

Materna Provisioning Middleware – service catalogue

Installation: MVNE “Q” Czech Republic

From PMWpartner interface v4:

*simServiceList(): Returns static list of per-SIM services that may be activated or deactivated. List and structure of services varies per installation. For actual list of services, please refer to **PMW service catalogue** document.*

This document specifies list of SIM services. This is a set of services that may be activated/deactivated/set on per-subscription basis. Subscription is a pair of MSISDN + SIM card.

SIM service types

type	web form structure	explanation
bool_act_deact	[x] Foobar service	Service that may be active/inactive. End user may request to activate or deactivate. Format check: /^[01]\$/. <u>values</u> 0 ... service is not active 1 ... service is active <u>example</u> <name>m_RoamingData</name> <value>1</value>
enum_1ofN	(O) operand1 () operand2 () operand3	One of many. Such a service has a list of operands - plain string identifiers. Operand name is 2-32 ASCII a-zA-Z characters/digits. Format check: /^[a-zA-Z0-9]{2,32}\$/. This is often used as a parameter for bool_act_deact. <u>values</u> one of listed operands as string <u>example</u> <name>m_smsNotificationType</name> <type>enum_1ofN</type> <operand>OneByOne</operand> <operand>AllTogether</operand> <operand>None</operand> <defaultValue>OneByOne</defaultValue> <value>AllTogether</value>
text	[mypassw0rd]	Free text with specified maximum length up to 500 characters. UTF8. Format check: /.*/. <u>example</u> <name>m_blockingPassword</name> <value>qwertFHK</value>
text_number	[789001455]	input field for telephone number: fixed length max 17 characters, optional leading '+'. Format check /^\\+?([0-9]{2,15})\$/. <u>example</u> +421910998159

unsigned	[1250]	Positive number: 0 - 65535 <u>example</u> 1500
container	<pre> +--[service1]-----+ -----+ service1.1 service1.2 ... +-----+ -----+ </pre>	This is not in fact service, but container for several parameters.

XML schema definition

```

<!-- sim services DEFINITION, this is for simServiceList() -->
<xs:complexType name="simServiceDefinitionType">
  <xs:sequence>
    <xs:element name="name" type="xs:string"/>
    <xs:element name="type" type="xs:string"/> <!-- bool_active_inactive, enum_1ofN, text, text_number, container -->
    <xs:element name="defaultValue" type="xs:string" minOccurs="0"/>
    <xs:element name="operand" type="xs:string" minOccurs="0" maxOccurs="unbounded"/> <!-- for enum_1ofN -->
    <xs:element name="volatile" type="xs:boolean"/>
  </xs:sequence>
</xs:complexType>

```

Service list for “Q” Czech Republic

service name	volatile	PPW	PMWeu read/set	default value	type
m_communicationLanguage		+	++	Czech	enum_1ofN (operands <u>Czech</u> ,English)
m_subscriberNotificationType		+	++	Nothing	enum_1ofN (operands Nothing, Voice, All)
m_barringByCustomer					container
m_barringByCustomer/incomingCall		+	--	0	bool_act_deact
m_barringByCustomer/incomingSms		+	++	0	bool_act_deact

m_barringByCustomer/outgoingCall		+	++	0	bool_act_deact
m_barringByCustomer/outgoingSms		+	++	0	bool_act_deact
m_barringByCustomer/outgoingInternationalCall		+	++	0	bool_act_deact
m_barringByCustomer/outgoingInternationalSms		+	++	0	bool_act_deact
m_barringByCustomer/incomingRoamingCall		+	++	0	bool_act_deact
m_barringByCustomer/incomingRoamingSms		+	--	0	bool_act_deact
m_barringByCustomer/outgoingInternationalRoamingCall		+	++	0	bool_act_deact
m_barringByCustomer/outgoingInternationalRoamingSms		+	++	0	bool_act_deact
m_barringByCustomer/userBlockingPassword		+	++	0	unsigned (4 digits)
m_barringByOperator		+	--	0	container
m_barringByOperator/incomingCall		+	--	0	bool_act_deact
m_barringByOperator/incomingSms		+	--	0	bool_act_deact
m_barringByOperator/outgoingCall		+	--	0	enum_1ofN (operands <u>None</u> ,All,International,ExceptHomeCountry)
m_barringByOperator/outgoingSms		+	--	0	bool_act_deact
m_barringByOperator/audiotex		+	--	0	bool_act_deact
m_barringByOperator/roaming		+	--	1	bool_act_deact
m_barringByOperator/mms		+	--	0	bool_act_deact
m_barringByOperator/gprs		+	--	0	bool_act_deact
m_adultContentFilter		+	++	0	bool_act_deact
m_premiumSmsBar		+	++	0	bool_act_deact
m_premiumLimit		+	-	0	unsigned
m_welcomeRoamingSmsBar		+	++	0	bool_act_deact
m_mms		+	++	0	bool_act_deact
m_clir	!	+	++	TemporaryAllowed	enum_1ofN (operands Off/Permanent/TemporaryRestricted/ <u>TemporaryAllowed</u>)
m_missedCallAlert		+	++	None	enum_1ofN (operands: Off, <u>Czech</u> ,English)

