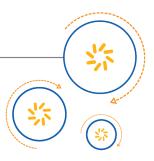


Qualcomm Technologies, Inc.



# QMI IMSS 1.30 for MPSS.TH.1.0

QMI IMS Settings Svc Spec

80-NV400-32 B

February 20, 2015

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# **Revision History**

Revision	Date	Description
A	Oct 2014	Initial release. Created from 80-NH952-32 AE.
		Updates for this revision include minor version 24 through minor version 28.
		Added new TLVs:
		• SIP Timer T4 (Sections 3.3.1, 3.8.2, and 3.14.1)
		• SIP Timer A (Sections 3.3.1, 3.8.2, and 3.14.1)
		• SIP Timer E (Sections 3.3.1, 3.8.2, and 3.14.1)
		• SIP Timer G (Sections 3.3.1, 3.8.2, and 3.14.1)
		• SIP Timer H (Sections 3.3.1, 3.8.2, and 3.14.1)
		• SIP Timer I (Sections 3.3.1, 3.8.2, and 3.14.1)
		• SIP Timer K (Sections 3.3.1, 3.8.2, and 3.14.1)
		• SMS PSI String (Sections 3.5.1, 3.10.2, and 3.16.1)
		• VoIP Configuration Conference Factory URI (Sections 3.7.1, 3.12.2, and
		3.18.1)
		• Smallest RTP Port Number (Sections 3.25.1, 3.26.2, and 3.27.1)
		• Largest RTP Port Number (Sections 3.25.1, 3.26.2, and 3.27.1)
		• AMR-WB Octet Aligned Payload Type (Sections 3.25.1, 3.26.2, and 3.27.1)
		• AMR-WB Bandwidth Efficient Payload Type (Sections 3.25.1, 3.26.2, and
		3.27.1)
		• AMR Octet Aligned Payload Type (Sections 3.25.1, 3.26.2, and 3.27.1)
		• AMR Bandwidth Efficient Payload Type (Sections 3.25.1, 3.26.2, and 3.27.1)
		• DTMF Wideband Payload Type (Sections 3.25.1, 3.26.2, and 3.27.1)
		• DTMF Narrowband Payload Type (Sections 3.25.1, 3.26.2, and 3.27.1)
		• AMR Default Encoding Mode (Sections 3.25.1, 3.26.2, and 3.27.1)
		• RegRetryBaseTime (Sections 3.37.1, 3.38.2, and 3.39.1)
		• RegRetryMaxTime (Sections 3.37.1, 3.38.2, and 3.39.1)
		• Wi-Fi Call Setting (Sections 3.52.1 and 3.53.2, and 3.54.1)
		• Wi-Fi Call Preference Setting (Sections 3.52.1, 3.53.2, and 3.54.1)
		• Wi-Fi Call Roaming Setting (Sections 3.52.1, 3.53.2, and 3.54.1)
		Added new message
		QMI_IMS_SETTINGS_SET_APCS_COMPLETE_CONFIG (Section 3.55)

Revision	Date	Description
В	Feb 2015	Updates for this revision include minor version 29 and minor version 30.
		Deprecated:
		QMI_IMS_SETTINGS_SET_MEDIA_CONFIG command (Section 3.22)
		Added new TLVs:
		• Publish User Agent (Sections 3.43.1, 3.44.2, and 3.45.1)
		• Lipsync Drop Upper Limit (Sections 3.23.2 and 3.24.1)
		• Lipsync Drop Lower Limit (Sections 3.23.2 and 3.24.1)
		• RTP MTU Size (Sections 3.23.2 and 3.24.1)
		• QDJ Time Warping Enable Option (Sections 3.23.2 and 3.24.1)
		• QDJ IBA Maximum Value (Sections 3.23.2 and 3.24.1)
		• QDJ Maximum Frames to Start Dequeue (Sections 3.23.2 and 3.24.1)
		• QDJ Maximum Dejitter Delay (Sections 3.23.2 and 3.24.1)
		• QDJ Minimum Dejitter Delay (Sections 3.23.2 and 3.24.1)
		• QDJ Optimization2 Information (Sections 3.23.2 and 3.24.1)
		• QDJ Maximum Frames at Run (Sections 3.23.2 and 3.24.1)
		• QDJ Maximum Bumped Delay (Sections 3.23.2 and 3.24.1)
		• QDJ Jitter Increment (Sections 3.23.2 and 3.24.1)
		• QDJ Target Underflow Rate (Sections 3.23.2 and 3.24.1)
		• QDJ Drop Threshold (Sections 3.23.2 and 3.24.1)
		• Gap Minimum (Sections 3.23.2 and 3.24.1)
		• Transmit System Delay (Sections 3.23.2 and 3.24.1)
		• Receive System Delay (Sections 3.23.2 and 3.24.1)
		Audio Offload (Sections 3.23.2 and 3.24.1)
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# 1 Introduction

### 1.1 Purpose

This specification documents Major Version 1 of the Qualcomm Messaging Interface (QMI) for IP Multimedia Subsystem Settings Service (QMI\_IMSS).

QMI\_IMSS provides the settings service to its control points. These services include interfaces to read configuration parameters and write configuration parameters. This service can be extended in the future to support other configuration parameters.

## 1.2 Scope

This document is intended for QMI clients to perform operations and to learn about settings service for Qualcomm MSM<sup>TM</sup> devices via the QMI\_IMSS.

This document provides the following details about QMI\_IMSS:

- Theory of operation Chapter 2 provides the theory of operation of QMI\_IMSS. The chapter includes messaging conventions, assigned QMI service type, fundamental service concepts, and state variables related to the service.
- Message formats, syntax, and semantics Chapter 3 provides the specific syntax and semantics of messages included in this version of the QMI\_IMSS specification.

#### 1.3 Conventions

Function declarations, function names, type declarations, and code samples appear in a different font, for example, #include.

#### 1.4 Technical Assistance

For assistance or clarification on information in this document, submit a case to Qualcomm Technologies at https://support.cdmatech.com.

If you do not have access to the CDMATech Support website, register for access or send email to support.cdmatech@qti.qualcomm.com.

# 2 Theory of Operation

# 2.1 Generalized QMI Service Compliance

The QMI\_IMSS service complies with the generalized QMI service specification, including the rules for messages, indications and responses, byte ordering, arbitration, constants, result, and error code values described in 80-VB816-1. Extensions to the generalized QMI service theory of operation are noted in subsequent sections of this chapter.

# 2.2 QMI\_IMSS Service Type

QMI\_IMSS is assigned QMI service type 0x12.

# 2.3 Message Definition Template

# 2.3.1 Response Message Result TLV

This Type-Length-Value (TLV) is present in all Response messages defined in this document. It is not present in the Indication messages.

Name	Version introduced	Version last modified
Result Code	Corresponding	Corresponding
	response's Version	response's Version
	introduced	last modified

Field	Field	Field	Parameter	Size	Description
	value	type		(byte)	
Туре	0x02			1	Result Code
Length	4			2	
Value	$\rightarrow$	uint16	qmi_result	2	Result code
					• QMI_RESULT_SUCCESS
					<ul> <li>QMI_RESULT_FAILURE</li> </ul>
		uint16	qmi_error	2	Error code – Possible error code values
					are described in the error codes section
					of each message definition

## 2.4 QMI\_IMSS Fundamental Concepts

The QMI\_IMSS service provides the settings service to its control points. These services include interfaces to read configuration parameters and write configuration parameters. This service can be extended in the future to support other configuration parameters.

Control points can also register for indications to be sent from the service when any of the configuration parameters change on the modem.

User-level applications use QMI\_IMSS to access this functionality on the MSM device.

### 2.5 Service State Variables

#### 2.5.1 Shared State Variables

No QMI\_IMSS state variables are shared across control points.

# 3 QMI\_IMSS Messages

Table 3-1 QMI\_IMSS messages

Command	ID	Description
QMI_IMS_SETTINGS_GET_SUPPORTED_	0x001E	Queries the set of messages
MSGS		implemented by the currently running
		software.
QMI_IMS_SETTINGS_GET_SUPPORTED_	0x001F	Queries the fields supported for a single
FIELDS		command as implemented by the
		currently running software.
QMI_IMS_SETTINGS_SET_SIP_CONFIG	0x0020	Sets the IMS Session Initiation Protocol
		(SIP) configuration parameters for the
	~	requesting control point.
QMI_IMS_SETTINGS_SET_REG_MGR_	0x0021	Sets the IMS registration manager
CONFIG	N. M.	configuration parameters for the
	.V 10	requesting control point.
QMI_IMS_SETTINGS_SET_SMS_CONFIG	0x0022	Sets the IMS SMS configuration
	3.0	parameters for the requesting control
0, 340		point.
QMI_IMS_SETTINGS_SET_USER_CONFIG	0x0023	Sets the IMS user configuration
2000		parameters for the requesting control
8		point.
QMI_IMS_SETTINGS_SET_VOIP_CONFIG	0x0024	Sets the IMS Voice over Internet
		Protocol (VoIP) configuration
		parameters for the requesting control
		point.
QMI_IMS_SETTINGS_GET_SIP_CONFIG	0x0025	Retrieves the SIP configuration
		parameters.
QMI_IMS_SETTINGS_GET_REG_MGR_	0x0026	Retrieves the registration manager
CONFIG		configuration parameters.
QMI_IMS_SETTINGS_GET_SMS_CONFIG	0x0027	Retrieves the SMS configuration
		parameters.
QMI_IMS_SETTINGS_GET_USER_CONFIG	0x0028	Retrieves the user configuration
		parameters.
QMI_IMS_SETTINGS_GET_VOIP_CONFIG	0x0029	Retrieves the VoIP configuration
		parameters.
QMI_IMS_SETTINGS_CONFIG_IND_REG	0x002A	Sets the registration state for various
		settings service indications for the
		requesting control points.
QMI_IMS_SETTINGS_SIP_CONFIG_IND	0x002B	Indicates when the SIP configuration
		parameters change.
		parameters change.

Table 3-1 QMI\_IMSS messages (cont.)

Command	ID	Description
QMI_IMS_SETTINGS_REG_MGR_CONFIG_	0x002C	Indicates when the registration manager
IND		configuration parameters change.
QMI_IMS_SETTINGS_SMS_CONFIG_IND	0x002D	Indicates when the SMS configuration
		parameters change.
QMI_IMS_SETTINGS_USER_CONFIG_IND	0x002E	Indicates when the user configuration
		parameters change.
QMI_IMS_SETTINGS_VOIP_CONFIG_IND	0x002F	Indicates when the VoIP configuration
		parameters change.
QMI_IMS_SETTINGS_SET_PRESENCE_	0x0030	Sets the IMS presence-related
CONFIG		configuration parameters for the
		requesting control point.
QMI_IMS_SETTINGS_GET_PRESENCE_	0x0031	Retrieves the presence-related
CONFIG		configuration parameters.
QMI_IMS_SETTINGS_PRESENCE_CONFIG_	0x0032	Indicates when the presence-related
IND		configuration parameters change.
QMI_IMS_SETTINGS_SET_MEDIA_CONFIG	0x0033	Sets the IMS media-related
		configuration parameters for the
		requesting control point. (Deprecated)
QMI_IMS_SETTINGS_GET_MEDIA_CONFIG	0x0034	Retrieves the media-related
	N. M.	configuration parameters.
QMI_IMS_SETTINGS_MEDIA_CONFIG_IND	0x0035	Indicates when the media-related
10	The state of the s	configuration parameters change.
QMI_IMS_SETTINGS_SET_QIPCALL_	0x0036	Sets the IMS QIPCall-related
CONFIG		configuration parameters for the
70 111		requesting control point.
QMI_IMS_SETTINGS_GET_QIPCALL_	0x0037	Retrieves the QIPCall-related
CONFIG		configuration parameters.
QMI_IMS_SETTINGS_QIPCALL_CONFIG_	0x0038	Indicates when the QIPCall-related
IND		configuration parameters change.
QMI_IMS_SETTINGS_GET_SIP_READ_	0x0039	Retrieves the SIP read-only-related
ONLY_CONFIG		configuration parameters.
QMI_IMS_SETTINGS_SIP_READ_ONLY_	0x003A	Indicates when the SIP
CONFIG_IND		read-only-related configuration
		parameters change.
QMI_IMS_SETTINGS_GET_NETWORK_	0x003D	Retrieves the network read-only-related
READ_ONLY_CONFIG		configuration parameters.
QMI_IMS_SETTINGS_NETWORK_READ_	0x003E	Indicates when the network
ONLY_CONFIG_IND		read-only-related configuration
		parameters change.
QMI_IMS_SETTINGS_GET_VOIP_READ_	0x003F	Retrieves the VoIP read-only-related
ONLY_CONFIG		configuration parameters.
QMI_IMS_SETTINGS_GET_USER_READ_	0x0040	Retrieves the user read-only-related
ONLY_CONFIG		configuration parameters.
QMI_IMS_SETTINGS_GET_REG_MGR_	0x0041	Retrieves the registration manager
READ_ONLY_CONFIG		read-only-related configuration

Table 3-1 QMI\_IMSS messages (cont.)

Command	ID	Description
QMI_IMS_SETTINGS_GET_RCS_AUTO_	0x0042	Retrieves the RCS automatic
CONFIG_READ_ONLY_CONFIG		configuration read-only-related
		configuration parameters.
QMI_IMS_SETTINGS_GET_RCS_IMSCORE_	0x0043	Retrieves the RCS IMS core automatic
AUTO_CONFIG_READ_ONLY_CONFIG		configuration read-only-related
		configuration parameters.
QMI_IMS_SETTINGS_SET_REG_MGR_	0x0044	Sets the IMS registration manager
EXTENDED_CONFIG		extended configuration parameters for
		the requesting control point.
QMI_IMS_SETTINGS_GET_REG_MGR_	0x0045	Retrieves the registration manager
EXTENDED_CONFIG		extended configuration parameters.
QMI_IMS_SETTINGS_REG_MGR_	0x0046	Indicates when the registration manager
EXTENDED_CONFIG_IND	0.1	extended configuration parameters
		change.
QMI_IMS_SETTINGS_SET_POL_MGR_	0x0047	Sets the IMS policy manager
CONFIG		configuration parameters for the
	3	requesting control point. (Deprecated)
QMI_IMS_SETTINGS_GET_POL_MGR_	0x0048	Retrieves the policy manager
CONFIG	18	configuration parameters.
QMI_IMS_SETTINGS_POL_MGR_CONFIG_	0x0049	Indicates when the policy manager
IND	Dr. Co.	configuration parameters change.
QMI_IMS_SETTINGS_SET_PRESENCE_EXT_	0x004A	Sets the IMS presence extended-related
CONFIG	3	configuration parameters for the
05 119		requesting control point.
QMI_IMS_SETTINGS_GET_PRESENCE_EXT_	0x004B	Retrieves the presence extended-related
CONFIG		configuration parameters.
QMI_IMS_SETTINGS_PRESENCE_EXT_	0x004C	Indicates when the presence
CONFIG_IND		extended-related configuration
		parameters change.
QMI_IMS_SETTINGS_SET_RCS_SM_	0x004D	Sets the IMS RCS standalone
CONFIG		messaging configuration parameters for
		the requesting control point.
QMI_IMS_SETTINGS_GET_RCS_SM_	0x004E	Retrieves the RCS standalone
CONFIG		messaging configuration parameters.
QMI_IMS_SETTINGS_RCS_SM_CONFIG_	0x004F	Indicates when the RCS standalone
IND		messaging configuration parameters
		change.
QMI_IMS_SETTINGS_SET_UT_CONFIG	0x0050	Sets the IMS Ut Interface configuration
		parameters for the requesting control
		point.
QMI_IMS_SETTINGS_GET_UT_CONFIG	0x0051	Retrieves the Ut Interface configuration
		parameters.
QMI_IMS_SETTINGS_UT_CONFIG_IND	0x0052	Indicates when the Ut Interface
		configuration parameters change.

Table 3-1 QMI\_IMSS messages (cont.)

Command	ID	Description	
QMI_IMS_SETTINGS_SET_CLIENT_	0x0053	Sets the IMS client provisioning	
PROVISIONING_CONFIG		configuration parameters for the	
		requesting control point.	
QMI_IMS_SETTINGS_GET_CLIENT_	0x0054	Retrieves the client provisioning	
PROVISIONING_CONFIG		configuration parameters.	
QMI_IMS_SETTINGS_CLIENT_	0x0055	Indicates when the client provisioning	
PROVISIONING_CONFIG_IND		configuration parameters change.	
QMI_IMS_SETTINGS_SET_APCS_	0x0056	Sets the APCS_COMPLETE status for	
COMPLETE_CONFIG		the requesting control point.	



## 3.1 QMI\_IMS\_SETTINGS\_GET\_SUPPORTED\_MSGS

Queries the set of messages implemented by the currently running software.

IMSS message ID

0x001E

Version introduced

Major - 1, Minor - 7

## 3.1.1 Request - QMI\_IMS\_SETTINGS\_GET\_SUPPORTED\_MSGS\_REQ

Message type

Request

Sender

Control point

**Mandatory TLVs** 

None

**Optional TLVs** 

None

# 3.1.2 Response - QMI\_IMS\_SETTINGS\_GET\_SUPPORTED\_MSGS\_RESP

Message type

Response

Sender

Service

#### **Mandatory TLVs**

The Result Code TLV (defined in Section 2.3.1) is always present in the response.

Name	Common version introduced	Common version last modified
Result Code	1.6	1.7

#### **Optional TLVs**

Name	Common version introduced	Common version last modified
List of Supported Messages	1.6	1.6

Field	Field	Field	Parameter	Size	Description
	value	type		(byte)	
Туре	0x10			1	List of Supported Messages
Length	Var			2	<u> </u>
Value	$\rightarrow$	uint16	supported_msgs_len	2	Number of sets of the following
					elements:
				- 0	• supported_msgs
		uint8	supported_msgs	Var	This array of uint8 is a bitmask where
					each bit represents a message ID, i.e.,
					starting with the LSB, bit 0 represents
					message ID 0, bit 1 represents message
					ID 1, etc.
				_	The bit is set to 1 if the message is
				160	supported; otherwise, it is set to zero.
				2	For example, if a service supports
			2	, , ,	exactly four messages with IDs 0, 1, 30,
			000	27	and 31 (decimal), the array (in
			7, 625		hexadecimal) is 4 bytes [03 00 00 c0].

#### **Error codes**

QMI_ERR_NONE	No error in the request
QMI_ERR_INTERNAL	Unexpected error occurred during processing
QMI_ERR_NO_MEMORY	Device could not allocate memory to formulate a response
QMI_ERR_INFO_UNAVAILABLE	Information is not available

# 3.1.3 Description of QMI\_IMS\_SETTINGS\_GET\_SUPPORTED\_MSGS REQ/RESP

This command queries the set of messages implemented by the currently running software. This may be a subset of the messages defined in this revision of the service.

#### QMI IMS SETTINGS GET SUPPORTED FIELDS 3.2

Queries the fields supported for a single command as implemented by the currently running software.

**IMSS** message ID

0x001F

**Version introduced** 

Major - 1, Minor - 7

#### Request - QMI\_IMS\_SETTINGS\_GET\_SUPPORTED\_FIELDS\_REQ 3.2.1

Message type

#### **Mandatory TLVs**

Request		7	
Sender		<b>O</b> ,	
Control point			
Mandatory TLVs		24.27 Pr. Inh	
	Name	Common version	Common version
	\$ 63	introduced	last modified
Service Message ID	6,49	1.6	1.6

Field	Field	Field	Parameter	Size	Description
	value	type	0	(byte)	
Туре	0x01			1	Service Message ID
Length	2			2	
Value	$\rightarrow$	uint16	msg_id	2	ID of the command for which the
					supported fields are requested.

#### **Optional TLVs**

None

#### Response - QMI\_IMS\_SETTINGS\_GET\_SUPPORTED\_FIELDS\_RESP 3.2.2

Message type

Response

#### Sender

Service

#### **Mandatory TLVs**

The Result Code TLV (defined in Section 2.3.1) is always present in the response.

Name	Common version introduced	Common version last modified
Result Code	1.6	1.7

Name	Common version	Common version
	introduced	last modified
List of Supported Request Fields	1.6	1.6
List of Supported Response Fields	1.6	1.6
List of Supported Indication Fields	1.6	1.6

Field	Field	Field	Parameter	Size	Description
	value	type	.2	(byte)	
Туре	0x10		00,	ē <sup>3</sup> 1	List of Supported Request Fields
Length	Var		2 000	2	
Value	$\rightarrow$	uint8	request_fields_len	1	Number of sets of the following
			16. 1ha.		elements:
			30, 20,		• request_fields
		uint8	request_fields	Var	This field describes which optional field
					IDs are supported in the QMI request.
					The array of uint8 is a bitmask where
					each bit represents a field (TLV) ID.
					Because fields 0 to 15 (decimal) are
					mandatory by definition, the first bit
					represents field ID 16. Starting with the
					LSB, bit 0 represents field ID 16, bit 1
					represents field ID 17, etc.
					The bit is set to 1 if the field ID is
					supported; otherwise, it is set to zero.
					For example, if a service supports
					exactly four fields with IDs 16, 17, 30,
					and 31 (decimal), the array (in
					hexadecimal) is 2 bytes [03 c0].
Туре	0x11			1	List of Supported Response Fields
Length	Var			2	
Value	$\rightarrow$	uint8	response_fields_len	1	Number of sets of the following
					elements:
					• response_fields

Field	Field	Field	Parameter	Size	Description
	value	type		(byte)	
		uint8	response_fields	Var	This field describes which optional field
					IDs are supported in the QMI response.
					Its format is the same as request_fields.
Туре	0x12			1	List of Supported Indication Fields
Length	Var			2	
Value	$\rightarrow$	uint8	indication_fields_len	1	Number of sets of the following
					elements:
					• indication_fields
		uint8	indication_fields	Var	This field describes which optional field
					IDs are supported in the QMI indication.
					Its format is the same as request_fields.

#### **Error codes**

QMI_ERR_NONE	No error in the request
QMI_ERR_INTERNAL	Unexpected error occurred during processing
QMI_ERR_NO_MEMORY	Device could not allocate memory to formulate a response
QMI_ERR_REQUESTED_NUM_	Requested message ID is not supported by the currently
UNSUPPORTED	running software
QMI_ERR_MALFORMED_MSG	Message was not formulated correctly by the control point
	or the message was corrupted during transmission
QMI_ERR_INFO_UNAVAILABLE	Information is not available

# 3.2.3 Description of QMI\_IMS\_SETTINGS\_GET\_SUPPORTED\_FIELDS REQ/RESP

This command queries the fields supported for a single command as implemented by the currently running software.

If the request, response, or indication is supported for the given message ID, the corresponding optional array is included in QMI\_IMS\_SETTINGS\_GET\_SUPPORTED\_FIELDS\_RESP, even if the message does not contain any optional fields. This enables the client to distinguish this case from one where the service does not support the request, response, or indication.

#### Examples are:

- If the specified message ID is not supported by the service, the response has qmi\_result = QMI\_RESULT\_FAILURE and qmi\_error = QMI\_ERR\_REQUESTED\_NUM\_UNSUPPORTED.
- If the specified message ID is an empty message, the response has qmi\_result =
   QMI\_RESULT\_SUCCESS and qmi\_error = QMI\_ERR\_NONE. None of the optional arrays are
   included.
- If the specified message ID supports the request with 0 optional fields, the response with 3 optional fields (16, 17, and 18 decimal), and does not support an indication, the response has the following:
  - qmi result = QMI RESULT SUCCESS
  - qmi\_error = QMI\_ERR\_NONE

- request\_fields array is included with length zero
- response\_fields array is included with length 1 value [07]
- indication\_fields array is not included

Trailing zero bytes are omitted from the response. For example, if the message defines 20 different fields but the response only contains 16 bits, the client is to assume the last four fields are not supported.



#### QMI IMS SETTINGS SET SIP CONFIG 3.3

Sets the IMS Session Initiation Protocol (SIP) configuration parameters for the requesting control point.

#### **IMSS** message ID

0x0020

#### **Version introduced**

Major - 1, Minor - 0

#### Request - QMI\_IMS\_SETTINGS\_SET\_SIP\_CONFIG\_REQ 3.3.1

Message type

Request								
Sender								
Control point	Control point							
Mandatory TLVs	N. N. M. IM							
None	1. 10.							
Optional TLVs	Version introduced							
Name	Version introduced	Version last modified						
SIP Port Number	1.0	1.0						
Timer SIP Registration	1.0	1.0						
Subscribe Timer	1.0	1.0						
Timer T1	1.0	1.0						
Timer T2	1.0	1.0						
Timer TF	1.0	1.0						
Sigcomp Status	1.0	1.0						
Timer TJ	1.4	1.10						
Timer TJ Extended	1.10	1.10						
Keep Alive Status	1.10	1.10						
NAT-RTO Timer Value	1.10	1.10						
SIP_TIMER_OPERATOR_MODE_A Timer	1.17	1.17						
Value								
SIP Timer B Value	1.20	1.20						
SIP GRUU Support Enable Flag	1.20	1.20						
SIP Transport Protocol Switch Support	1.20	1.20						
SIP Maximum TCP Transport Backoff Timer	1.20	1.20						
Value								
SIP GZIP Decoding Outbuffer Multiplier Value	1.20	1.20						
SIP Timer D Value	1.23	1.23						
SIP Timer T4	1.27	1.27						

Name	Version introduced	Version last modified
SIP Timer A	1.27	1.27
SIP Timer E	1.27	1.27
SIP Timer G	1.27	1.27
SIP Timer H	1.27	1.27
SIP Timer I	1.27	1.27
SIP Timer K	1.27	1.27

Field	Field	Field	Parameter	Size	Description
	value	type		(byte)	<b>(b)</b>
Туре	0x10			1	SIP Port Number
Length	2			2	
Value	$\rightarrow$	uint16	sip_local_port	2	Primary call session control function SIP
					port number.
Туре	0x11			1	Timer SIP Registration
Length	4			2	
Value	$\rightarrow$	uint32	timer_sip_reg	4	Initial SIP registration duration, in
				5	seconds, from the User Equipment (UE).
Туре	0x12			1 _<	Subscribe Timer
Length	4			2	A
Value	$\rightarrow$	uint32	subscribe_timer	4	Duration, in seconds, of the subscription
			.2	x. 'OU.	by the UE for IMS registration
			00.	E. J.	notifications.
Туре	0x13	4	V 045	1	Timer T1
Length	4	1	5 55	2	
Value	$\rightarrow$	uint32	timer_t1	4	RTT estimate, in milliseconds.
Туре	0x14		20, 40,	1	Timer T2
Length	4		752	2	
Value	$\rightarrow$	uint32	timer_t2	4	Maximum retransmit interval, in
					milliseconds, for non-invite requests and
					invite responses.
Туре	0x15			1	Timer TF
Length	4			2	
Value	$\rightarrow$	uint32	timer_tf	4	Non-invite transaction timeout timer, in
					milliseconds.
Туре	0x16			1	Sigcomp Status
Length	1			2	
Value	$\rightarrow$	boolean	sigcomp_enabled	1	Values:
					• TRUE – Enable
					• FALSE – Disable
Туре	0x17			1	Timer TJ
Length	2			2	
Value	$\rightarrow$	uint16	timer_tj	2	Wait time, in milliseconds, for the
					non-invite request retransmission. If the
					value exceeds the range of uint16, it is
					set to 0xFFFF.
Туре	0x18			1	Timer TJ Extended
Length	4			2	

Field	Field value	Field type	Parameter	Size (byte)	Description
Value	$\rightarrow$	uint32	timer_tj_ext	4	Wait time, in milliseconds, for the
					non-invite request retransmission.
Туре	0x19			1	Keep Alive Status
Length	1			2	
Value	$\rightarrow$	boolean	keepalive_enabled	1	Values: • TRUE – Enable
					• FALSE – Disable (default)
Туре	0x1A			1	NAT-RTO Timer Value
Length	4			2	
Value	$\rightarrow$	uint32	nat_rto_timer	4	Request timeout value, in milliseconds, used in NAT implementation. Default value is 500.
Туре	0x1B			1	SIP_TIMER_OPERATOR_MODE_A Timer Value
Length	4			2	
Value	$\rightarrow$	uint32	sip_timer_operator_ mode_a	4	SIP timer operator mode A, in seconds; valid range of values is 0 to 30. If this TLV is not included in the request, a value of 6 seconds is used.
Туре	0x1C			11	SIP Timer B Value
Length	4		.2	2	
Value	$\rightarrow$	uint32	timer_tb_value	4	SIP timer B's value, in milliseconds. If this TLV is not included in the request, a value of 0 is used.
Туре	0x1D		16 Mai	1	SIP GRUU Support Enable Flag
Length	1		30, 40,	2	
Value	$\rightarrow$	boolean	gruu_enabled	1	SIP Globally Routable User-Agent URI (GRUU) support enable flag. If this TLV is not included in the request, a value of FALSE is used.
Туре	0x1E			1	SIP Transport Protocol Switch Support
Length	1			2	
Value	$\rightarrow$	boolean	transport_switch_enabled	1	SIP transport protocol switching support enable flag per RFC 3261. If this TLV is not included in the request, a value of FALSE is used.
Туре	0x1F			1	SIP Maximum TCP Transport Backoff Timer Value
Length	4			2	
Value	$\rightarrow$	uint32	tcp_max_backoff_timer_ value	4	Maximum timeout, in milliseconds, for TCP transport of SIP packets after which SIP packets are sent via UDP. If this TLV is not included in the request, a value of 10000 (i.e., 10 seconds) is used.
Туре	0x20			1	SIP GZIP Decoding Outbuffer Multiplier Value
Length	1			2	

Field	Field	Field	Parameter	Size	Description
	value	type		(byte)	
Value	$\rightarrow$	uint8	gzip_decoding_outbuffer_	1	SIP GZIP decoding outbuffer multiplier,
			multiplier		the compression multiplier value. If this
					TLV is not included in the request, a
					value of 40 is used.
Туре	0x21			1	SIP Timer D Value
Length	4			2	
Value	$\rightarrow$	uint32	timer_td_value	4	SIP timer D's value, in milliseconds.
					Timer D is the wait time for response
					retransmits of the invite client
					transactions. If this TLV is not included
					in the request, a value of 130000 (i.e.,
					130 seconds) is used.
Туре	0x22			1	SIP Timer T4
Length	4			2	
Value	$\rightarrow$	uint32	timer_t4	4	SIP timer T4's value, in milliseconds.
					Timer T4 is the maximum duration that a
				5	SIP message can remain in the network.
Туре	0x23			1	SIP Timer A
Length	4			2	4
Value	$\rightarrow$	uint32	timer_ta_value	A.	SIP timer A's value, in milliseconds.
			- A	, (0)	Timer A is the INVITE request
			00,	5.4.	retransmit interval, for UDP only
Туре	0x24		7, 62	1	SIP Timer E
Length	4		05 110	2	
Value	$\rightarrow$	uint32	timer_te_value	4	SIP timer E's value, in milliseconds.
			20,000		Timer E is the value Non-INVITE
_	0.05		26		request retransmit interval, for UDP only.
Туре	0x25			1	SIP Timer G
Length	4	: .22	1	2	GID : GI I : III
Value	$\rightarrow$	uint32	timer_tg_value	4	SIP timer G's value, in milliseconds.
					Timer G is the value of INVITE
<b>T</b>	026			1	response retransmit interval.
Туре	0x26			1	SIP Timer H
Length	4		4:	2	CID 4:
Value	$\rightarrow$	uint32	timer_th_value	4	SIP timer H's value, in milliseconds.  Timer H is the value of wait time for
Time	0x27			1	ACK receipt. SIP Timer I
Type	4			2	SII TIIIICI I
Length		uint32	timor ti voluo	4	CID timer L'e velue in milliogrande
Value	$\rightarrow$	uiiit32	timer_ti_value	4	SIP timer I's value, in milliseconds.  Timer I is the value of wait time for ACK
					retransmits.
Type	0x28			1	SIP Timer K
Type Length	4			2	SH THICK
		uint32	timor the volue	4	SIP timer K's value, in milliseconds.
Value	$\rightarrow$	umtsz	timer_tk_value	4	Timer K is the value of wait time for
					response retransmits.

## 3.3.2 Response - QMI\_IMS\_SETTINGS\_SET\_SIP\_CONFIG\_RSP

#### Message type

Response

#### Sender

**Settings Service** 

#### **Mandatory TLVs**

The Result Code TLV (defined in Section 2.3.1) is always present in the response.

#### **Optional TLVs**

Name	Version introduced	Version last modified	
Settings Response	1.0	1.0	

Field	Field	Field	Parameter	Size	Description
	value	type		(byte)	4
Туре	0x10			11	Settings Response
Length	1		.2	2	
Value	$\rightarrow$	enum8	settings_resp	© <sup>3</sup> 1	Settings standard response type. A
			1 025		settings-specific error code is returned
			5 10		when the standard response error type is
			2016-05 thande		QMI_ERR_CAUSE_CODE.
			20,00		Values:
			200		• 0 – No error
					• 1 – Not ready
					• 2 – File not available
					• 3 – Message read failed
					• 4 – Message write failed
					• 5 – Other internal error

## 3.3.3 Description of QMI\_IMS\_SETTINGS\_SET\_SIP\_CONFIG REQ/RESP

The request message from the client sets the IMS SIP configuration parameters for the requesting control point. The response message indicates success or failure based on the outcome of the request message processing by the service. When the request message does not contain any configuration parameters, the service does no processing and returns QMI\_RESULT\_SUCCESS.

#### QMI IMS SETTINGS SET REG MGR CONFIG 3.4

Sets the IMS registration manager configuration parameters for the requesting control point.

**IMSS** message ID

0x0021

**Version introduced** 

Major - 1, Minor - 0

# Request - QMI\_IMS\_SETTINGS\_SET\_REG\_MGR\_CONFIG\_REQ

Message type

Request	W.							
Sender								
Control point								
Mandatory TLVs	24.27 ED in							
None	5,00							
Optional TLVs	£,							
Name	Version introduced	Version last modified						
Primary Call Session Control Function Port	1.0	1.0						
CSCF Port	1.0	1.0						
IMS Test Mode	1.0	1.0						

Field	Field	Field	Parameter	Size	Description
	value	type		(byte)	
Туре	0x10			1	Primary Call Session Control Function
					Port (CSCF)
Length	2			2	
Value	$\rightarrow$	uint16	regmgr_config_pcscf_port	2	Primary call session control function
					port.
Туре	0x11			1	CSCF Port
Length	Var			2	
Value	$\rightarrow$	string	regmgr_primary_cscf	Var	Call session control port, fully qualified
					domain name.
Туре	0x12			1	IMS Test Mode
Length	1			2	
Value	$\rightarrow$	boolean	ims_test_mode_enabled	1	Values:
					• TRUE – Enable, no IMS registration
					• FALSE – Disable, IMS registration is
					initiated

## 3.4.2 Response - QMI\_IMS\_SETTINGS\_SET\_REG\_MGR\_CONFIG\_RSP

#### Message type

Response

#### Sender

**Settings Service** 

#### **Mandatory TLVs**

The Result Code TLV (defined in Section 2.3.1) is always present in the response.

#### **Optional TLVs**

Name	Version introduced	Version last modified
Settings Standard Response Type	1.0	1.0

Field	Field	Field	Parame	eter	Size	Description
	value	type			(byte)	d.
Туре	0x10				11	Settings Standard Response Type
Length	1			, 1	2	
Value	$\rightarrow$	enum8	settings_resp	0,0,	≥ <sup>3</sup> 1	A settings-specific error code is returned
				2 035		when the standard response error type is
				05 708		QMI_ERR_CAUSE_CODE.

# 3.4.3 Description of QMI\_IMS\_SETTINGS\_SET\_REG\_MGR\_CONFIG REQ/RESP

The request message sets the IMS registration manager configuration parameters for the requesting control point. The response message indicates success or failure based on the outcome of the request message processing by the service. When the request message does not contain any configuration parameters, the service does no processing and returns QMI\_RESULT\_SUCCESS.

## 3.5 QMI\_IMS\_SETTINGS\_SET\_SMS\_CONFIG

Sets the IMS SMS configuration parameters for the requesting control point.

IMSS message ID

0x0022

**Version introduced** 

Major - 1, Minor - 0

# 3.5.1 Request - QMI\_IMS\_SETTINGS\_SET\_SMS\_CONFIG\_REQ

Message type

Request

Sender

Control point

**Mandatory TLVs** 

None

Name	Version introduced	Version last modified
SMS Format	1.0	1.0
SMS Over IP Network Indication Flag	1.0	1.0
Phone Context Universal Resource Identifier	1.0	1.0
SMS PSI String	1.27	1.27

Field	Field	Field	Parameter	Size	Description
	value	type		(byte)	
Туре	0x10			1	SMS Format
Length	1			2	
Value	$\rightarrow$	enum8	sms_format	1	Values:
					• IMS_SETTINGS_SMS_FORMAT_
					3GPP2(0) - 3GPP2
					• IMS_SETTINGS_SMS_FORMAT_
					3GPP (1) – 3GPP
Туре	0x11			1	SMS Over IP Network Indication Flag
Length	1			2	
Value	$\rightarrow$	boolean	sms_over_ip_network_	1	Values:
			indication		• TRUE – Turn on Mobile-Originated
					(MO) SMS
					• FALSE – Turn off MO SMS

Field	Field	Field	Parameter	Size	Description
	value	type		(byte)	
Туре	0x12			1	Phone Context Universal Resource
					Identifier
Length	Var			2	
Value	$\rightarrow$	string	phone_context_uri	Var	Phone context universal resource
					identifier.
Туре	0x13			1	SMS PSI String
Length	Var			2	
Value	$\rightarrow$	string	sms_psi	Var	SMS PSI string value.

### 3.5.2 Response - QMI\_IMS\_SETTINGS\_SET\_SMS\_CONFIG\_RSP

#### Message type

Response

#### Sender

**Settings Service** 

#### **Mandatory TLVs**

The Result Code TLV (defined in Section 2.3.1) is always present in the response.

#### **Optional TLVs**

Name	Version introduced	Version last modified
Settings Standard Response Type	1.0	1.0

Field	Field	Field	Parameter	Size	Description
	value	type		(byte)	
Туре	0x10			1	Settings Standard Response Type
Length	1			2	
Value	$\rightarrow$	enum8	settings_resp	1	A settings-specific error code is returned
					when the standard response error type is
					QMI_ERR_CAUSE_CODE.

# 3.5.3 Description of QMI\_IMS\_SETTINGS\_SET\_SMS\_CONFIG REQ/RESP

The request message from the client sets the IMS SMS configuration parameters for the requesting control point. The response message indicates success or failure based on the outcome of the request message processing by the service. When the request message does not contain any configuration parameters, the service does no processing and returns QMI\_RESULT\_SUCCESS.

#### QMI IMS SETTINGS SET USER CONFIG 3.6

Sets the IMS user configuration parameters for the requesting control point.

**IMSS** message ID

0x0023

**Version introduced** 

Major - 1, Minor - 0

# Request - QMI\_IMS\_SETTINGS\_SET\_USER\_CONFIG\_REQ

Message type

#### **Optional TLVs**

Request		N	
Sender		<b>O</b> ,	
Control point			
Mandatory TLVs		24.27 EUT.IN	
None	106	Tel. Co.	
Optional TLVs	05. Ang 05. Ang 05.	7	
	Name	Version introduced	Version last modified
IMS Domain Name	1 1 N 1 N 1 N 1 N 1 N 1 N 1 N 1 N 1 N 1	1.0	1.0

Field	Field	Field	Parameter	Size	Description
	value	type		(byte)	
Туре	0x10			1	IMS Domain Name
Length	Var			2	
Value	$\rightarrow$	string	ims_domain	Var	IMS domain name.

# Response - QMI\_IMS\_SETTINGS\_SET\_USER\_CONFIG\_RSP

Message type

Response

#### Sender

**Settings Service** 

#### **Mandatory TLVs**

The Result Code TLV (defined in Section 2.3.1) is always present in the response.

#### **Optional TLVs**

Name	Version introduced	Version last modified
Settings Standard Response Type	1.0	1.0

Field	Field	Field	Parameter	Size	Description
	value	type		(byte)	
Туре	0x10			1	Settings Standard Response Type
Length	1		A (	2	
Value	$\rightarrow$	enum8	settings_resp	1	A settings-specific error code is returned
				1	when the standard response error type is
				5	QMI_ERR_CAUSE_CODE.

# 3.6.3 Description of QMI\_IMS\_SETTINGS\_SET\_USER\_CONFIG REQ/RESP

The request message sets the IMS user configuration parameters for the requesting control point. The response message indicates success or failure based on the outcome of the request message processing by the service. When the request message does not contain any configuration parameters, the service does no processing and returns QMI\_RESULT\_SUCCESS.

#### 3.7 QMI IMS SETTINGS SET VOIP CONFIG

Sets the IMS Voice over Internet Protocol (VoIP) configuration parameters for the requesting control point.

#### **IMSS** message ID

0x0024

#### **Version introduced**

Major - 1, Minor - 1

#### Request - QMI\_IMS\_SETTINGS\_SET\_VOIP\_CONFIG\_REQ 3.7.1

Message type

wessage type					
Request					
Sender					
Control point					
Mandatory TLVs	127 Min				
None	1. 50.				
Optional TLVs	Vorsion introduced				
Name	Version introduced	Version last modified			
Session Duration	1.1	1.1			
Minimum Session Timer	1.1	1.1			
Enable AMR WB	1.1	1.1			
Enable SCR for AMR	1.1	1.1			
Enable SCR for AMR WB	1.1	1.1			
AMR NB Modes Allowed	1.1	1.1			
AMR WB Modes Allowed	1.1	1.1			
AMR Octet Aligned	1.1	1.1			
AMR WB Octet Aligned	1.1	1.1			
Ringing Timer	1.1	1.1			
Ringback Timer Duration	1.1	1.1			
RTP/RTCP Inactivity Timer Duration	1.1	1.1			
AMR NB Modes Allowed String	1.13	1.13			
AMR WB Modes Allowed String	1.13	1.13			
VoLTE to 1xRTT Silent Redial Flag	1.17	1.17			
VoIP Preferred RTP Payload Type	1.19	1.19			
VoIP Configuration Conference Factory URI	1.24	1.24			

Field	Field	Field	Parameter	Size	Description	
	value	type		(byte)		
Туре	0x10			1	Session Duration	
Length	2			2		
Value	$\rightarrow$	uint16	session_expiry_timer	2	Session duration, in seconds.	
Туре	0x11			1	Minimum Session Timer	
Length	2			2		
Value	$\rightarrow$	uint16	min_session_expiry	2	Minimum allowed value for session	
					timer, in seconds.	
Туре	0x12			1	Enable AMR WB	
Length	1			2	<u></u>	
Value	$\rightarrow$	boolean	amr_wb_enable	1	Flag to enable/disable Adaptive	
					Multirate codec (AMR) Wideband (WB)	
				- 0	audio.	
					Values:	
					• TRUE – Enable	
					• FALSE – Disable	
Туре	0x13			1	Enable SCR for AMR	
Length	1			2		
Value	$\rightarrow$	boolean	scr_amr_enable	1	Flag to enable/disable Source Controlled	
				187	Rate (SCR) for AMR narrowband (NB).	
				20	Values:	
			A	, , ,	• TRUE – Enable	
			000	073	• FALSE – Disable	
Туре	0x14		7, 92	1	Enable SCR for AMR WB	
Length	1		05 300	2		
Value	$\rightarrow$	boolean	scr_amr_wb_enable	1	Flag to enable/disable SCR for AMR	
			20,000		WB audio.	
			80		Values:	
					• TRUE – Enable	
_	0.15			1	• FALSE – Disable	
Туре	0x15			1	AMR NB Modes Allowed	
Length	1	i40	4.	2	Diamonda for AMD ND and Jan 11 and 1	
Value	$\rightarrow$	uint8	amr_mode	1	Bitmask for AMR NB modes allowed.	
					Values:	
					• $0x1 - 4.75$ kbps	
					• $0x2 - 5.15$ kbps	
					<ul> <li>0x4 – 5.9 kbps</li> <li>0x8 – 6.17 kbps</li> </ul>	
					• 0x8 - 6.17 kbps • 0x10 - 7.4 kbps	
					• $0x10 - 7.4 \text{ kbps}$ • $0x20 - 7.95 \text{ kbps}$	
					• $0x20 - 7.93$ kbps • $0x40 - 10.2$ kbps	
					• 0x40 – 10.2 kbps • 0x80 – 12.2 kbps	
Type	0x16			1	AMR WB Modes Allowed	
Type	2			2	AWIN WD WIGGES Allowed	
Length				<sup>2</sup>		

Field	Field	Field	Parameter	Size	Description
	value	type		(byte)	
Value	$\rightarrow$	uint16	amr_wb_mode	2	Bitmask for AMR WB modes allowed.
					Values:
					• 0x1 - 6.60 kbps
					• 0x2 - 8.85 kbps
					• 0x4 - 12.65 kbps
					• 0x8 - 14.25 kbps
					• 0x10 - 15.85 kbps
					• 0x20 - 18.25 kbps
					• 0x40 - 19.85 kbps
					• 0x80 - 23.05 kbps
					• 0x100 - 23.85 kbps
Туре	0x17			1 _	AMR Octet Aligned
Length	1			2	- Company of the Comp
Value	$\rightarrow$	boolean	amr_octet_align	1	Flag indicating whether the octet is
-					aligned for AMR NB audio.
			A (	30	Values:
					• TRUE – Aligned
				,	• FALSE – Not aligned, Bandwidth
				~0	Efficient mode
Туре	0x18			^1 ×	AMR WB Octet Aligned
Length	1			2	The state of the s
Value	$\rightarrow$	boolean	amr_wb_octet_align	1.4	Flag indicating if the octet is aligned for
14.45	,	ocorcan	um_we_octot_umgn	20.1	AMR WB audio.
			( ) ( ) ( ) ( )		Values:
		1	0, 300		• TRUE – Aligned
			16 11		• FALSE – Not aligned, Bandwidth
			amr_wb_octet_align		Efficient mode
Туре	0x19		80	1	Ringing Timer
Length	2			2	Kinging Timer
Value	$\xrightarrow{2}$	uint16	ringing_timer	2	Duration of the ringing timer, in seconds.
value	7	unitio	iniging_timei		The ringing timer starts on the ringing
					event. If the call is not answered within
					the duration of this timer, the call is
					disconnected.
Type	0x1A			1	
Type	2			2	Ringback Timer Duration
Length		nint14	ringhook timor	2	Duration of the singhaals times in
Value	$\rightarrow$	uint16	ringback_timer	2	Duration of the ringback timer, in
					seconds. The ringback timer starts on the
					ringback event. If the call is not
					answered within the duration of this
T	Or. 1 D			1	timer, the call is disconnected.
Type	0x1B			1	RTP/RTCP Inactivity Timer Duration
Length	2			2	D d Gd pmp mmm d
Value	$\rightarrow$	uint16	rtp_rtcp_inactivity_timer	2	Duration of the RTP/RTCP inactivity
					timer, in seconds. If no RTP/RTCP
					packet is received before the expiration
					of this timer, the call is disconnected.

Field	Field	Field	Parameter	Size	Description
	value	type		(byte)	
Туре	0x1C			1	AMR NB Modes Allowed String
Length	Var			2	
Value	$\rightarrow$	string	amr_mode_str	Var	String consisting of AMR NB modes allowed.
Туре	0x1D			1	AMR WB Modes Allowed String
Length	Var			2	
Value	$\rightarrow$	string	amr_wb_mode_str	Var	String consisting of AMR WB modes allowed.
Туре	0x1E			1	VoLTE to 1xRTT Silent Redial Flag
Length	1			2	
Value	$\leftarrow$	boolean	voip_silent_redial_enabled	1	Flag that allows a device to silently redial over 1xRTT. If this TLV is not included in the request, a value of TRUE (i.e., enabled) is used.
Туре	0x1F			1	VoIP Preferred RTP Payload Type
Length	2			2	
Value	$\rightarrow$	uint16	voip_preferred_rtp_ payload_type	2	Values for the VoIP preferred codec mode. Must be set only when G.711 support is required in addition to AMR and AMR-WB.  Refer to Real-Time Transport Protocol (RTP) Parameters for possible values.  If an unsupported codec value is set, CODEC MIME is the default audio codec and the G.711 codec is ignored.
Туре	0x20		202007	1	VoIP Configuration Conference Factory URI
Length	Var			2	
Value	$\rightarrow$	string	voip_config_confURI	Var	VoIP configuration conference factory URI.

# 3.7.2 Response - QMI\_IMS\_SETTINGS\_SET\_VOIP\_CONFIG\_RSP

Message type

Response

Sender

Settings Service

### **Mandatory TLVs**

The Result Code TLV (defined in Section 2.3.1) is always present in the response.

### **Optional TLVs**

Name	Version introduced	Version last modified
Settings Standard Response Type	1.1	1.1

Field	Field	Field	Parameter	Size	Description
	value	type		(byte)	
Туре	0x10			1	Settings Standard Response Type
Length	1			2	
Value	$\rightarrow$	enum8	settings_resp	1	A settings-specific error code is returned
					when the standard response error type is
					QMI_ERR_CAUSE_CODE.

# 3.7.3 Description of QMI\_IMS\_SETTINGS\_SET\_VOIP\_CONFIG REQ/RESP

The request message from the client sets the IMS VoIP configuration parameters for the requesting control point. The response message indicates success or failure based on the outcome of the request message processing by the service. When the request message does not contain any configuration parameters, the service does no processing and returns QMI\_RESULT\_SUCCESS.

## 3.8 QMI\_IMS\_SETTINGS\_GET\_SIP\_CONFIG

Retrieves the SIP configuration parameters.

IMSS message ID

0x0025

Version introduced

Major - 1, Minor - 0

# 3.8.1 Request - QMI\_IMS\_SETTINGS\_GET\_SIP\_CONFIG\_REQ

Message type

Request

Sender

Control point

**Mandatory TLVs** 

None

**Optional TLVs** 

None

# 3.8.2 Response - QMI\_IMS\_SETTINGS\_GET\_SIP\_CONFIG\_RSP

Message type

Response

Sender

Settings Service

## **Mandatory TLVs**

The Result Code TLV (defined in Section 2.3.1) is always present in the response.

Name	Version introduced	Version last modified
Settings Response	1.0	1.0
SIP Local Port	1.0	1.0
SIP Registration Timer	1.0	1.0
Subscribe Timer	1.0	1.0

Name	Version introduced	Version last modified
Timer T1	1.0	1.0
Timer T2	1.0	1.0
Timer TF	1.0	1.0
Sigcomp Status	1.0	1.0
Timer TJ	1.4	1.10
Timer TJ Extended	1.10	1.10
Keep Alive Status	1.10	1.10
NAT-RTO Timer Value	1.10	1.10
SIP_TIMER_OPERATOR_MODE_A Timer	1.17	1.17
Value		
SIP Timer B Value	1.20	1.20
SIP GRUU Support Enable Flag	1.20	1.20
SIP Transport Protocol Switch Support	1.20	1.20
SIP Maximum TCP Transport Backoff Timer	1.20	1.20
Value		
SIP GZIP Decoding Outbuffer Multiplier Value	1.20	1.20
SIP Timer D Value	1.23	1.23
SIP Timer T4	1.27	1.27
SIP Timer A	1.27	1.27
SIP Timer E	1.27	1.27
SIP Timer G	1.27	1.27
SIP Timer H	1.27	1.27
SIP Timer I	1.27	1.27
SIP Timer K	1.27	1.27

Field	Field	Field	Parameter	Size	Description
	value	type	96,	(byte)	
Туре	0x10			1	Settings Response
Length	1			2	
Value	$\rightarrow$	enum8	settings_resp	1	Settings response.
Туре	0x11			1	SIP Local Port
Length	2			2	
Value	$\rightarrow$	uint16	sip_local_port	2	Primary call session control function SIP
					port number.
Туре	0x12			1	SIP Registration Timer
Length	4			2	
Value	$\rightarrow$	uint32	timer_sip_reg	4	Initial SIP registration duration, in
					seconds, from the UE.
Туре	0x13			1	Subscribe Timer
Length	4			2	
Value	$\rightarrow$	uint32	subscribe_timer	4	Duration, in seconds, of the subscription
					by the UE for IMS registration
					notifications.
Туре	0x14			1	Timer T1
Length	4			2	
Value	$\rightarrow$	uint32	timer_t1	4	RTT estimate, in milliseconds.

Field	Field	Field	Parameter	Size	Description
	value	type		(byte)	
Туре	0x15			1	Timer T2
Length	4			2	
Value	$\rightarrow$	uint32	timer_t2	4	Maximum retransmit interval, in
					milliseconds, for non-invite requests and
					invite responses.
Туре	0x16			1	Timer TF
Length	4			2	
Value	$\rightarrow$	uint32	timer_tf	4	Non-invite transaction timeout timer, in
					milliseconds.
Туре	0x17			1	Sigcomp Status
Length	1			2	
Value	$\rightarrow$	boolean	sigcomp_enabled	1 (	Values:
					• TRUE – SigComp enabled
					• FALSE – SigComp disabled
Туре	0x18			1	Timer TJ
Length	2			2	
Value	$\rightarrow$	uint16	timer_tj	2	Wait time, in milliseconds, for the
				_	non-invite request retransmission. If the
				16/	value exceeds the range of uint16, it is
				2	set to 0xFFFF.
Туре	0x19		.2	, [D),	Timer TJ Extended
Length	4		000	2	
Value	$\rightarrow$	uint32	timer_tj_ext	4	Wait time, in milliseconds, for the
		1	05 40		non-invite request retransmission.
Туре	0x1A		16, Mg	1	Keep Alive Status
Length	1		30,00	2	
Value	$\rightarrow$	boolean	keepalive_enabled	1	Values:
					• TRUE – Enable
					• FALSE – Disable
Туре	0x1B			1	NAT-RTO Timer Value
Length	4			2	
Value	$\rightarrow$	uint32	nat_rto_timer	4	Requests timeout value, in milliseconds,
					used in NAT implementation.
Туре	0x1C			1	SIP_TIMER_OPERATOR_MODE_A
					Timer Value
Length	4			2	
Value	$\rightarrow$	uint32	sip_timer_operator_	4	SIP timer operator mode A, in seconds;
			mode_a		valid range of values is 0 to 30. If this
					TLV is not included in the request, a
					value of 6 seconds is used.
Туре	0x1D			1	SIP Timer B Value
Length	4			2	
Value	$\rightarrow$	uint32	timer_tb_value	4	SIP timer B's value, in milliseconds. If
					this TLV is not included in the request, a
					value of 0 is used.
Туре	0x1E			1	SIP GRUU Support Enable Flag
Length	1			2	

Field	Field	Field	Parameter	Size	Description
	value	type		(byte)	
Value	$\rightarrow$	boolean	gruu_enabled	1	SIP GRUU support enable flag. If this
					TLV is not included in the request, a
					value of FALSE is used.
Туре	0x1F			1	SIP Transport Protocol Switch Support
Length	1			2	
Value	$\rightarrow$	boolean	transport_switch_enabled	1	SIP transport protocol switching support
					enable flag per RFC 3261. If this TLV is
					not included in the request, a value of
					FALSE is used.
Туре	0x20			1	SIP Maximum TCP Transport Backoff
					Timer Value
Length	4			2	
Value	$\rightarrow$	uint32	tcp_max_backoff_timer_	4	Maximum timeout, in milliseconds, for
			value		TCP transport of SIP packets after which
					SIP packets are sent via UDP. If this TLV
					is not included in the request, a value of
				1	10000 (i.e., 10 seconds) is used.
Туре	0x21			1 <	SIP GZIP Decoding Outbuffer Multiplier
				~ &\	Value
Length	1			2	
Value	$\rightarrow$	uint8	gzip_decoding_outbuffer_	x. 10//	SIP GZIP decoding outbuffer multiplier,
			multiplier	54.	the compression multiplier value. If this
			7, 625	1	TLV is not included in the request, a
			65, 40		value of 40 is used.
Туре	0x22		16, 11, 10.	1	SIP Timer D Value
Length	4		20,00	2	
Value	$\rightarrow$	uint32	timer_td_value	4	SIP timer D's value, in milliseconds.
					Timer D is the wait time for response
					retransmits of the invite client
_	0.00				transactions.
Туре	0x23			1	SIP Timer T4
Length	4	22		2	CID ( TIM 1 : 111 )
Value	$\rightarrow$	uint32	timer_t4	4	SIP timer T4's value, in milliseconds.
					Timer T4 is the maximum duration that a
_	0.24			1	SIP message can remain in the network.
Type	0x24			1	SIP Timer A
Length	4	-: 400	4	2	CID d'acces Al cer 1
Value	$\rightarrow$	uint32	timer_ta_value	4	SIP timer A's value, in milliseconds.
					Timer A is the INVITE request
T	0::25			1	retransmit interval, for UDP only
Type	0x25			1	SIP Timer E
Length	4	i420	4:	2	CID times E's males 's mailline and
Value	$\rightarrow$	uint32	timer_te_value	4	SIP timer E's value, in milliseconds.
					Timer E is the value Non-INVITE
<b>-</b> .	0-26			1	request retransmit interval, for UDP only.
Туре	0x26			1	SIP Timer G
Length	4			2	

Field	Field	Field	Parameter	Size	Description
	value	type		(byte)	
Value	$\rightarrow$	uint32	timer_tg_value	4	SIP timer G's value, in milliseconds.
					Timer G is the value of INVITE
					response retransmit interval.
Туре	0x27			1	SIP Timer H
Length	4			2	
Value	$\rightarrow$	uint32	timer_th_value	4	SIP timer H's value, in milliseconds.
					Timer H is the value of wait time for
					ACK receipt.
Туре	0x28			1	SIP Timer I
Length	4			2	
Value	$\rightarrow$	uint32	timer_ti_value	4	SIP timer I's value, in milliseconds.
					Timer I is the value of wait time for ACK
					retransmits.
Туре	0x29			1	SIP Timer K
Length	4			2	
Value	$\rightarrow$	uint32	timer_tk_value	4	SIP timer K's value, in milliseconds.
				1	Timer K is the value of wait time for
					response retransmits.

# 3.8.3 Description of QMI\_IMS\_SETTINGS\_GET\_SIP\_CONFIG REQ/RESP

The request message from the client gets the SIP configuration parameters from the requesting control point. The response message indicates success or failure based on the outcome of the request message processing by the service. The response message returns the SIP configuration parameters to the control point.

## 3.9 QMI\_IMS\_SETTINGS\_GET\_REG\_MGR\_CONFIG

Retrieves the registration manager configuration parameters.

IMSS message ID

0x0026

**Version introduced** 

Major - 1, Minor - 0

## 3.9.1 Request - QMI\_IMS\_SETTINGS\_GET\_REG\_MGR\_CONFIG\_REQ

Message type

Request

Sender

Control point

**Mandatory TLVs** 

None

**Optional TLVs** 

None

# 3.9.2 Response - QMI\_IMS\_SETTINGS\_GET\_REG\_MGR\_CONFIG\_RSP

Message type

Response

Sender

**Settings Service** 

## **Mandatory TLVs**

The Result Code TLV (defined in Section 2.3.1) is always present in the response.

Name	Version introduced	Version last modified
Result Code	1.0	1.0

## **Optional TLVs**

Name	Version introduced	Version last modified
Settings Standard Response Type	1.0	1.0
Proxy Call Session Control Function Port	1.0	1.0
Primary CSCF Port	1.0	1.0
IMS Test Mode	1.0	1.0

Field	Field	Field	Parameter	Size	Description
	value	type		(byte)	<b>(b)</b>
Туре	0x10			1	Settings Standard Response Type
Length	1			2	
Value	$\rightarrow$	enum8	settings_resp	1 @	A settings-specific error code is returned
					when the standard response error type is
					QMI_ERR_CAUSE_CODE.
Туре	0x11			1	Proxy Call Session Control Function
					Port
Length	2			2	
Value	$\rightarrow$	uint16	regmgr_config_pcscf_port	2 <	Proxy CSCF port.
Туре	0x12			10	Primary CSCF Port
Length	Var			. 2	
Value	$\rightarrow$	string	regmgr_primary_cscf	Var	Primary CSCF port, fully qualified
			00,	5. J.	domain name.
Туре	0x13		2 000	1	IMS Test Mode
Length	1		05 40	2	
Value	$\rightarrow$	boolean	ims_test_mode	1	Values:
			ims_test_mode		• TRUE – Enabled
			900		• FALSE – Disabled

# 3.9.3 Description of QMI\_IMS\_SETTINGS\_GET\_REG\_MGR\_CONFIG REQ/RESP

The request message gets the registration manager configuration parameters from the requesting control point. The response message indicates success or failure based on the outcome of the request message processing by the service. The response message returns the registration manager configuration parameters to the control point.

## 3.10 QMI\_IMS\_SETTINGS\_GET\_SMS\_CONFIG

Retrieves the SMS configuration parameters.

IMSS message ID

0x0027

**Version introduced** 

Major - 1, Minor - 0

## 3.10.1 Request - QMI\_IMS\_SETTINGS\_GET\_SMS\_CONFIG\_REQ

Message type

Request

Sender

Control point

**Mandatory TLVs** 

None

**Optional TLVs** 

None

# 3.10.2 Response - QMI\_IMS\_SETTINGS\_GET\_SMS\_CONFIG\_RSP

Message type

Response

Sender

**Settings Service** 

**Mandatory TLVs** 

The Result Code TLV (defined in Section 2.3.1) is always present in the response.

Name	Version introduced	Version last modified
Settings Response	1.0	1.0
SMS Format	1.0	1.0
SMS Over IP Network Indication Flag	1.0	1.0
Phone Context Universal Resource Identifier	1.0	1.0
SMS PSI String	1.27	1.27

Field	Field	Field	Parameter	Size	Description
	value	type		(byte)	
Туре	0x10			1	Settings Response
Length	1			2	
Value	$\rightarrow$	enum8	settings_resp	1	Settings response.
Туре	0x11			1	SMS Format
Length	1			2	
Value	$\rightarrow$	enum8	sms_format	1	Values:
					• IMS_SETTINGS_SMS_FORMAT_
					3GPP2 (0) – 3GPP2
					• IMS_SETTINGS_SMS_FORMAT_
					3GPP(1) - 3GPP
Туре	0x12			1	SMS Over IP Network Indication Flag
Length	1			2	
Value	$\rightarrow$	boolean	sms_over_ip_network_	1	Values:
			indication		• TRUE – MO SMS turned on
					• FALSE – MO SMS turned off
Туре	0x13			1	Phone Context Universal Resource
				3	Identifier
Length	Var			2 <	
Value	$\rightarrow$	string	phone_context_uri	Var	Phone context universal resource
				2	identifier.
Туре	0x14		.2	, To,	SMS PSI String
Length	Var		00,	2	
Value	$\rightarrow$	string	sms_psi	Var	SMS PSI string value.

# 3.10.3 Description of QMI\_IMS\_SETTINGS\_GET\_SMS\_CONFIG REQ/RESP

The request message retrieves the SMS configuration parameters from the requesting control point. The response message indicates success or failure based on the outcome of the request message processing by the service. The response message returns the SMS configuration parameters to the control point.

## 3.11 QMI\_IMS\_SETTINGS\_GET\_USER\_CONFIG

Retrieves the user configuration parameters.

IMSS message ID

0x0028

Version introduced

Major - 1, Minor - 0

## 3.11.1 Request - QMI\_IMS\_SETTINGS\_GET\_USER\_CONFIG\_REQ

Message type

Request

Sender

Control point

**Mandatory TLVs** 

None

**Optional TLVs** 

None

# 3.11.2 Response - QMI\_IMS\_SETTINGS\_GET\_USER\_CONFIG\_RSP

Message type

Response

Sender

Settings Service

**Mandatory TLVs** 

The Result Code TLV (defined in Section 2.3.1) is always present in the response.

Name	Version introduced	Version last modified	
Settings Response	1.0	1.0	
IMS Domain Name	1.0	1.0	

Field	Field	Field	Parameter	Size	Description
	value	type		(byte)	
Туре	0x10			1	Settings Response
Length	1			2	
Value	$\rightarrow$	enum8	settings_resp	1	Settings response.
Туре	0x11			1	IMS Domain Name
Length	Var			2	
Value	$\rightarrow$	string	ims_domain	Var	IMS domain name.

# 3.11.3 Description of QMI\_IMS\_SETTINGS\_GET\_USER\_CONFIG REQ/RESP

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The request message retrieves the user configuration parameters from the control point. The response message indicates success or failure based on the outcome of the request message processing by the service. The response message returns the user configuration parameters to the control point.

## 3.12 QMI\_IMS\_SETTINGS\_GET\_VOIP\_CONFIG

Retrieves the VoIP configuration parameters.

IMSS message ID

0x0029

Version introduced

Major - 1, Minor - 1

## 3.12.1 Request - QMI\_IMS\_SETTINGS\_GET\_VOIP\_CONFIG\_REQ

Message type

Request

Sender

Control point

**Mandatory TLVs** 

None

**Optional TLVs** 

None

# 3.12.2 Response - QMI\_IMS\_SETTINGS\_GET\_VOIP\_CONFIG\_RSP

Message type

Response

Sender

Settings Service

## **Mandatory TLVs**

The Result Code TLV (defined in Section 2.3.1) is always present in the response.

Name	Version introduced	Version last modified
Settings Standard Response Type	1.1	1.1
Session Duration	1.1	1.1
Minimum Session Timer	1.1	1.1
Enable AMR WB	1.1	1.1

Name	Version introduced	Version last modified
Enable SCR AMR	1.1	1.1
Enable SCR AMR WB	1.1	1.1
AMR NB Mode	1.1	1.1
AMR WB Mode	1.1	1.1
AMR NB Octet Aligned	1.1	1.1
AMR WB Octet Aligned	1.1	1.1
Ringing Timer Duration	1.1	1.1
Ringback Timer Duration	1.1	1.1
RTP/RTCP Inactivity Timer Duration	1.1	1.1
VoLTE to 1xRTT Silent Redial Flag	1.17	1.17
VoIP Preferred RTP Payload Type	1.19	1.19
VoIP Configuration Conference Factory URI	1.24	1.24

Field	Field	Field	Parameter	Size	Description
	value	type		(byte)	
Туре	0x10			1	Settings Standard Response Type
Length	1			2	
Value	$\rightarrow$	enum8	settings_resp	1 <	A settings-specific error code is returned
				160	when the standard response error type is
				2 3	QMI_ERR_CAUSE_CODE.
Туре	0x11		.2	x. Tr.,	Session Duration
Length	2		00,	2	
Value	$\rightarrow$	uint16	session_expiry_timer	2	Session duration, in seconds.
Туре	0x12		5 70	1	Minimum Session Timer
Length	2		16' Than	2	
Value	$\rightarrow$	uint16	min_session_expiry	2	Minimum allowed value, in seconds, for session timer.
Туре	0x13			1	Enable AMR WB
Length	1			2	
Value	$\rightarrow$	boolean	amr_wb_enable	1	Flag indicating AMR WB audio.
					Values:
					• TRUE – Enabled
					• FALSE – Disabled
Туре	0x14			1	Enable SCR AMR
Length	1			2	
Value	$\rightarrow$	boolean	scr_amr_enable	1	Flag indicating SCR for AMR NB audio.
					Values:
					• TRUE – Enabled
					• FALSE – Disabled
Туре	0x15			1	Enable SCR AMR WB
Length	1			2	
Value	$\rightarrow$	boolean	scr_amr_wb_enable	1	Flag indicating SCR for AMR WB
					audio.
					Values:
					• TRUE – Enabled
					• FALSE – Disabled

Field	Field	Field	Parameter	Size	Description
	value	type		(byte)	
Туре	0x16			1	AMR NB Mode
Length	1			2	
Value	$\rightarrow$	uint8	amr_mode	1	Bitmask indicating AMR NB modes.
					Values:
					• 0x1 – 4.75 kbps
					• 0x2 – 5.15 kbps
					• 0x4 – 5.9 kbps
					• 0x8 – 6.17 kbps
					• $0x10 - 7.4$ kbps
					• 0x20 – 7.95 kbps
					• 0x40 – 10.2 kbps
					• 0x80 – 12.2 kbps
Туре	0x17			1	AMR WB Mode
Length	2			2	
Value	$\rightarrow$	uint16	amr_wb_mode	2	Bitmask indicating AMR WB modes.
					Values:
					• $0x1 - 6.60$ kbps
				_	• 0x2 – 8.85 kbps
				. 60	• 0x4 – 12.65 kbps
				2	• 0x8 – 14.25 kbps
				x. 'OL.	• 0x10 – 15.85 kbps
			06.	E. J.	• 0x20 – 18.25 kbps
			V1 025		• 0x40 – 19.85 kbps
			5 ,08		• 0x80 – 23.05 kbps
			61 10		• 0x100 – 23.85 kbps
Туре	0x18		20,00	1	AMR NB Octet Aligned
Length	1		200	2	
Value	$\rightarrow$	boolean	amr_octet_align	1	Flag indicating whether the octet is
					aligned for AMR NB audio.
					Values:
					• TRUE – Octet aligned
					• FALSE – Octet not aligned, Bandwidth
					Efficient Mode
Туре	0x19			1	AMR WB Octet Aligned
Length	1			2	
Value	$\rightarrow$	boolean	amr_wb_octet_align	1	Flag indicating whether the octet is
					aligned for AMR WB audio.
					Values:
					• TRUE – Octet aligned
					• FALSE – Octet not aligned, Bandwidth
					Efficient Mode
Туре	0x1A			1	Ringing Timer Duration
Length	2			2	

Field	Field	Field	Parameter	Size	Description
	value	type		(byte)	
Value	$\rightarrow$	uint16	ringing_timer	2	Duration, in seconds, of the ringing
					timer. The ringing timer is started on the
					ringing event. If the call is not answered
					within the duration of this timer, the call
					is disconnected.
Туре	0x1B			1	Ringback Timer Duration
Length	2			2	
Value	$\rightarrow$	uint16	ringback_timer	2	Duration, in seconds, of the ringback
					timer. The ringback timer is started on
					the ringback event. If the call is not
					answered within the duration of this
					timer, the call is disconnected.
Туре	0x1C			1	RTP/RTCP Inactivity Timer Duration
Length	2			2	
Value	$\rightarrow$	uint16	rtp_rtcp_inactivity_timer	2	Duration, in seconds, of the RTP/RTCP
				3	inactivity timer. If no RTP/RTCP packet
					is received before the expiration of this
					timer, the call is disconnected.
Туре	0x1D			100	VoLTE to 1xRTT Silent Redial Flag
Length	1			2	
Value	$\rightarrow$	boolean	voip_silent_redial_enabled	x. 100	Flag that allows a device to silently
			00.	E.J.	redial over 1xRTT. If this TLV is not
		1	V 200		included in the request, a value of TRUE
			5 20		(i.e., enabled) is used.
Туре	0x1E		6, 113	1	VoIP Preferred RTP Payload Type
Length	2		30,000	2	
Value	$\rightarrow$	uint16	voip_preferred_rtp_	2	Values for the VoIP preferred codec
			payload_type		mode. Must be set only when G.711
					support is required in addition to AMR
					and AMR-WB.
					Refer to Real-TimeTransport Protocol
					(RTP) