the output description for this action
NE_CODE	String	Code returned by the target
NE_DESCRIPTION	String	Description returned by the target
NE_OUTPUT	String	Exactly output returned by the target
NE_ACT_TOTAL_TIME	String	Time taken to perform the activation only in the target (in milliseconds)
NETWORKELEMENT	String	Name of the target where the activation have been done
COMMANDS_SENT	String	Command sent to the target
WF_INSTANCE	String	Name of the HPSA workflow manager that executed this action
RESULT	String	Code returned by the target

2.9.3 SDP Set Subscriber

The next table has the input parameters defined for this service in the Service Catalog. These are the parameters that need to be sent to the MSA northbound interface to activate this service.

The means of each column in this table is:

- Name: Name of the parameter in the northbound interface.
- Type: Type of the parameters.
- Format: is a regular expression used to validate the value of the parameter, if the value received in the northbound interfaces does not match this regular expression an error will be returned indicating the error.
- Mandatory: indicates is the parameters is mandatory for this service.
- Default Value: indicate a default value set for this parameters is case that it is not received in the service request.

INPUT				
Name	Type	Format	Mandatory	Default Value
VERSION	String	.{1,5}	Yes	
TRANSACTIONID	String	.{1,40}	Yes	
MSISDN	String	\d{12,13}	Yes	
UPDATETYPE	String	.{1,21}	No	Modify
UPDATEDDESCRIPTION	String	.{1,255}	No	Modify subscriber
SELFUPDATEDDESCRIPTION	String	.{1,255}	No	Modify subscriber
PAYTYPE	Integer	0-9999	No	
USERSTATE	Integer	0-9999	No	
SCPID	Integer	0-9999	No	
IMSI	String	.{1,16}	No	
USERCREDIT	Integer	0-9999	No	
USERBRAND	Integer	0-9999	No	
GENDER	Integer	0-1	No	
DATEOFBIRTH	String	\d{8}	No	
OPERATORID	String	.{1,64}	No	
ZIPCODE	String	.{1,64}	No	
ACCEPTAD	Integer	0 -1	No	
UNIQUEID	String	.{1,20}	No	
CHARGEDATE	Integer	0-9999	No	

The next table has the values returned in the northbound interface as a response for this service request.

OUTPUT		
Name	Type	Description
S_SOSA_CODE	String	SOSA internal output, indicated is the was ok or not
S_SOSA_DESCRIPTION	String	SOSA internal description
S_CODE	String	Represent the output code returned by this action
S_DESCRIPTION	String	Represent the output description for this action
NE_CODE	String	Code returned by the target
NE_DESCRIPTION	String	Description returned by the target

NE_OUTPUT	String	Exactly output returned by the target
NE_ACT_TOTAL_TIME	String	Time taken to perform the activation only in the target (in milliseconds)
NETWORKELEMENT	String	Name of the target where the activation have been done
COMMANDS_SENT	String	Command sent to the target
WF_INSTANCE	String	Name of the HPSA workflow manager that executed this action
RESULT	String	Code returned by the target

2.9.4 SDP Change MSISDN

The next table has the input parameters defined for this service in the Service Catalog. These are the parameters that need to be sent to the MSA northbound interface to activate this service.

The means of each column in this table is:

- Name: Name of the parameter in the northbound interface.
- Type: Type of the parameters.
- Format: is a regular expression used to validate the value of the parameter, if the value received in the northbound interfaces does not match this regular expression an error will be returned indicating the error.
- Mandatory: indicates is the parameters is mandatory for this service.
- Default Value: indicate a default value set for this parameters is case that it is not received in the service request.

INPUT				
Name	Type	Format	Mandatory	Default Value
VERSION	String	.{1,5}	Yes	
TRANSACTIONID	String	.{1,40}	Yes	
MSISDN	String	\d{12,13}	Yes	
UPDATETYPE	String	.{1,21}	No	ModifyMsisDN
UPDATEDDESCRIPTION	String	.{1,255}	No	Modify MSISDN of a subscriber
SELFUPDATEDDESCRIPTION	String	.{1,255}	No	Modify MSISDN of a subscriber
NEWSMSISDN	String	\d{12,13}	Yes	
PAYTYPE	Integer	0-9999	No	
USERSTATE	Integer	0-9999	No	
SCPID	Integer	0-9999	No	
IMSI	String	.{1,16}	No	

USERCREDIT	Integer	0-9999	No	
USERBRAND	Integer	0-9999	No	
GENDER	Integer	0-1	No	
DATEOFBIRTH	String	\d{8}	No	
OPERATORID	String	{1,64}	No	
ZIPCODE	String	{1,64}	No	
ACCEPTAD	Integer	0-1	No	
UNIQUEID	String	{1,20}	No	
CHARGEDATE	Integer	0-9999	No	

The next table has the values returned in the northbound interface as a response for this service request.

OUTPUT		
Name	Type	Description
S_SOSA_CODE	String	SOSA internal output, indicated is the was ok or not
S_SOSA_DESCRIPTION	String	SOSA internal description
S_CODE	String	Represent the output code returned by this action
S_DESCRIPTION	String	Represent the output description for this action
NE_CODE	String	Code returned by the target
NE_DESCRIPTION	String	Description returned by the target
NE_OUTPUT	String	Exactly output returned by the target
NE_ACT_TOTAL_TIME	String	Time taken to perform the activation only in the target (in milliseconds)
NETWORKELEMENT	String	Name of the target where the activation have been done
COMMANDS_SENT	String	Command sent to the target
WF_INSTANCE	String	Name of the HPSA workflow manager that executed this action
RESULT	String	Code returned by the target

2.9.5 SDP Error Management

These are the errors returned by the SDP platform and the translation that MSA will applied.

Platform type	Service	Operation	Ne_code	Return_code	Return_description	Action	Number_retrie	Time out	Number exist	Number not exist

							s			f
HUAW EI	SDP	DEFAULT	100	100	Protocol error	RETURN			0	0
HUAW EI	SDP	DEFAULT	101	101	User has already existed	RETURN			1	0
HUAW EI	SDP	DEFAULT	102	102	User does not exist	RETURN			0	1
HUAW EI	SDP	DEFAULT	103	103	Invalid data field	RETURN			0	0
HUAW EI	SDP	DEFAULT	104	104	MSISDN field should be given	RETURN			0	0
HUAW EI	SDP	DEFAULT	105	105	IMSI field should be given	RETURN			0	0
HUAW EI	SDP	DEFAULT	106	106	Password field should be given	RETURN			0	0
HUAW EI	SDP	DEFAULT	107	107	PayType field should be given	RETURN			0	0
HUAW EI	SDP	DEFAULT	108	108	UserState filed should be given	RETURN			0	0
HUAW EI	SDP	DEFAULT	120	120	Failure to change MSIS DN	RETURN			0	0
HUAW EI	SDP	DEFAULT	121	121	Database Error	RETURN			0	0
HUAW EI	SDP	DEFAULT	151	151	Registered user exceed max number	RETURN			0	0
HUAW EI	SDP	DEFAULT	152	152	Platform SMAP messa ges rate has been up to upper limit	RETURN			0	0
HUAW EI	SDP	DEFAULT	7001	7001	Parameter error	RETURN			0	0
HUAW EI	SDP	DEFAULT	7006	7006	Illegal version number.	RETURN			0	0
HUAW EI	SDP	DEFAULT	7007	7007	Illegal message ID.	RETURN			0	0
HUAW EI	SDP	DEFAULT	7999	7999	Other reasons	RETURN			0	0

2.10 MNP Service

This service is implemented over the platform MNP (Huawei). See in the next sections the parameters involved for service action.

2.10.1 MNP Create Subscriber Operation

The next table has the input parameters defined for this service in the Service Catalog. These are the parameters that need to be sent to the MSA northbound interface to activate this service.

The means of each column in this table is:

- Name: Name of the parameter in the northbound interface.
- Type: Type of the parameters.
- Format: is a regular expression used to validate the value of the parameter, if the value received in the northbound interfaces does not match this regular expression an error will be returned indicating the error.
- Mandatory: indicates is the parameters is mandatory for this service.
- Default Value: indicate a default value set for this parameters is case that it is not received in the service request.

INPUT				
Name	Type	Format	Mandatory	Default Value
MSISDN	String		Yes	
IMSI	String		Yes	
SERVATTR	String		Yes	
NUMTYPE	String		Yes	
RNIDXTYPE	String		Yes	
HLRIDX	String		Yes	
DESC	String		No	
USRATTR	String		No	
RNIDX	String		No	
RTIDX	String		No	
RN	String		No	
RNIDX2	String		No	

The next table has the values returned in the northbound interface as a response for this service request.

OUTPUT		
Name	Type	Description
S_SOSA_CODE	String	SOSA internal output, indicated is the was ok or not
S_SOSA_DESCRIPTION	String	SOSA internal description
S_CODE	String	Represent the output code returned by this action
S_DESCRIPTION	String	Represent the output description for this action
NE_CODE	String	Code returned by the target
NE_DESCRIPTION	String	Description returned by the target
NE_OUTPUT	String	Exactly output returned by the target
NE_ACT_TOTAL_TIME	String	Time taken to perform the activation only in the target (in milliseconds)
NETWORKELEMENT	String	Name of the target where the activation have been done
COMMANDS_SENT	String	Command sent to the target
WF_INSTANCE	String	Name of the HPSA workflow manager that executed this action

2.10.2 MNP Delete Subscriber Operation

The next table has the input parameters defined for this service in the Service Catalog. These are the parameters that need to be sent to the MSA northbound interface to activate this service.

The means of each column in this table is:

- Name: Name of the parameter in the northbound interface.
- Type: Type of the parameters.
- Format: is a regular expression used to validate the value of the parameter, if the value received in the northbound interfaces does not match this regular expression an error will be returned indicating the error.
- Mandatory: indicates is the parameters is mandatory for this service.
- Default Value: indicate a default value set for this parameters is case that it is not received in the service request.

INPUT				
Name	Type	Format	Mandatory	Default Value
MSISDN	String		Yes	

The next table has the values returned in the northbound interface as a response for this service request.

OUTPUT		
Name	Type	Description
S_SOSA_CODE	String	SOSA internal output, indicated is the was ok or not
S_SOSA_DESCRIPTION	String	SOSA internal description
S_CODE	String	Represent the output code returned by this action
S_DESCRIPTION	String	Represent the output description for this action
NE_CODE	String	Code returned by the target
NE_DESCRIPTION	String	Description returned by the target
NE_OUTPUT	String	Exactly output returned by the target
NE_ACT_TOTAL_TIME	String	Time taken to perform the activation only in the target (in milliseconds)
NETWORKELEMENT	String	Name of the target where the activation have been done
COMMANDS_SENT	String	Command sent to the target
WF_INSTANCE	String	Name of the HPSA workflow manager that executed this action

2.10.3 MNP Set Subscriber Operation

The next table has the input parameters defined for this service in the Service Catalog. These are the parameters that need to be sent to the MSA northbound interface to activate this service.

The means of each column in this table is:

- Name: Name of the parameter in the northbound interface.
- Type: Type of the parameters.
- Format: is a regular expression used to validate the value of the parameter, if the value received in the northbound interfaces does not match this regular expression an error will be returned indicating the error.
- Mandatory: indicates is the parameters is mandatory for this service.
- Default Value: indicate a default value set for this parameters is case that it is not received in the service request.

INPUT				
Name	Type	Format	Mandatory	Default Value
MSISDN	String		Yes	
IMSI	String		Yes	
SERVATTR	String		No	
NUMTYPE	String		No	
RNIDXTYPE	String		No	
HLRIDX	String		No	
RNIDX2	String		No	
DESC	String		No	
USRATTR	String		No	
RNIDX	String		No	
RTIDX	String		No	
RN	String		No	

The next table has the values returned in the northbound interface as a response for this service request.

OUTPUT		
Name	Type	Description
S_SOSA_CODE	String	SOSA internal output, indicated is the was ok or not
S_SOSA_DESCRIPTION	String	SOSA internal description
S_CODE	String	Represent the output code returned by this action
S_DESCRIPTION	String	Represent the output description for this action
NE_CODE	String	Code returned by the target
NE_DESCRIPTION	String	Description returned by the target
NE_OUTPUT	String	Exactly output returned by the target
NE_ACT_TOTAL_TIME	String	Time taken to perform the activation only in the target (in milliseconds)
NETWORKELEMENT	String	Name of the target where the activation have been done

COMMANDS_SENT	String	Command sent to the target
WF_INSTANCE	String	Name of the HPSA workflow manager that executed this action

2.10.4 MNP Get Subscriber Operation

The next table has the input parameters defined for this service in the Service Catalog. These are the parameters that need to be sent to the MSA northbound interface to activate this service.

The means of each column in this table is:

- Name: Name of the parameter in the northbound interface.
- Type: Type of the parameters.
- Format: is a regular expression used to validate the value of the parameter, if the value received in the northbound interfaces does not match this regular expression an error will be returned indicating the error.
- Mandatory: indicates is the parameters is mandatory for this service.
- Default Value: indicate a default value set for this parameters is case that it is not received in the service request.

INPUT				
Name	Type	Format	Mandatory	Default Value
MSISDN	String		Yes	

The next table has the values returned in the northbound interface as a response for this service request.

OUTPUT		
Name	Type	Description
S_SOSA_CODE	String	SOSA internal output, indicated is the was ok or not
S_SOSA_DESCRIPTION	String	SOSA internal description
S_CODE	String	Represent the output code returned by this action
S_DESCRIPTION	String	Represent the output description for this action
NE_CODE	String	Code returned by the target
NE_DESCRIPTION	String	Description returned by the target
NE_OUTPUT	String	Exactly output returned by the target
NE_ACT_TOTAL_TIME	String	Time taken to perform the activation only in the target (in milliseconds)
NETWORKELEMENT	String	Name of the target where the activation have been done
COMMANDS_SENT	String	Command sent to the target
WF_INSTANCE	String	Name of the HPSA workflow manager that executed this action
INDEX	String	INDEX value returned by the target
DESC2	String	DESC2 value returned by the target
MSISDN	String	MSISDN value returned by the target
IMSI	String	IMSI value returned by the target

ENABLED_RELATED_SERVICES	String	ENABLED_RELATED_SERVICES value returned by the target
WHETHER_SUPPORT_RBT	String	WHETHER_SUPPORT_RBT value returned by the target
NUMBER_TYPE	String	NUMBER_TYPE value returned by the target
ROUTE_INDEX_TYPE	String	ROUTE_INDEX_TYPE value returned by the target
HLR_ADDRESS_INDEX	String	HLR_ADDRESS_INDEX value returned by the target
ROUTING_NUMBER_INDEX	String	ROUTING_NUMBER_INDEX value returned by the target
MC_ROUTING_INDEX	String	MC_ROUTING_INDEX value returned by the target
FILTER_TIME_SEGMENT_INDEX	String	FILTER_TIME_SEGMENT_INDEX value returned by the target

2.10.5 MNP Error Management

Platform type	Service	Operation	Node	Return code	Return description	Action	Number retrievals	Time out	Number exists	Number not exists
HUAW EI	MNP	CREATE	1515	1515	Insufficient authority	RETURN			0	0
HUAW EI	MNP	DELETE	1515	1515	Insufficient authority	RETURN			0	0
HUAW EI	MNP	SET	1515	1515	Insufficient authority	RETURN			0	0
HUAW EI	MNP	GET	1515	1515	Insufficient authority	RETURN			0	0
HUAW EI	MNP	CREATE	1517	1517	xxxx password not correct. Login failed	RETURN			0	0
HUAW EI	MNP	DELETE	1517	1517	xxxx password not correct. Login failed	RETURN			0	0
HUAW EI	MNP	SET	1517	1517	xxxx password not correct. Login failed	RETURN			0	0
HUAW EI	MNP	GET	1517	1517	xxxx password not correct. Login failed	RETURN			0	0
HUAW EI	MNP	CREATE	1518	1518	Workstation unregistered. Login failed	RETURN			0	0
HUAW EI	MNP	DELETE	1518	1518	Workstation unregistered. Login failed	RETURN			0	0
HUAW EI	MNP	SET	1518	1518	Workstation unregistered. Login failed	RETURN			0	0
HUAW EI	MNP	GET	1518	1518	Workstation unregistered. Login failed	RETURN			0	0
HUAW EI	MNP	CREATE	1565	1565	You have logged in with the operator accounts. Logout first before you login again	RETURN			0	0
HUAW EI	MNP	DELETE	1565	1565	You have logged in with the operator accounts. Logout first before you login again	RETURN			0	0
HUAW EI	MNP	SET	1565	1565	You have logged in with the operator	RETURN			0	0

					accounts. Logout first before you login again					
HUAW EI	MNP	GET	1565	1565	You have logged in with the operator accounts. Logout first before you login again	RETURN			0	0
HUAW EI	MNP	CREATE	1525	1525	xxx is an invalid account. Login failed	RETURN			0	0
HUAW EI	MNP	DELETE	1525	1525	xxx is an invalid account. Login failed	RETURN			0	0
HUAW EI	MNP	SET	1525	1525	xxx is an invalid account. Login failed	RETURN			0	0
HUAW EI	MNP	GET	1525	1525	xxx is an invalid account. Login failed	RETURN			0	0
HUAW EI	MNP	CREATE	1523	1523	Too many operators logging in at present. Login failed	RETURN			0	0
HUAW EI	MNP	DELETE	1523	1523	Too many operators logging in at present. Login failed	RETURN			0	0
HUAW EI	MNP	SET	1523	1523	Too many operators logging in at present. Login failed	RETURN			0	0
HUAW EI	MNP	GET	1523	1523	Too many operators logging in at present. Login failed	RETURN			0	0
HUAW EI	MNP	CREATE	1529	1529	Operator name cannot be empty	RETURN			0	0
HUAW EI	MNP	DELETE	1529	1529	Operator name cannot be empty	RETURN			0	0
HUAW EI	MNP	SET	1529	1529	Operator name cannot be empty	RETURN			0	0
HUAW EI	MNP	GET	1529	1529	Operator name cannot be empty	RETURN			0	0
HUAW EI	MNP	CREATE	1531	1531	Operators password cannot be empty	RETURN			0	0
HUAW EI	MNP	DELETE	1531	1531	Operators password cannot be empty	RETURN			0	0
HUAW EI	MNP	SET	1531	1531	Operators password cannot be empty	RETURN			0	0
HUAW EI	MNP	GET	1531	1531	Operators password cannot be empty	RETURN			0	0
HUAW EI	MNP	CREATE	1535	1535	Record of this operator already exists	RETURN			0	0
HUAW EI	MNP	DELETE	1535	1535	Record of this operator already exists	RETURN			0	0
HUAW EI	MNP	SET	1535	1535	Record of this operator already exists	RETURN			0	0
HUAW EI	MNP	GET	1535	1535	Record of this operator already exists	RETURN			0	0
HUAW EI	MNP	CREATE	1533	1533	Failed to add operator	RETURN			0	0
HUAW EI	MNP	DELETE	1533	1533	Failed to add operator	RETURN			0	0
HUAW EI	MNP	SET	1533	1533	Failed to add operator	RETURN			0	0
HUAW EI	MNP	GET	1533	1533	Failed to add operator	RETURN			0	0
HUAW EI	MNP	DELETE	1537	1537	Failed to delete operator	RETURN			0	0
HUAW EI	MNP	DEFAULT	1545	1545	Old password error	RETURN			0	0
HUAW	MNP	DEFAULT	1544	1544	No authority to	RETURN			0	0

EI					operate log					
HUAW EI	MNP	DEFAULT	1549	1549	Workstation name cannot be empty	RETURN			0	0
HUAW EI	MNP	DEFAULT	1551	1551	This workstation name already exists	RETURN			0	0
HUAW EI	MNP	DEFAULT	1552	1552	Failed to add the workstation	RETURN			0	0
HUAW EI	MNP	DEFAULT	1554	1554	Workstation not found	RETURN			0	0
HUAW EI	MNP	DELETE	1556	1556	Failed to delete workstationr	RETURN			0	0
HUAW EI	MNP	CREATE	1562	1562	Invalid IP address	RETURN			0	0
HUAW EI	MNP	DELETE	1562	1562	Invalid IP address	RETURN			0	0
HUAW EI	MNP	SET	1562	1562	Invalid IP address	RETURN			0	0
HUAW EI	MNP	GET	1562	1562	Invalid IP address	RETURN			0	0
HUAW EI	MNP	DEFAULT	1563	1563	The IP address has been registered. Try another one	RETURN			0	0
HUAW EI	MNP	DEFAULT	1566	1566	Command xxx input error	RETURN			0	0
HUAW EI	MNP	CREATE	1625	1625	Alarm output parameter is error	RETURN			0	0
HUAW EI	MNP	DELETE	1625	1625	Alarm output parameter is error	RETURN			0	0
HUAW EI	MNP	SET	1625	1625	Alarm output parameter is error	RETURN			0	0
HUAW EI	MNP	GET	1625	1625	Alarm output parameter is error	RETURN			0	0
HUAW EI	MNP	CREATE	1845	1845	Error command name	RETURN			0	0
HUAW EI	MNP	DELETE	1845	1845	Error command name	RETURN			0	0
HUAW EI	MNP	SET	1845	1845	Error command name	RETURN			0	0
HUAW EI	MNP	GET	1845	1845	Error command name	RETURN			0	0
HUAW EI	MNP	CREATE	5005	5005	Database operation failed	RETURN			0	0
HUAW EI	MNP	DELETE	5005	5005	Database operation failed	RETURN			0	0
HUAW EI	MNP	SET	5005	5005	Database operation failed	RETURN			0	0
HUAW EI	MNP	GET	5005	5005	Database operation failed	RETURN			0	0
HUAW EI	MNP	CREATE	5305	5305	Input number is invalid	RETURN			0	0
HUAW EI	MNP	DELETE	5305	5305	Input number is invalid	RETURN			0	0
HUAW EI	MNP	SET	5305	5305	Input number is invalid	RETURN			0	0
HUAW EI	MNP	GET	5305	5305	Input number is invalid	RETURN			0	0
HUAW EI	MNP	CREATE	5525	5525	User number repeated	RETURN			0	0
HUAW EI	MNP	DELETE	5525	5525	User number repeated	RETURN			0	0
HUAW EI	MNP	SET	5525	5525	User number repeated	RETURN			0	0
HUAW EI	MNP	GET	5525	5525	User number repeated	RETURN			0	0
HUAW EI	MNP	CREATE	5526	5526	User number repeated	RETURN			1	0
HUAW EI	MNP	CREATE	5855	5855	IMSI number repeated	RETURN			1	0

EI										
HUAW EI	MNP	DELETE	5526	5526	User number repeated	RETURN			1	0
HUAW EI	MNP	SET	5526	5526	User number repeated	RETURN			1	0
HUAW EI	MNP	GET	5526	5526	User number repeated	RETURN			1	0
HUAW EI	MNP	GET	26010	26010	Query result is empty	RETURN			0	0

2.11 PTT (Push to talk) Service

This service is implemented over the platform Kodiak. See in the next sections the parameters involved for service action

2.11.1 Create Subscriber

The next table has the input parameters defined for this service in the Service Catalog. These are the parameters that need to be sent to the MSA northbound interface to activate this service.

The means of each column in this table is:

- Name: Name of the parameter in the northbound interface.
- Type: Type of the parameters.
- Format: is a regular expression used to validate the value of the parameter, if the value received in the northbound interfaces does not match this regular expression an error will be returned indicating the error.
- Mandatory: indicates is the parameters is mandatory for this service.
- Default Value: indicate a default value set for this parameters is case that it is not received in the service request.

INPUT				
Name	Type	Format	Mandatory	Default Value
PROFILE	String		Yes	
MSISDN	String		Yes	
IMSI	String		Yes	
CORPID	String		No	
SERVICENAME	String		No	createSubscriber

The next table has the values returned in the northbound interface as a response for this service request.

OUTPUT		
Name	Type	Description
S_SOSA_CODE	String	SOSA internal output, indicated is the was ok or not
S_SOSA_DESCRIPTION	String	SOSA internal description

S_CODE	String	Represent the output code returned by this action
S_DESCRIPTION	String	Represent the output description for this action
NE_CODE	String	Code returned by the target
NE_DESCRIPTION	String	Description returned by the target
NE_OUTPUT	String	Exactly output returned by the target
NE_ACT_TOTAL_TIME	String	Time taken to perform the activation only in the target (in milliseconds)
NETWORKELEMENT	String	Name of the target where the activation have been done
COMMANDS_SENT	String	Command sent to the target
WF_INSTANCE	String	Name of the HPSA workflow manager that executed this action

2.11.2 Create Corporate Profile

The next table has the input parameters defined for this service in the Service Catalog. These are the parameters that need to be sent to the MSA northbound interface to activate this service.

The means of each column in this table is:

- Name: Name of the parameter in the northbound interface.
- Type: Type of the parameters.
- Format: is a regular expression used to validate the value of the parameter, if the value received in the northbound interfaces does not match this regular expression an error will be returned indicating the error.
- Mandatory: indicates is the parameters is mandatory for this service.
- Default Value: indicate a default value set for this parameters is case that it is not received in the service request.

INPUT				
Name	Type	Format	Mandatory	Default Value
PROFILE	String		Yes	
MSISDN	String		Yes	
CORPID	String		Yes	
CORPNAME	String		Yes	
MAXGRPS	String		Yes	
MAXMBRS	String		Yes	
RESTRICT	String		Yes	
CALLSRVID	String		Yes	
SERVICENAME	String		No	createCorporateProfile

The next table has the values returned in the northbound interface as a response for this service request.

OUTPUT		
Name	Type	Description
S_SOSA_CODE	String	SOSA internal output, indicated is the was ok or not
S_SOSA_DESCRIPTION	String	SOSA internal description
S_CODE	String	Represent the output code returned by this action
S_DESCRIPTION	String	Represent the output description for this action
NE_CODE	String	Code returned by the target
NE_DESCRIPTION	String	Description returned by the target
NE_OUTPUT	String	Exactly output returned by the target
NE_ACT_TOTAL_TIME	String	Time taken to perform the activation only in the target (in milliseconds)
NETWORKELEMENT	String	Name of the target where the activation have been done
COMMANDS_SENT	String	Command sent to the target
WF_INSTANCE	String	Name of the HPSA workflow manager that executed this action

2.11.3 Create Corporate Administrator

The next table has the input parameters defined for this service in the Service Catalog. These are the parameters that need to be sent to the MSA northbound interface to activate this service.

The means of each column in this table is:

- Name: Name of the parameter in the northbound interface.
- Type: Type of the parameters.
- Format: is a regular expression used to validate the value of the parameter, if the value received in the northbound interfaces does not match this regular expression an error will be returned indicating the error.
- Mandatory: indicates is the parameters is mandatory for this service.
- Default Value: indicate a default value set for this parameters is case that it is not received in the service request.

INPUT				
Name	Type	Format	Mandatory	Default Value
PROFILE	String		Yes	
MSISDN	String		Yes	
CORPID	String		Yes	
CORPNAME	String		Yes	
ADMUSER	String		Yes	
ROLEID	String		Yes	
PASSWORD	String		Yes	

SERVICENAME	String		No	createCorpAdmin
-------------	--------	--	----	-----------------

The next table has the values returned in the northbound interface as a response for this service request.

OUTPUT		
Name	Type	Description
S_SOSA_CODE	String	SOSA internal output, indicated is the was ok or not
S_SOSA_DESCRIPTION	String	SOSA internal description
S_CODE	String	Represent the output code returned by this action
S_DESCRIPTION	String	Represent the output description for this action
NE_CODE	String	Code returned by the target
NE_DESCRIPTION	String	Description returned by the target
NE_OUTPUT	String	Exactly output returned by the target
NE_ACT_TOTAL_TIME	String	Time taken to perform the activation only in the target (in milliseconds)
NETWORKELEMENT	String	Name of the target where the activation have been done
COMMANDS_SENT	String	Command sent to the target
WF_INSTANCE	String	Name of the HPSA workflow manager that executed this action

2.11.4 Delete Subscriber

The next table has the input parameters defined for this service in the Service Catalog. These are the parameters that need to be sent to the MSA northbound interface to activate this service.

The means of each column in this table is:

- Name: Name of the parameter in the northbound interface.
- Type: Type of the parameters.
- Format: is a regular expression used to validate the value of the parameter, if the value received in the northbound interfaces does not match this regular expression an error will be returned indicating the error.
- Mandatory: indicates is the parameters is mandatory for this service.
- Default Value: indicate a default value set for this parameters is case that it is not received in the service request.

INPUT				
Name	Type	Format	Mandatory	Default Value
PROFILE	String			
MSISDN	String			
IMSI	String			

SERVICENAME	String		No	deleteSubscriber
-------------	--------	--	----	------------------

The next table has the values returned in the northbound interface as a response for this service request.

OUTPUT		
Name	Type	Description
S_SOSA_CODE	String	SOSA internal output, indicated is the was ok or not
S_SOSA_DESCRIPTION	String	SOSA internal description
S_CODE	String	Represent the output code returned by this action
S_DESCRIPTION	String	Represent the output description for this action
NE_CODE	String	Code returned by the target
NE_DESCRIPTION	String	Description returned by the target
NE_OUTPUT	String	Exactly output returned by the target
NE_ACT_TOTAL_TIME	String	Time taken to perform the activation only in the target (in milliseconds)
NETWORKELEMENT	String	Name of the target where the activation have been done
COMMANDS_SENT	String	Command sent to the target
WF_INSTANCE	String	Name of the HPSA workflow manager that executed this action

2.11.5 Delete Corporate Profile

The next table has the input parameters defined for this service in the Service Catalog. These are the parameters that need to be sent to the MSA northbound interface to activate this service.

The means of each column in this table is:

- Name: Name of the parameter in the northbound interface.
- Type: Type of the parameters.
- Format: is a regular expression used to validate the value of the parameter, if the value received in the northbound interfaces does not match this regular expression an error will be returned indicating the error.
- Mandatory: indicates is the parameters is mandatory for this service.
- Default Value: indicate a default value set for this parameters is case that it is not received in the service request.

INPUT				
Name	Type	Format	Mandatory	Default Value
CORPID	String			
SERVICENAME	String		No	deleteCorporateProfile

The next table has the values returned in the northbound interface as a response for this service request.

OUTPUT		
Name	Type	Description
S_SOSA_CODE	String	SOSA internal output, indicated is the was ok or not
S_SOSA_DESCRIPTION	String	SOSA internal description
S_CODE	String	Represent the output code returned by this action
S_DESCRIPTION	String	Represent the output description for this action
NE_CODE	String	Code returned by the target
NE_DESCRIPTION	String	Description returned by the target
NE_OUTPUT	String	Exactly output returned by the target
NE_ACT_TOTAL_TIME	String	Time taken to perform the activation only in the target (in milliseconds)
NETWORKELEMENT	String	Name of the target where the activation have been done
COMMANDS_SENT	String	Command sent to the target
WF_INSTANCE	String	Name of the HPSA workflow manager that executed this action

2.11.6 Delete Corporate Administrator

The next table has the input parameters defined for this service in the Service Catalog. These are the parameters that need to be sent to the MSA northbound interface to activate this service.

The means of each column in this table is:

- Name: Name of the parameter in the northbound interface.
- Type: Type of the parameters.
- Format: is a regular expression used to validate the value of the parameter, if the value received in the northbound interfaces does not match this regular expression an error will be returned indicating the error.
- Mandatory: indicates is the parameters is mandatory for this service.
- Default Value: indicate a default value set for this parameters is case that it is not received in the service request.

INPUT				
Name	Type	Format	Mandatory	Default Value
PROFILE	String		Yes	
ADMUSER	String		Yes	
SERVICENAME	String		No	deleteCorpAdmin

The next table has the values returned in the northbound interface as a response for this service request.

OUTPUT		
Name	Type	Description
S_SOSA_CODE	String	SOSA internal output, indicated is the was ok or not
S_SOSA_DESCRIPTION	String	SOSA internal description
S_CODE	String	Represent the output code returned by this action
S_DESCRIPTION	String	Represent the output description for this action
NE_CODE	String	Code returned by the target
NE_DESCRIPTION	String	Description returned by the target
NE_OUTPUT	String	Exactly output returned by the target
NE_ACT_TOTAL_TIME	String	Time taken to perform the activation only in the target (in milliseconds)
NETWORKELEMENT	String	Name of the target where the activation have been done
COMMANDS_SENT	String	Command sent to the target
WF_INSTANCE	String	Name of the HPSA workflow manager that executed this action

2.11.7 Update Subscriber

The next table has the input parameters defined for this service in the Service Catalog. These are the parameters that need to be sent to the MSA northbound interface to activate this service.

The means of each column in this table is:

- Name: Name of the parameter in the northbound interface.
- Type: Type of the parameters.
- Format: is a regular expression used to validate the value of the parameter, if the value received in the northbound interfaces does not match this regular expression an error will be returned indicating the error.
- Mandatory: indicates is the parameters is mandatory for this service.
- Default Value: indicate a default value set for this parameters is case that it is not received in the service request.

INPUT				
Name	Type	Format	Mandatory	Default Value
PROFILE	String		Yes	
MSISDN	String		Yes	
NIMSI	String		Yes	
CORPID	String		No	
SERVICENAME	String		No	

The next table has the values returned in the northbound interface as a response for this service request.

OUTPUT		
Name	Type	Description
S_SOSA_CODE	String	SOSA internal output, indicated is the was ok or not
S_SOSA_DESCRIPTION	String	SOSA internal description
S_CODE	String	Represent the output code returned by this action
S_DESCRIPTION	String	Represent the output description for this action
NE_CODE	String	Code returned by the target
NE_DESCRIPTION	String	Description returned by the target
NE_OUTPUT	String	Exactly output returned by the target
NE_ACT_TOTAL_TIME	String	Time taken to perform the activation only in the target (in milliseconds)
NETWORKELEMENT	String	Name of the target where the activation have been done
COMMANDS_SENT	String	Command sent to the target
WF_INSTANCE	String	Name of the HPSA workflow manager that executed this action

2.11.8 Change MSISDN

The next table has the input parameters defined for this service in the Service Catalog. These are the parameters that need to be sent to the MSA northbound interface to activate this service.

The means of each column in this table is:

- Name: Name of the parameter in the northbound interface.
- Type: Type of the parameters.
- Format: is a regular expression used to validate the value of the parameter, if the value received in the northbound interfaces does not match this regular expression an error will be returned indicating the error.
- Mandatory: indicates is the parameters is mandatory for this service.
- Default Value: indicate a default value set for this parameters is case that it is not received in the service request.

INPUT				
Name	Type	Format	Mandatory	Default Value
MSISDN	String		Yes	
NMSISDN	String		Yes	
IMSI	String		Yes	
RTXID	String		Yes	
SERVICENAME	String		No	changeMDN

The next table has the values returned in the northbound interface as a response for this service request.

OUTPUT		
Name	Type	Description
S_SOSA_CODE	String	SOSA internal output, indicated is the was ok or not
S_SOSA_DESCRIPTION	String	SOSA internal description
S_CODE	String	Represent the output code returned by this action
S_DESCRIPTION	String	Represent the output description for this action
NE_CODE	String	Code returned by the target
NE_DESCRIPTION	String	Description returned by the target
NE_OUTPUT	String	Exactly output returned by the target
NE_ACT_TOTAL_TIME	String	Time taken to perform the activation only in the target (in milliseconds)
NETWORKELEMENT	String	Name of the target where the activation have been done
COMMANDS_SENT	String	Command sent to the target
WF_INSTANCE	String	Name of the HPSA workflow manager that executed this action

2.11.9 Deactivate Subscriber

The next table has the input parameters defined for this service in the Service Catalog. These are the parameters that need to be sent to the MSA northbound interface to activate this service.

The means of each column in this table is:

- Name: Name of the parameter in the northbound interface.
- Type: Type of the parameters.
- Format: is a regular expression used to validate the value of the parameter, if the value received in the northbound interfaces does not match this regular expression an error will be returned indicating the error.
- Mandatory: indicates is the parameters is mandatory for this service.
- Default Value: indicate a default value set for this parameters is case that it is not received in the service request.

INPUT				
Name	Type	Format	Mandatory	Default Value
MSISDN	String		Yes	
IMSI	String		Yes	
SERVICENAME	String		No	deactivateSubs

The next table has the values returned in the northbound interface as a response for this service request.

OUTPUT		
Name	Type	Description
S_SOSA_CODE	String	SOSA internal output, indicated is the was ok or not
S_SOSA_DESCRIPTION	String	SOSA internal description
S_CODE	String	Represent the output code returned by this action
S_DESCRIPTION	String	Represent the output description for this action
NE_CODE	String	Code returned by the target
NE_DESCRIPTION	String	Description returned by the target
NE_OUTPUT	String	Exactly output returned by the target
NE_ACT_TOTAL_TIME	String	Time taken to perform the activation only in the target (in milliseconds)
NETWORKELEMENT	String	Name of the target where the activation have been done
COMMANDS_SENT	String	Command sent to the target
WF_INSTANCE	String	Name of the HPSA workflow manager that executed this action

2.11.10 Activate Subscriber

The next table has the input parameters defined for this service in the Service Catalog. These are the parameters that need to be sent to the MSA northbound interface to activate this service.

The means of each column in this table is:

- Name: Name of the parameter in the northbound interface.
- Type: Type of the parameters.
- Format: is a regular expression used to validate the value of the parameter, if the value received in the northbound interfaces does not match this regular expression an error will be returned indicating the error.
- Mandatory: indicates is the parameters is mandatory for this service.
- Default Value: indicate a default value set for this parameters is case that it is not received in the service request.

INPUT				
Name	Type	Format	Mandatory	Default Value
MSISDN	String		Yes	
IMSI	String		Yes	
SERVICENAME	String		No	activateSubs

The next table has the values returned in the northbound interface as a response for this service request.

OUTPUT

Name	Type	Description
S_SOSA_CODE	String	SOSA internal output, indicated is the was ok or not
S_SOSA_DESCRIPTION	String	SOSA internal description
S_CODE	String	Represent the output code returned by this action
S_DESCRIPTION	String	Represent the output description for this action
NE_CODE	String	Code returned by the target
NE_DESCRIPTION	String	Description returned by the target
NE_OUTPUT	String	Exactly output returned by the target
NE_ACT_TOTAL_TIME	String	Time taken to perform the activation only in the target (in milliseconds)
NETWORKELEMENT	String	Name of the target where the activation have been done
COMMANDS_SENT	String	Command sent to the target
WF_INSTANCE	String	Name of the HPSA workflow manager that executed this action

2.11.11 Reset Subscriber Password

The next table has the input parameters defined for this service in the Service Catalog. These are the parameters that need to be sent to the MSA northbound interface to activate this service.

The means of each column in this table is:

- Name: Name of the parameter in the northbound interface.
- Type: Type of the parameters.
- Format: is a regular expression used to validate the value of the parameter, if the value received in the northbound interfaces does not match this regular expression an error will be returned indicating the error.
- Mandatory: indicates is the parameters is mandatory for this service.
- Default Value: indicate a default value set for this parameters is case that it is not received in the service request.

INPUT				
Name	Type	Format	Mandatory	Default Value
MSISDN	String		Yes	
PASSWORD	String		Yes	
SERVICENAME	String		No	resetSubscriberPassword

The next table has the values returned in the northbound interface as a response for this service request.

OUTPUT		
Name	Type	Description
S_SOSA_CODE	String	SOSA internal output, indicated is the was ok or not
S_SOSA_DESCRIPTION	String	SOSA internal description
S_CODE	String	Represent the output code returned by this action
S_DESCRIPTION	String	Represent the output description for this action
NE_CODE	String	Code returned by the target
NE_DESCRIPTION	String	Description returned by the target
NE_OUTPUT	String	Exactly output returned by the target
NE_ACT_TOTAL_TIME	String	Time taken to perform the activation only in the target (in milliseconds)
NETWORKELEMENT	String	Name of the target where the activation have been done
COMMANDS_SENT	String	Command sent to the target
WF_INSTANCE	String	Name of the HPSA workflow manager that executed this action

2.11.12 Synchronize HandSet

The next table has the input parameters defined for this service in the Service Catalog. These are the parameters that need to be sent to the MSA northbound interface to activate this service.

The means of each column in this table is:

- Name: Name of the parameter in the northbound interface.
- Type: Type of the parameters.
- Format: is a regular expression used to validate the value of the parameter, if the value received in the northbound interfaces does not match this regular expression an error will be returned indicating the error.
- Mandatory: indicates is the parameters is mandatory for this service.
- Default Value: indicate a default value set for this parameters is case that it is not received in the service request.

INPUT				
Name	Type	Format	Mandatory	Default Value
MSISDN	String		Yes	
IMSI	String		Yes	
OPERTYPE	String		Yes	
OPERMODE	String		Yes	
SERVICENAME	String		No	handSetSyncCommand

The next table has the values returned in the northbound interface as a response for this service request.

OUTPUT		
Name	Type	Description
S_SOSA_CODE	String	SOSA internal output, indicated is the was ok or not
S_SOSA_DESCRIPTION	String	SOSA internal description
S_CODE	String	Represent the output code returned by this action
S_DESCRIPTION	String	Represent the output description for this action
NE_CODE	String	Code returned by the target
NE_DESCRIPTION	String	Description returned by the target
NE_OUTPUT	String	Exactly output returned by the target
NE_ACT_TOTAL_TIME	String	Time taken to perform the activation only in the target (in milliseconds)
NETWORKELEMENT	String	Name of the target where the activation have been done
COMMANDS_SENT	String	Command sent to the target
WF_INSTANCE	String	Name of the HPSA workflow manager that executed this action

2.11.13 Update Corporate Profile

The next table has the input parameters defined for this service in the Service Catalog. These are the parameters that need to be sent to the MSA northbound interface to activate this service.

The means of each column in this table is:

- Name: Name of the parameter in the northbound interface.
- Type: Type of the parameters.
- Format: is a regular expression used to validate the value of the parameter, if the value received in the northbound interfaces does not match this regular expression an error will be returned indicating the error.
- Mandatory: indicates is the parameters is mandatory for this service.
- Default Value: indicate a default value set for this parameters is case that it is not received in the service request.

INPUT				
Name	Type	Format	Mandatory	Default Value
CORPID	String		Yes	
CORPNAME	String		Yes	
MAXGRPS	String		Yes	
MAXMBRS	String		Yes	
RESTRICT	String		Yes	

CALLSRVID	String		Yes	
SERVICENAME	String		No	updateCorporateProfile

The next table has the values returned in the northbound interface as a response for this service request.

OUTPUT		
Name	Type	Description
S_SOSA_CODE	String	SOSA internal output, indicated is the was ok or not
S_SOSA_DESCRIPTION	String	SOSA internal description
S_CODE	String	Represent the output code returned by this action
S_DESCRIPTION	String	Represent the output description for this action
NE_CODE	String	Code returned by the target
NE_DESCRIPTION	String	Description returned by the target
NE_OUTPUT	String	Exactly output returned by the target
NE_ACT_TOTAL_TIME	String	Time taken to perform the activation only in the target (in milliseconds)
NETWORKELEMENT	String	Name of the target where the activation have been done
COMMANDS_SENT	String	Command sent to the target
WF_INSTANCE	String	Name of the HPSA workflow manager that executed this action

2.11.14 Update Corporate Administrator

The next table has the input parameters defined for this service in the Service Catalog. These are the parameters that need to be sent to the MSA northbound interface to activate this service.

The means of each column in this table is:

- Name: Name of the parameter in the northbound interface.
- Type: Type of the parameters.
- Format: is a regular expression used to validate the value of the parameter, if the value received in the northbound interfaces does not match this regular expression an error will be returned indicating the error.
- Mandatory: indicates is the parameters is mandatory for this service.
- Default Value: indicate a default value set for this parameters is case that it is not received in the service request.

INPUT				
Name	Type	Format	Mandatory	Default Value
ROLEID	String		Yes	
ADMUSER	String		Yes	
SERVICENAME	String		No	updateCorpAdmin

The next table has the values returned in the northbound interface as a response for this service request.

OUTPUT		
Name	Type	Description
S_SOSA_CODE	String	SOSA internal output, indicated is the was ok or not
S_SOSA_DESCRIPTION	String	SOSA internal description
S_CODE	String	Represent the output code returned by this action
S_DESCRIPTION	String	Represent the output description for this action
NE_CODE	String	Code returned by the target
NE_DESCRIPTION	String	Description returned by the target
NE_OUTPUT	String	Exactly output returned by the target
NE_ACT_TOTAL_TIME	String	Time taken to perform the activation only in the target (in milliseconds)
NETWORKELEMENT	String	Name of the target where the activation have been done
COMMANDS_SENT	String	Command sent to the target
WF_INSTANCE	String	Name of the HPSA workflow manager that executed this action

2.11.15 Reset Administrator Password

The next table has the input parameters defined for this service in the Service Catalog. These are the parameters that need to be sent to the MSA northbound interface to activate this service.

The means of each column in this table is:

- Name: Name of the parameter in the northbound interface.
- Type: Type of the parameters.
- Format: is a regular expression used to validate the value of the parameter, if the value received in the northbound interfaces does not match this regular expression an error will be returned indicating the error.
- Mandatory: indicates is the parameters is mandatory for this service.
- Default Value: indicate a default value set for this parameters is case that it is not received in the service request.

INPUT				
Name	Type	Format	Mandatory	Default Value
PASSWORD	String		Yes	
ADMUSER	String		Yes	
SERVICENAME	String		No	resetCorpAdminPassword

The next table has the values returned in the northbound interface as a response for this service request.

OUTPUT		
Name	Type	Description
S_SOSA_CODE	String	SOSA internal output, indicated is the was ok or not
S_SOSA_DESCRIPTION	String	SOSA internal description
S_CODE	String	Represent the output code returned by this action
S_DESCRIPTION	String	Represent the output description for this action
NE_CODE	String	Code returned by the target
NE_DESCRIPTION	String	Description returned by the target
NE_OUTPUT	String	Exactly output returned by the target
NE_ACT_TOTAL_TIME	String	Time taken to perform the activation only in the target (in milliseconds)
NETWORKELEMENT	String	Name of the target where the activation have been done
COMMANDS_SENT	String	Command sent to the target
WF_INSTANCE	String	Name of the HPSA workflow manager that executed this action

2.11.16 Get Subscriber Details

The next table has the input parameters defined for this service in the Service Catalog. These are the parameters that need to be sent to the MSA northbound interface to activate this service.

The means of each column in this table is:

- Name: Name of the parameter in the northbound interface.
- Type: Type of the parameters.
- Format: is a regular expression used to validate the value of the parameter, if the value received in the northbound interfaces does not match this regular expression an error will be returned indicating the error.
- Mandatory: indicates is the parameters is mandatory for this service.
- Default Value: indicate a default value set for this parameters is case that it is not received in the service request.

INPUT				
Name	Type	Format	Mandatory	Default Value
MSISDN	String		Yes	
IMSI	String		Yes	
SERVICENAME	String		No	getSubscriberDetails

The next table has the values returned in the northbound interface as a response for this service request.

OUTPUT		
Name	Type	Description
S_SOSA_CODE	String	SOSA internal output, indicated is the was ok or not
S_SOSA_DESCRIPTION	String	SOSA internal description
S_CODE	String	Represent the output code returned by this action
S_DESCRIPTION	String	Represent the output description for this action
NE_CODE	String	Code returned by the target
NE_DESCRIPTION	String	Description returned by the target
NE_OUTPUT	String	Exactly output returned by the target
NE_ACT_TOTAL_TIME	String	Time taken to perform the activation only in the target (in milliseconds)
NETWORKELEMENT	String	Name of the target where the activation have been done
COMMANDS_SENT	String	Command sent to the target
WF_INSTANCE	String	Name of the HPSA workflow manager that executed this action
MDN		
SSTATUS		
PSTATUS		
OSTATUS		
RSTATUS		
KEY_MIN		
KEY_PRIVILEGE_LEVEL		
KEY_PTT_SUBSCRIPTION_TYPE		
KEY_CORPORATE_ID		
KEY_MAX_GROUP_SIZE		
KEY_MAX_MEMBERS_PER_GROUP		
KEY_PRESS_MESSAGE_FLAG		
KEY_PROTOCOL_VERSION		
KEY_ROAMING_FLAG		
KEY_PREPAID_FLAG		
KEY_PRESS_TO_CONFERENCE_UPGRADE_FLAG		
KEY_PRESS_TO_TALK_FLAG		
KEY_INST_PRESS_TO_CONFERENCE_FLAG		
KEY_RX_CALLS_WHILE_ROAMING_FLAG		

KEY_INIT_CALLS_WHILE_ROAMING_FLAG		
KEY_WPS_FLAG		
KEY_WPS_PRIORITY		
KEY_ORIG_FLOOR_CONTROL_FLAG		
KEY_PRESENCE_WHILE_ROAMING_FLAG		
KEY_EMLPP_FLAG		
KEY_EMLPP_PRIORITY		
KEY_VOICEMAIL_INFORMATION		
KEY_PREPAID_SUBSCRIBER_TYPE		
KEY_BREW		
KEY_SIM_CLIENT		
KEY_NON_RTX_SUBSCRIBERS		
KEY_GROUP_SMS		
KEY_SERVICE_SUPPORT_WHILE_NATIONAL_ROAMING		
KEY_ORIGINATING_CALLS_WHILE_NATIONAL_ROAMING		
KEY_RECEIVING_CALLS_WHILE_NATIONAL_ROAMING		
KEY_PRESENCE_WHILE_NATIONAL_ROAMING		
KEY_NATIONAL_CALL_CONTROL		
KEY_INTERNATIONAL_CALL_CONTROL		
KEY_INTERNATIONAL_GROUP_SMS		
KEY_SHORT_CODE		
KEY_PRESENCE_AVL		
KEY_VSMS		
KEY_INTERNATIONAL_VSMS		
KEY_CONFERENCE_SCHEDULER		
KEY_MAX_NUMBER_CONFERENCES		
KEY_MAX_MEMBER_P		

ER_CONF_BRIDGE		
KEY_HOME_RTX_IP		
KEY_CDF_FLAG		
KEY_ACCESS_MODE_AVS		
KEY_ACCESS_MODE_AGC		
KEY_ACCESS_MODE_CLIENTLESS		
KEY_AVS_CHARGING_TYPE		
KEY_CONNECTED_CHARGING_TYPE		
KEY_VB_LITE		
KEY_GSMS_LITE		
KEY_BUDDY_CONNECT		
KEY_MEET_ME_CONFERENCE		
KEY_QUICK_REACH		
ACCESS_MODE_AVS		

2.11.17 Get Subscriber Group Details

The next table has the input parameters defined for this service in the Service Catalog. These are the parameters that need to be sent to the MSA northbound interface to activate this service.

The means of each column in this table is:

- Name: Name of the parameter in the northbound interface.
- Type: Type of the parameters.
- Format: is a regular expression used to validate the value of the parameter, if the value received in the northbound interfaces does not match this regular expression an error will be returned indicating the error.
- Mandatory: indicates is the parameters is mandatory for this service.
- Default Value: indicate a default value set for this parameters is case that it is not received in the service request.

INPUT				
Name	Type	Format	Mandatory	Default Value
MSISDN	String		Yes	
IMSI	String		Yes	
SERVICENAME	String		No	getSubscriberGroupDetails

The next table has the values returned in the northbound interface as a response for this service request.

OUTPUT		
Name	Type	Description
S_SOSA_CODE	String	SOSA internal output, indicated is the was ok or not
S_SOSA_DESCRIPTION	String	SOSA internal description
S_CODE	String	Represent the output code returned by this action
S_DESCRIPTION	String	Represent the output description for this action
NE_CODE	String	Code returned by the target
NE_DESCRIPTION	String	Description returned by the target
NE_OUTPUT	String	Exactly output returned by the target
NE_ACT_TOTAL_TIME	String	Time taken to perform the activation only in the target (in milliseconds)
NETWORKELEMENT	String	Name of the target where the activation have been done
COMMANDS_SENT	String	Command sent to the target
WF_INSTANCE	String	Name of the HPSA workflow manager that executed this action
MDN		
GROUPID		
GROUPNAME		
ROLE		

2.11.18 Get Subscriber Contact Group Details

The next table has the input parameters defined for this service in the Service Catalog. These are the parameters that need to be sent to the MSA northbound interface to activate this service.

The means of each column in this table is:

- Name: Name of the parameter in the northbound interface.
- Type: Type of the parameters.
- Format: is a regular expression used to validate the value of the parameter, if the value received in the northbound interfaces does not match this regular expression an error will be returned indicating the error.
- Mandatory: indicates is the parameters is mandatory for this service.
- Default Value: indicate a default value set for this parameters is case that it is not received in the service request.

INPUT				
Name	Type	Format	Mandatory	Default Value
MSISDN	String		Yes	
IMSI	String		Yes	

SERVICENAME	String		No	getSubscriberContactGroupDetails
-------------	--------	--	----	----------------------------------

The next table has the values returned in the northbound interface as a response for this service request.

OUTPUT		
Name	Type	Description
S_SOSA_CODE	String	SOSA internal output, indicated is the was ok or not
S_SOSA_DESCRIPTION	String	SOSA internal description
S_CODE	String	Represent the output code returned by this action
S_DESCRIPTION	String	Represent the output description for this action
NE_CODE	String	Code returned by the target
NE_DESCRIPTION	String	Description returned by the target
NE_OUTPUT	String	Exactly output returned by the target
NE_ACT_TOTAL_TIME	String	Time taken to perform the activation only in the target (in milliseconds)
NETWORKELEMENT	String	Name of the target where the activation have been done
COMMANDS_SENT	String	Command sent to the target
WF_INSTANCE	String	Name of the HPSA workflow manager that executed this action
GROUPID		
GROUPNAME		
GROUPTYPE		
SUBSCRIBERCOUNT		
MAX_SUBSCRIBER		
HANG_TIMER		
MEMBERLIST		List of members: This is a serialized string with the same format: MDN=<value>; MIN=<value>; LISTINDEX=<value>; SSTATUS=<value>; PSTATUS=<value>; OSTATUS=<value>; RSTATUS=<value>; SUBROLE=<value>; MSTATUS=<value>;....

2.11.19 Get Subscriber Group Details

The next table has the input parameters defined for this service in the Service Catalog. These are the parameters that need to be sent to the MSA northbound interface to activate this service.

The means of each column in this table is:

- Name: Name of the parameter in the northbound interface.
- Type: Type of the parameters.
- Format: is a regular expression used to validate the value of the parameter, if the value received in the northbound interfaces does not match this regular expression an error will be returned indicating the error.
- Mandatory: indicates is the parameters is mandatory for this service.
- Default Value: indicate a default value set for this parameters is case that it is not received in the service request.

INPUT				
Name	Type	Format	Mandatory	Default Value
GROUPID	String		Yes	
SERVICENAME	String		No	getSubscriberGroupDetailsByID

The next table has the values returned in the northbound interface as a response for this service request.

OUTPUT		
Name	Type	Description
S_SOSA_CODE	String	SOSA internal output, indicated is the was ok or not
S_SOSA_DESCRIPTION	String	SOSA internal description
S_CODE	String	Represent the output code returned by this action
S_DESCRIPTION	String	Represent the output description for this action
NE_CODE	String	Code returned by the target
NE_DESCRIPTION	String	Description returned by the target
NE_OUTPUT	String	Exactly output returned by the target
NE_ACT_TOTAL_TIME	String	Time taken to perform the activation only in the target (in milliseconds)
NETWORKELEMENT	String	Name of the target where the activation have been done
COMMANDS_SENT	String	Command sent to the target
WF_INSTANCE	String	Name of the HPSA workflow manager that executed this action
GROUPID		
GROUPNAME		

GROUPTYPE		
SUBSCRIBERCOUNT		
MAX_SUBSCRIBER		
HANG_TIMER		
MEMBERLIST		List of members: This is a serialized string with the same format: MDN=<value>; MIN=<value>; LISTINDEX=<value>; SSTATUS=<value>; PSTATUS=<value>; OSTATUS=<value>; RSTATUS=<value>; SUBROLE=<value>; MSTATUS=<value>;....

2.11.20 Get All Administrator Accounts

The next table has the input parameters defined for this service in the Service Catalog. These are the parameters that need to be sent to the MSA northbound interface to activate this service.

The means of each column in this table is:

- Name: Name of the parameter in the northbound interface.
- Type: Type of the parameters.
- Format: is a regular expression used to validate the value of the parameter, if the value received in the northbound interfaces does not match this regular expression an error will be returned indicating the error.
- Mandatory: indicates is the parameters is mandatory for this service.
- Default Value: indicate a default value set for this parameters is case that it is not received in the service request.

INPUT				
Name	Type	Format	Mandatory	Default Value
CORPID	String		Yes	
SERVICENAME	String		No	getAllAdminAccountsPerCorpld

The next table has the values returned in the northbound interface as a response for this service request.

OUTPUT		
Name	Type	Description
S_SOSA_CODE	String	SOSA internal output, indicated is the was ok or not
S_SOSA_DESCRIPTION	String	SOSA internal description
S_CODE	String	Represent the output code returned by this action
S_DESCRIPTION	String	Represent the output description for this action
NE_CODE	String	Code returned by the target
NE_DESCRIPTION	String	Description returned by the target
NE_OUTPUT	String	Exactly output returned by the target
NE_ACT_TOTAL_TIME	String	Time taken to perform the activation only in the target (in milliseconds)
NETWORKELEMENT	String	Name of the target where the activation have been done
COMMANDS_SENT	String	Command sent to the target
WF_INSTANCE	String	Name of the HPSA workflow manager that executed this action
ACCOUNTLIST		List of returned accounts serialized as a string with the next format: CORPID=<value>; CORPADMINUSERNAME=<value>; ROLEID=<value>;...

2.11.21 PTT Error Management

PLATF FORM TYPE	SERVIC E	OPER ATIO N	NE_C ODE	RETUR N _C OD E	RETURN_DESC RIPTION	ACTION	NU MB ER _R E TRI ES	TI ME OU T	NU MBE R EXIS T	NU MBE R NOT EXIS T
KODIAC	PTT	DEFAULT	1	1	Invalid MDN value	RETURN			0	0
KODIAC	PTT	DEFAULT	2	2	Invalid MIN value	RETURN			0	0
KODIAC	PTT	DEFAULT	3	3	Invalid privilege level	RETURN			0	0
KODIAC	PTT	DEFAULT	4	4	Invalid transaction ID	RETURN			0	0
KODIAC	PTT	DEFAULT	5	5	Invalid application ID	RETURN			0	0
KODIAC	PTT	DEFAULT	6	6	Invalid PTT subscription type	RETURN			0	0
KODIAC	PTT	DEFAULT	7	7	Invalid Corporate ID	RETURN			0	0
KODIAC	PTT	DEFAULT	8	8	MDN can not be mapped to RTX	RETURN			0	0
KODIAC	PTT	DEFAULT	9	9	MDN is already provisioned	RETURN			0	0
KODIAC	PTT	DEFAULT	10	10	MDN IS already activated	RETURN			0	0
KODIAC	PTT	DEFAULT	11	11	MDN is already deactivated	RETURN			0	0
KODIAC	PTT	DEFAULT	12	12	Invalid operation,	RETURN			0	0

					MDN doesnt exist in the RTX					
KODIAC	PTT	DEFAULT	13	13	Mobile is not reachable	RETURN			0	0
KODIAC	PTT	DEFAULT	14	14	Mobile cant be auto configured	RETURN			0	0
KODIAC	PTT	DEFAULT	15	15	PrivilegeLevel already exists at requested level.	RETURN			0	0
KODIAC	PTT	DEFAULT	16	16	MDN Already exists in the DG	RETURN			0	0
KODIAC	PTT	DEFAULT	17	17	Internal Error has occurred	RETURN			0	0
KODIAC	PTT	DEFAULT	18	18	Invalid Update Request	RETURN			0	0
KODIAC	PTT	DEFAULT	19	19	Entity Already Updated	RETURN			0	0
KODIAC	PTT	DEFAULT	20	20	MIN is already associated with other MDN, not applicable for GSM customer	RETURN			0	0
KODIAC	PTT	DEFAULT	21	21	EMS Card is in Stand By Mode, make sure to point to the Active EMS	RETURN			0	0
KODIAC	PTT	DEFAULT	22	22	Invalid press to message flag	RETURN			0	0
KODIAC	PTT	DEFAULT	23	23	Invalid roaming flag	RETURN			0	0
KODIAC	PTT	DEFAULT	24	24	Invalid maximum groups size number	RETURN			0	0
KODIAC	PTT	DEFAULT	25	25	Invalid maximum subscribers per group number	RETURN			0	0
KODIAC	PTT	DEFAULT	26	26	Invalid input parameters	RETURN			0	0
KODIAC	PTT	DEFAULT	27	27	Invalid operation	RETURN			0	0
KODIAC	PTT	DEFAULT	28	28	Probable reason of the failure or extra information about error. The message could be EMS or RTX subsystem specific. Check errorContext associated with this ErrorInfo object for the exact error reason	RETURN			0	0
KODIAC	PTT	DEFAULT	29	29	Operation failed as subscriber account is in provision pending state and waiting for handset activation.	RETURN			0	0
KODIAC	PTT	DEFAULT	30	30	MDN is already migrated. Failed to change MDN	RETURN			0	0
KODIAC	PTT	DEFAULT	31	31	Subscriber is not Online 1. Could not get the PTTServerID from the given RTX IP Address 32 Could not get	RETURN			0	0
KODIAC	PTT	DEFAULT	32	32	Could not get the PTTServerID from the given RTX IP Address	RETURN			0	0
KODIAC	PTT	DEFAULT	33	33	Could not load default RTX IP	RETURN			0	0
KODIAC	PTT	DEFAULT	34	34	SUBSCRIBER_NOT_IN_ACTIVATED_STATE	RETURN			0	0

KODIAC	PTT	DEFAULT	35	35	SUBSCRIBER_IN_PROV ISION_PENDING_STAT E	RETURN			0	0
KODIAC	PTT	DEFAULT	36	36	CDF is enabled	RETURN			0	0
KODIAC	PTT	DEFAULT	37	37	Delete Operation failed. The Subscriber is in one of following mode [Subscriber Migration Inprogress, Subscriber Migrated].	RETURN			0	0
KODIAC	PTT	DEFAULT	38	38	Delete Operation failed. The Subscriber has wrong Online status	RETURN			0	0
KODIAC	PTT	DEFAULT	39	39	Internal Error occurred. Failed to retrieve Online status	RETURN			0	0
KODIAC	PTT	DEFAULT	40	40	Corporate Id does not exist	RETURN			0	0
KODIAC	PTT	DEFAULT	41	41	Feature not licensed	RETURN			0	0
KODIAC	PTT	DEFAULT	42	42	VoiceMail is not configured	RETURN			0	0
KODIAC	PTT	DEFAULT	43	43	Privilege level is wrong for the configured subscription type	RETURN			0	0
KODIAC	PTT	DEFAULT	44	44	Non numeric Short code	RETURN			0	0
KODIAC	PTT	DEFAULT	45	45	Invalid Short code	RETURN			0	0
KODIAC	PTT	DEFAULT	46	46	Invalid Feature set for CUG Type	RETURN			0	0
KODIAC	PTT	DEFAULT	47	47	Short code exists	RETURN			0	0
KODIAC	PTT	DEFAULT	48	48	Subscription type cannot be changed	RETURN			0	0
KODIAC	PTT	DEFAULT	49	49	Privilege cannot be changed	RETURN			0	0
KODIAC	PTT	DEFAULT	50	50	Invalid International Group SMS feature	RETURN			0	0
KODIAC	PTT	DEFAULT	51	51	Invalid International call control feature	RETURN			0	0
KODIAC	PTT	DEFAULT	52	52	Privilege level is wrong for the CUG	RETURN			0	0
KODIAC	PTT	DEFAULT	53	53	MIN_NOT_MAPPED_I N_DG	RETURN			0	0
KODIAC	PTT	DEFAULT	54	54	INVALID_SUBSCRIPTIO N_CHANGE_ PUBLIC2CORPORATE	RETURN			0	0
KODIAC	PTT	DEFAULT	55	55	INVALID_SUBSCRIPTIO N_CHANGE_ PUBLIC2CANDP	RETURN			0	0
KODIAC	PTT	DEFAULT	56	56	INVALID_SUBSCRIPTIO N_CHANGE_ PUBLIC2EXTERNAL	RETURN			0	0
KODIAC	PTT	DEFAULT	57	57	INVALID_SUBSCRIPTIO N_CHANGE_ CORPORATE2PUBLIC	RETURN			0	0
KODIAC	PTT	DEFAULT	58	58	INVALID_SUBSCRIPTIO N_CHANGE_ CORPORATE2CANDP	RETURN			0	0
KODIAC	PTT	DEFAULT	59	59	INVALID_SUBSCRIPTIO N_CHANGE_ CORPORA TE2EXTERNAL	RETURN			0	0
KODIAC	PTT	DEFAULT	60	60	INVALID_SUBSCRIPTIO N_CHANGE_ CANDP2PUBLIC	RETURN			0	0
KODIAC	PTT	DEFAULT	61	61	INVALID_SUBSCRIPTIO N_CHANGE_ CANDP2CORPORATE	RETURN			0	0

KODIAC	PTT	DEFAULT	62	62	INVALID_SUBSCRIPTIO N_CHANGE_ CANDP2CUG	RETURN			0	0
KODIAC	PTT	DEFAULT	63	63	INVALID_SUBSCRIPTIO N_CHANGE_CUG	RETURN			0	0
KODIAC	PTT	DEFAULT	64	64	INVALID_PROTOCOL_ VERSION	RETURN			0	0
KODIAC	PTT	DEFAULT	65	65	INVALID_MEMBERS_P ER_GROUP	RETURN			0	0
KODIAC	PTT	DEFAULT	66	66	INVALID_MAX_GROUP _SIZE	RETURN			0	0
KODIAC	PTT	DEFAULT	67	67	INVALID_WPS_PRIORI TY	RETURN			0	0
KODIAC	PTT	DEFAULT	68	68	INVALID_MAX_GROUP _SIZE_FOR_SIM	RETURN			0	0
KODIAC	PTT	DEFAULT	69	69	INVALID_MAX_GROUP S_FOR_SIM	RETURN			0	0
KODIAC	PTT	DEFAULT	70	70	LICENSE_LIMIT_EXCEE DED	RETURN			0	0
KODIAC	PTT	DEFAULT	71	71	MAX_SUBSCRIBERS_P ER_GROUP_EXCEEDED	RETURN			0	0
KODIAC	PTT	DEFAULT	72	72	INVALID_CHANGE_PRI V_REQUEST	RETURN			0	0
KODIAC	PTT	DEFAULT	73	73	PARTITIONING_NOT_C ONFIGURED	RETURN			0	0
KODIAC	PTT	DEFAULT	74	74	INVALID_EMLPP_PRIO RITY	RETURN			0	0
KODIAC	PTT	DEFAULT	75	75	INVALID_PRIVILEGE_C HANGE	RETURN			0	0
KODIAC	PTT	DEFAULT	76	76	CUG_NOT_ALLOWED	RETURN			0	0
KODIAC	PTT	DEFAULT	77	77	Failed to retrieve carrier ID	RETURN			0	0
KODIAC	PTT	DEFAULT	78	78	Failed to retrieve callserver details	RETURN			0	0
KODIAC	PTT	DEFAULT	79	79	Failed to retrieve corporate Details	RETURN			0	0
KODIAC	PTT	DEFAULT	80	80	Failed to retrieve corporate admin details	RETURN			0	0
KODIAC	PTT	DEFAULT	81	81	CORPORATE_ID_EXIST S	RETURN			0	0
KODIAC	PTT	DEFAULT	82	82	CORPORATE_NAME_E XISTS	RETURN			0	0
KODIAC	PTT	DEFAULT	83	83	INVALID_MAX_GROUP _SIZE	RETURN			0	0
KODIAC	PTT	DEFAULT	84	84	INVALID_MAX_MEMB ER_SIZE	RETURN			0	0
KODIAC	PTT	DEFAULT	85	85	UPDATE_ALREADY_IN _PROGRESS	RETURN			0	0
KODIAC	PTT	DEFAULT	86	86	CORPORATE_DOESNT _EXIST	RETURN			0	0
KODIAC	PTT	DEFAULT	87	87	CORP_ADMIN_ALREA DY_EXISTS	RETURN			0	0
KODIAC	PTT	DEFAULT	88	88	ACCOUNT_ALREADY_L OCKED	RETURN			0	0
KODIAC	PTT	DEFAULT	89	89	ACCOUNT_ALREADY_ UNLOCK	RETURN			0	0
KODIAC	PTT	DEFAULT	90	90	INVALID_CORPORATE _PROFILE_NAME	RETURN			0	0
KODIAC	PTT	DEFAULT	91	91	INVALID_NUMBER_FO R_MAXIMUM_GROUP S	RETURN			0	0
KODIAC	PTT	DEFAULT	92	92	INVALID_NUMBER_FO R_MAXIMUM_MEMB ERS_PER_GROUP	RETURN			0	0
KODIAC	PTT	DEFAULT	93	93	INVALID_NAME	RETURN			0	0
KODIAC	PTT	DEFAULT	94	94	INVALID_PASSWORD	RETURN			0	0

KODIAC	PTT	DEFAULT	95	95	INVALID_ROLE	RETURN			0	0
KODIAC	PTT	DEFAULT	96	96	INVALID_PTTSERVERID	RETURN			0	0
KODIAC	PTT	DEFAULT	97	97	DB_INTERNAL_ERROR	RETURN			0	0
KODIAC	PTT	DEFAULT	98	98	FAILED_TORETRIEVE_WORKORDERS_FORCORPID	RETURN			0	0
KODIAC	PTT	DEFAULT	99	99	Failed to retrieve corporate admin details	RETURN			0	0
KODIAC	PTT	DEFAULT	100	100	NO_WORKORDERS_AVAILABLE_FORCORPORATEID	RETURN			0	0
KODIAC	PTT	DEFAULT	101	101	NO_FAILEDMDNDETAILS_FORTHE_WORKORDERID	RETURN			0	0
KODIAC	PTT	DEFAULT	102	102	NO_CORPORATE_SUBSCRIBERS_FORTHE_CORPID	RETURN			0	0
KODIAC	PTT	DEFAULT	103	103	NUMBER_OF_UPDATES_PERSERVER_INSTANCE_EXCEEDS_THE_CONFIGUREDLIMIT	RETURN			0	0
KODIAC	PTT	DEFAULT	104	104	UNABLE_TO_PAIR_CONTACTS	RETURN			0	0
KODIAC	PTT	DEFAULT	105	105	MAXIMUM_CONTACTS_REACHED	RETURN			0	0
KODIAC	PTT	DEFAULT	106	106	CONTACTGROUP_NOT_AVAILABLE	RETURN			0	0
KODIAC	PTT	DEFAULT	107	107	NOT_A_CORPORATECONTACT	RETURN			0	0
KODIAC	PTT	DEFAULT	108	108	INVALID_SUBSCRIPTIONTYPE	RETURN			0	0
KODIAC	PTT	DEFAULT	109	109	INVALID_MEMBERSHIP_STATE	RETURN			0	0
KODIAC	PTT	DEFAULT	110	110	FAILED_TOADD_CONTACTS	RETURN			0	0
KODIAC	PTT	DEFAULT	111	111	INVALID_SUBSCRIBER	RETURN			0	0
KODIAC	PTT	DEFAULT	112	112	NO_DATA_FOUND	RETURN			0	0
KODIAC	PTT	DEFAULT	113	113	VALIDATION FAILED	RETURN			0	0
KODIAC	PTT	DEFAULT	114	114	BLACKLISTIP_ALREADY_EXISTS	RETURN			0	0
KODIAC	PTT	DEFAULT	115	115	SERVER/CARD NOT AVAILABLE	RETURN			0	0
KODIAC	PTT	DEFAULT	116	116	NULL_CHECK_FAILED	RETURN			0	0
KODIAC	PTT	DEFAULT	117	117	NO_CONFERENCE_DETAILS_FOUND	RETURN			0	0
KODIAC	PTT	DEFAULT	118	118	NO_PARTICIPANT_LIST_FOUND	RETURN			0	0
KODIAC	PTT	DEFAULT	119	119	NO_TIME_ZONE_FOUND	RETURN			0	0
KODIAC	PTT	DEFAULT	120	120	NO_MDN_NETWORK_NAME_FOUND	RETURN			0	0
KODIAC	PTT	DEFAULT	122	122	NO_CONF_FOR_ACCESSCODE_MDN	RETURN			0	0
KODIAC	PTT	DEFAULT	123	123	NO_CONF_FOR_ACCESSCODE_BRIDGE	RETURN			0	0
KODIAC	PTT	DEFAULT	124	124	NO_CONF_FOR_ACCESSCODE	RETURN			0	0
KODIAC	PTT	DEFAULT	125	125	Invalid International Voice SMS,VSMS should be chosen to enable International VSMS	RETURN			0	0
KODIAC	PTT	DEFAULT	126	126	MDN NOT ACTIVATED	RETURN			0	0
KODIAC	PTT	DEFAULT	127	127	OPERATOR INITIATED TRANSITION NOT ALLOWED	RETURN			0	0

KODIAC	PTT	DEFAULT	128	128	TRANSITION FAILED	RETURN			0	0
KODIAC	PTT	DEFAULT	129	129	NOT A SIM CLIENT	RETURN			0	0
KODIAC	PTT	DEFAULT	130	130	FAILED_TO_SET_RESTRICT_AVAILABILITY_FEATUREBIT	RETURN			0	0
KODIAC	PTT	DEFAULT	131	131	SUBSYSTEM_NOT_CONFIGURED	RETURN			0	0
KODIAC	PTT	DEFAULT	132	132	INVALID_USER_ACCOUNT_EXPIRY_TIME	RETURN			0	0
KODIAC	PTT	DEFAULT	133	133	MAX_MEMBERS_PER_CONFERENCES_EXCEEDED	RETURN			0	0

2.12 RIM Blackberry Service

This service is implemented over the platform RIMBLACKBERRY. See in the next sections the parameters involved for service action.

2.12.1 RIMBLACKBERRY Active Subscriber Operation

The next table has the input parameters defined for this service in the Service Catalog. These are the parameters that need to be sent to the MSA northbound interface to activate this service.

The means of each column in this table is:

- Name: Name of the parameter in the northbound interface.
- Type: Type of the parameters.
- Format: is a regular expression used to validate the value of the parameter, if the value received in the northbound interfaces does not match this regular expression an error will be returned indicating the error.
- Mandatory: indicates is the parameters is mandatory for this service.
- Default Value: indicate a default value set for this parameters is case that it is not received in the service request.

INPUT				
Name	Type	Format	Mandatory	Default Value
MSISDN	String		Yes	
IMSI	String		Yes	
LOGIN	String		Yes	
PWD	String		Yes	
TRANSACTION_TYPE	String		No	Activate

The next table has the values returned in the northbound interface as a response for this service request.

OUTPUT		
Name	Type	Description
S_SOSA_CODE	String	SOSA internal output, indicated is the was ok or not
S_SOSA_DESCRIPTION	String	SOSA internal description

S_CODE	String	Represent the output code returned by this action
S_DESCRIPTION	String	Represent the output description for this action
NE_ERROR_CODE	String	Code returned by the target
NE_ERROR_DESC	String	Description returned by the target
NE_OUTPUT	String	Exactly output returned by the target
NE_ACT_TOTAL_TIME	String	Time taken to perform the activation only in the target (in milliseconds)
NETWORKELEMENT	String	Name of the target where the activation have been done
COMMANDS_SENT	String	Command sent to the target
WF_INSTANCE	String	Name of the HPSA workflow manager that executed this action
IMSI	String	IMSI value of this subscription
MSISDN	String	MSISDN value of this subscription

2.12.2 RIMBLACKBERRY Cancel Subscriber Operation

The next table has the input parameters defined for this service in the Service Catalog. These are the parameters that need to be sent to the MSA northbound interface to activate this service.

The means of each column in this table is:

- Name: Name of the parameter in the northbound interface.
- Type: Type of the parameters.
- Format: is a regular expression used to validate the value of the parameter, if the value received in the northbound interfaces does not match this regular expression an error will be returned indicating the error.
- Mandatory: indicates is the parameters is mandatory for this service.
- Default Value: indicate a default value set for this parameters is case that it is not received in the service request.

INPUT				
Name	Type	Format	Mandatory	Default Value
MSISDN	String		Yes	
IMSI	String		Yes	
LOGIN	String		Yes	
PWD	String		Yes	
TRANSACTION_TYPE	String		No	Deactivate

The next table has the values returned in the northbound interface as a response for this service request.

OUTPUT		
Name	Type	Description
S_SOSA_CODE	String	SOSA internal output, indicated is the was ok or not
S_SOSA_DESCRIPTION	String	SOSA internal description
S_CODE	String	Represent the output code returned by this action

S_DESCRIPTION	String	Represent the output description for this action
NE_ERROR_CODE	String	Code returned by the target
NE_ERROR_DESC	String	Description returned by the target
NE_OUTPUT	String	Exactly output returned by the target
NE_ACT_TOTAL_TIME	String	Time taken to perform the activation only in the target (in milliseconds)
NETWORKELEMENT	String	Name of the target where the activation have been done
COMMANDS_SENT	String	Command sent to the target
WF_INSTANCE	String	Name of the HPSA workflow manager that executed this action
IMSI	String	IMSI value of this subscription
MSISDN	String	MSISDN value of this subscription

2.12.3 RIMBLACKBERRY Resume Subscriber Operation

The next table has the input parameters defined for this service in the Service Catalog. These are the parameters that need to be sent to the MSA northbound interface to activate this service.

The means of each column in this table is:

- Name: Name of the parameter in the northbound interface.
- Type: Type of the parameters.
- Format: is a regular expression used to validate the value of the parameter, if the value received in the northbound interfaces does not match this regular expression an error will be returned indicating the error.
- Mandatory: indicates is the parameters is mandatory for this service.
- Default Value: indicate a default value set for this parameters is case that it is not received in the service request.

INPUT				
Name	Type	Format	Mandatory	Default Value
MSISDN	String		Yes	
IMSI	String		Yes	
LOGIN	String		Yes	
PWD	String		Yes	
TRANSACTION_TYPE	String		No	Resume

The next table has the values returned in the northbound interface as a response for this service request.

OUTPUT		
Name	Type	Description
S_SOSA_CODE	String	SOSA internal output, indicated is the was ok or not
S_SOSA_DESCRIPTION	String	SOSA internal description
S_CODE	String	Represent the output code returned by this action
S_DESCRIPTION	String	Represent the output description for this action

NE_ERROR_CODE	String	Code returned by the target
NE_ERROR_DESC	String	Description returned by the target
NE_OUTPUT	String	Exactly output returned by the target
NE_ACT_TOTAL_TIME	String	Time taken to perform the activation only in the target (in milliseconds)
NETWORKELEMENT	String	Name of the target where the activation have been done
COMMANDS_SENT	String	Command sent to the target
WF_INSTANCE	String	Name of the HPSA workflow manager that executed this action
IMSI	String	IMSI value of this subscription
MSISDN	String	MSISDN value of this subscription

2.12.4 RIMBLACKBERRY Suspend Subscriber Operation

The next table has the input parameters defined for this service in the Service Catalog. These are the parameters that need to be sent to the MSA northbound interface to activate this service.

The means of each column in this table is:

- Name: Name of the parameter in the northbound interface.
- Type: Type of the parameters.
- Format: is a regular expression used to validate the value of the parameter, if the value received in the northbound interfaces does not match this regular expression an error will be returned indicating the error.
- Mandatory: indicates is the parameters is mandatory for this service.
- Default Value: indicate a default value set for this parameters is case that it is not received in the service request.

INPUT				
Name	Type	Format	Mandatory	Default Value
MSISDN	String		Yes	
IMSI	String		Yes	
LOGIN	String		Yes	
PWD	String		Yes	
TRANSACTION_TYPE	String		No	Suspend

The next table has the values returned in the northbound interface as a response for this service request.

OUTPUT		
Name	Type	Description
S_SOSA_CODE	String	SOSA internal output, indicated is the was ok or not
S_SOSA_DESCRIPTION	String	SOSA internal description
S_CODE	String	Represent the output code returned by this action
S_DESCRIPTION	String	Represent the output description for this action
NE_ERROR_CODE	String	Code returned by the target

NE_ERROR_DESC	String	Description returned by the target
NE_OUTPUT	String	Exactly output returned by the target
NE_ACT_TOTAL_TIME	String	Time taken to perform the activation only in the target (in milliseconds)
NETWORKELEMENT	String	Name of the target where the activation have been done
COMMANDS_SENT	String	Command sent to the target
WF_INSTANCE	String	Name of the HPSA workflow manager that executed this action
IMSI	String	IMSI value of this subscription
MSISDN	String	MSISDN value of this subscription