m_portedNumberCallsNotificaton		+	++	1	bool_act_deact
m_voiceMail		+	++		container
m_voiceMail/enabled	!	+	++	0	bool_act_deact
m_voiceMail/language		+	++	Czech	enum_1ofN (operands: <u>Czech</u> ,English)
m_voiceMail/enableNoMessageNotification		+	++	1	bool_act_deact
m_voiceMail/pin		+	++		unsigned (4 digits)
m_voiceMail/blocked		+	--	0	bool_act_deact
m_voiceMail/notificationSmsEnable		+	++	1	bool_act_deact
m_callForwarding					container
m_callForwarding/busyNumber	!	+	++	-	text_number
m_callForwarding/unreachableNumber	!	+	++	-	text_number
m_callForwarding/notRespondingNumber	!	+	++	-	text_number
m_callForwarding/unconditionalNumber	!	+	++	-	text_number
m_callHold	!	+	++	1	bool_act_deact
m_callWaiting	!	+	++	0	bool_act_deact
m_limits/spendingLimit		-	--		unsigned
m_limits/flexiLimit		+	--		unsigned
m_limits/autoFlexiLimitMinimum		+	--		unsigned
m_limits/autoFlexiLimitMaximum		+	--		unsigned
m_limits/limitAlgorithm		+	--	Automatic	enum_1ofN (operands: Manual, Automatic)
m_dataRoamingCostControl		+	++		container
m_dataRoamingCostControl/enabled		+	++	1	bool_act_deact
m_dataRoamingCostControl/warningIf80PercentReachedEnabled		+	++	1	bool_act_deact
m_dataRoamingCostControl/lowLimit		+	++	1300	unsigned
m_dataRoamingCostControl/allowExceedingLimit		+	++	0	bool_act_deact (normally false, only after real exceeding of limit could be

					set on true
m_mobileData		+	++	1	bool_act_deact
m_roaming		+	+-	0	bool_act_deact
m_autoResumeAfterPostpaidLimitReached		+	--	0	bool_act_deact

m_barringByCustomer

This service enables to apply lower-priority barring (from MVNO customer's initiative) for particular subscription. List of low-level barrings like e.g. barring of incoming services or barring of outgoing services be applied by using this service.

Preconditions

Barring can be set only for already active GSM subscription.

Dependencies - how it works on HLR

Počáteční stav - žádná blokace BAIC NOT ACTIVE BAOC NOT ACTIVE BICRO NOT ACTIVE BOIC NOT ACTIVE BOIEXH NOT ACTIVE	Po nahození BAIC (BARRING OF ALL INCOMING CALLS) BAIC ACTIVE-OP BAOC NOT ACTIVE BICRO NOT ACTIVE BOIC NOT ACTIVE BOIEXH NOT ACTIVE	Po nahození BAOC (BARRING OF ALL OUTGOING CALLS) BAIC ACTIVE-OP BAOC ACTIVE-OP BICRO NOT ACTIVE BOIC NOT ACTIVE BOIEXH NOT ACTIVE
Po nahození BOIC (BARRING OF ALL OUTGOING INTERNATIONAL CALLS) BAIC ACTIVE-OP BAOC NOT ACTIVE BICRO NOT ACTIVE BOIC ACTIVE-OP BOIEXH NOT ACTIVE <i>Toto nastavení zruší BAOC</i>	Po nahození BICRO (BARRING OF ALL INCOMING CALLS WHEN ROAMING OUTSIDE THE HOME PLMN) BAIC NOT ACTIVE BAOC NOT ACTIVE BICRO ACTIVE-QS BOIC ACTIVE-OP BOIEXH NOT ACTIVE <i>BICRO se dostane do stavu QS (quiescent), protože je aktivní BOIC, a současně zruší BAIC</i>	Po nahození BOIEXH (BARRING OF ALL OUTGOING INTERNATIONAL CALLS EXCEPT THOSE DIRECTED TO THE HOME PLMN) BAIC NOT ACTIVE BAOC NOT ACTIVE BICRO ACTIVE-QS BOIC NOT ACTIVE BOIEXH ACTIVE-OP <i>Toto nastavení zruší BOIC</i>

m_barringByCustomer/incomingCall (BAIC)

Enables or disables all incoming calls. True is for barring, false is for unbarring. Values - true/false.

m_barringByCustomer/incomingSms

Enables or disables all incoming SMSes. Values - true/false.

m_barringByCustomer/outgoingCall (BAOC)

Enables or disables outgoing calls. True is for barring, false is for unbarring. Values - true/false.

m_barringByCustomer/outgoingSms

Enables or disables all outgoing SMSes. True is for barring, false is for unbarring. Values - true/false.

m_barringByCustomer/outgoingInternationalCall (BOIC)

Enables or disables outgoing international calls (i.e. to foreign country/network). Values - true/false.

m_barringByCustomer/outgoingInternationalSms

Enables or disables outgoing international SMSes (i.e. to foreign country/network). True is for barring, false is for unbarring. Values - true/false.

m_barringByCustomer/incomingRoamingCall (BICRO)

Enables or disables incoming calls in roaming. True is for barring, false is for unbarring. Values - true/false.

m_barringByCustomer/incomingRoamingSms

Enables or disables incoming SMSes in roaming. True is for barring, false is for unbarring. Values - true/false.

m_barringByCustomer/outgoingInternationalRoamingCall (BOIEXH)

Enables or disables outgoing international calls in roaming. True is for barring, false is for unbarring. Values - true/false.

m_barringByCustomer/outgoingInternationalRoamingSms

Enables or disables outgoing international SMSes in roaming. True is for barring, false is for unbarring. Values - true/false.

m_barringByCustomer/userBlockingPassword

Enables to set password that should be provided by user while operating with some of services from handset.

m_barringByOperator

This service enables to apply higher-priority barring (from MVNO partner/operator's initiative) for particular subscription. List of low-level barrings like e.g. barring of all calls, barring of SMS, barring of MMS, barring of premium or international calls can be applied by using this service. Also voice roaming, which is not activated by default during GSM activation/dehotline, can be enabled or disabled by using this service.

Preconditions

Barring can be set only for already active GSM subscription.

m_barringByOperator/incomingCall

Enables or disables all incoming calls. True is for barring, false is for unbarring. Values - true/false.

m_barringByOperator/incomingSms

Enables or disables all incoming SMSes. Values - true/false.

m_barringByOperator/outgoingCall

Enables or disables outgoing calls according to specified flag/mask.

None	- no outgoing calls barring
All	- all outgoing calls barred
International	- international calls barred
ExceptHomeCountry	- international calls barred, but can call home country (+420) from roaming

m_barringByOperator/outgoingSms

Enables or disables all outgoing SMSes. True is for barring, false is for unbarring. Values - true/false.

m_barringByOperator/audiotex

Enables or disables audiotex services. True is for barring, false is for unbarring. Values - true/false.

m_barringByOperator/roaming

Enables or disables roaming calls and it has opposite consequence to m_roaming.
True is for barring, false is for unbarring. Values - true/false.

m_barringByOperator/mms

Enables or disables MMS (multimedia messages). To use MMS by subscriber, m_barringByOperator/gprs must not be active too.

m_barringByOperator/gprs

Enables or disables GPRS/3G/H+ data transfers. When activated (barred), no data transfer is allowed for subscriber, including MMS. Sending and receiving of MMS is barred by this, too.
To prevent subscriber from using mobile data with no influence to MMS, use m_mobileData.
There is no influence to ordered data packages. Current data usage stays with no change. After deactivate of this barring, usage of mobile data “continues” from activa data package, if any.

This service no effective for LTE data. In case of barred data, LTE is not barred - for barring LTE service is needed to use service m_mobileData.

m_adultContentFilter

This service enables to apply adult content filter/barring for particular subscription. It is composite barring/service consisting of set of other low-level content filters and barrings. Specifies administrator rule set to apply to incoming messages and web browsing. Values - adult/general/child.

Preconditions

GSM subscription must be active.

m_premiumSmsBar

This service enables to prohibit usage of so called Premium SMS for particular subscription.

Preconditions

GSM subscription must be active and barring not applied.

m_premiumLimit

Monthly limit for premium services (premium SMS) in CZK. Allowed values are:

- 1 - 5000 ... sets the monthly limit to a given amount (CZK)
- 0 ... sets the Vodafone default value, which is 5000 CZK

m_welcomeRoamingSmsBar

This service switches off receiving of welcome SMS in roaming for specified subscription.

Preconditions

GSM subscription must be active and barring not applied.

m_mms

This service activates MMS, i.e. enables them for specified subscription.

Preconditions

GSM subscription must be active and barring not applied.

m_clir

This service activates CLIR (Calling Line Identification Restriction) for specified subscription.

Preconditions

GSM subscription must be active.

m_clir/type

Possible values - Permanent, TemporaryRestricted, TemporaryAllowed.

Permanent - always suppress MSISDN
TemporaryRestricted - by default MSISDN is not shown, but it can be switched on on handset
TemporaryAllowed - by default MSISDN is shown, but it can be switched off on handset

m_missedCallAlert

This service activates MCA (Missed Call Alert) for specified subscription.

Preconditions

GSM subscription must be active, but MCA not.

m_missedCallAlert/language

Sets language for MCA notification. Values - Czech/English.

m_portedNumberCallsNotificaton

This service activates off-net calls notification for specified subscription. I.e. voice message at the beginning of the call to ported-out number from partner MSISDN range.

Preconditions

GSM subscription must be active, but off-net calls notifications not.

m_voiceMail

This service allows setting voice mail box parameters for particular subscription. Voice mail itself is activated automatically by first access to it (and setting call forwarding).

Preconditions

GSM subscription must be active and Voice Mailbox too.

m_voiceMail/language

Specifies voice mail language. Values - Czech/English.

m_voiceMail/enableNoMessageNotification

Enables “who called to Voice Mail box” identification/notification, when no message is left. Default value is true.

m_voiceMail/setPin

Specifies, if to evaluate and handle pin parameter. If it is set to true and pin is not set, PIN will be reset. Values - true/false.

m_voiceMail/pin

Voice mail PIN value. Value is valid PIN.

m_voiceMail/blocked

Determines if service is blocked. By default it is false. Values - true/false.

m_voiceMail/notificationSmsEnable

Enables SMS notification when message is stored in voice mail box. Values - true/false.

m_callForwarding

This service allows setting parameters of call forwarding on GSM network for specified subscription.

Preconditions

GSM subscription must be active.

m_callForwarding/busyNumber

The MSISDN number for voice call forwarding if mobile subscriber is busy. Value - Starts with 420 + 9 digits.

m_callForwarding/unreachableNumber

The MSISDN number for voice call forwarding if mobile subscriber is not reachable. Value - Starts with 420 + 9 digits.

m_callForwarding/notRespondingNumber

The MSISDN number for voice call forwarding if mobile subscriber is not responding. Value - Starts with 420 + 9 digits.

m_callForwarding/unconditionalNumber

Specifies target MSISDN number for unconditional call forwarding. I.e. such CF always takes place. Value - Starts with 420 + 9 digits.

m_callHold

This service activates call hold on GSM network for particular subscription.

Preconditions

GSM subscription must be active and call hold not.

m_callWaiting

This service activates call waiting service on GSM network for particular subscription.

Preconditions

GSM subscription must be active. If service was already activated via customer's handset, it simply sets the value again and nothing happens.

m_limits

This service allows changing of spending limit for post-paid subscription. I.e. account spending limit (ASL) and flexi limit too. ASL represents "hard" limit, which cannot be exceeded. Otherwise, corresponding services are automatically deactivated (so called Forced Deactivation). Flexi limit is generally "soft" limit. I.e. notification about exceeding specified limit. Nevertheless, concrete behaviour in this case depends on implementation and processing of such notification on MVNO partner's side.

Preconditions

GSM subscription must be active. It must be postpaid subscription.

m_limits/spendingLimit

Only for postpaid. Values - Amount of account spending limit ("hard" limit) in CZK.

m_limits/flexiLimit

Only for postpaid. Values - Amount of subscriber flexi limit ("soft" limit) in CZK.

m_limits/limitAlgorithm

Only for postpaid. Set algorithm of limit calculation. Values - Manual/Automatic.

m_limits/autoFlexiLimitMinimum

Only for postpaid. Set minimum amount of flexi limit when automatic algorithm is set (in CZK).

m_limits/autoFlexiLimitMaximum

Only for postpaid. Set maximum amount of flexi limit when automatic algorithm is set (in CZK).

m_dataRoamingCostControl

Limits data spending in roaming. Only per kB charges are included into spending limit counter (fees for daily/monthly roaming tariffs are excluded). Data are always limited by hard limit, which is defined per partner and cannot be changed per subscription. Low limit can be configured per subscription.

Preconditions

GSM subscription must be active. Data roaming tariff must be active on GSM subscription.

m_dataRoamingCostControl/warningIf80PercentReachedEnabled

Enables or disables notification when 80% of limit is reached. Please note that for combination enable = false and warningIf80PercentReachedEnabled = true then warning notification is not sent. Values - true/false.

m_dataRoamingCostControl/lowLimit

Value of spending limit to be controlled. Only per kB charges are included into spending limit counter (fees are excluded). Values - Valid spending limit in CZK.

m_dataRoamingCostControl/allowExceedingLimit

Allows using roaming data even if spending limit has been already reached (or almost reached). Parameter is set only for current active period. Values - true/false.

m_mobileData

Switches on/off data connection (GPRS/3G/H+,LTE). This is implemented as (de)activation of the special "S102NODATA" tariff.

With m_mobileData deactivated, subscriber may still send and receive MMS.

Setting m_mobileData = 0 deactivate the current data tariff and activates the S102NODATA tariff. **Warning! All data packages (those defined as MP: or using MobileData pseudocurrency¹) are stopped and deactivated too. Rest of data usage limit (FUP limit) will not be available after re-enabling mobile data.** Those stopped packages already have PKG/BILL EDR in all billings. For short-term barring of data connection use m_barringByOperator/gprs.

Setting m_mobileData = 1 deactivate the S102NODATA. The default basic data tariff will be activated automatically by VF on the first use.

examples: MP300MB - 900DM - 150DMR

m_roaming

Enables or disables roaming calls and has opposite consequence to m_barringByOperator/roaming .

Setting m_roaming = 0 deactivate roaming and automatically set barring of m_barringByOperator/roaming .

Setting m_roaming = 1 activate roaming and automatically set unbarring of m_barringByOperator/roaming .

m_autoResumeAfterPostpaidLimitReached

Enables or disables auto resume after postpaid limit reached at the beginning of month.

Setting m_autoResumeAfterPostpaidLimitReached = 0 deactivate auto resume

Setting m_autoResumeAfterPostpaidLimitReached = 1 activate auto resume

Change Log

date	version	changed by	description
3.4.2013	1	Vojtěch Pithart	List of services based on Vodafone SP Service Provider Service Catalogue
10.4.2013	2	Marcela Špičánová	Descriptions
12. 4. 2013	5	Jiří Brachtl	Normalized case
17.4.2013	6	Vojtěch Pithart	Redukce zbytečností
10. 5. 2013	7	Jan Severa	Aktualizace vybraných parametrů metod po doplnění z VF
4. 6. 2013	10	Jiří Brachtl	m_voiceMail a m_dataRoamingCostControl jsou containery
13.12.2013	12	Vojtěch Pithart	Závislosti v barringByCustomer
11.7.2014	13	Jiří Brachtl	Added m_mobileData
12. 8. 2014	14	Jan Severa	Aktualizace výchozích hodnot parametru SIM vůči VF
4. 9. 2014	15	Jan Severa	Added m_roaming
9. 9. 2014	16	Jan Severa	Correct wrong default status of m_callWaiting
17. 12. 2014	17	Vojtěch Pithart	Upřesnění popisků u barringByOperator/(gprs,mms), m_mms, m_mobileData; nová služba m_premiumLimit
25. 2. 2015	18	Lukáš Veselka	Changed m_spendingLimit □ m_limits, m_spendingLimit/flexiLimit □ m_limits/flexiLimit, m_spendingLimit/spendingLimit □ m_limits/spendingLimit Added m_limits/limitAlgorithm, m_limits/autoFlexiLimitMinimum, m_limits/autoFlexiLimitMaximum
20. 4. 2015	19	Lukáš Veselka	Added m_autoResumeAfterPostpaidLimitReached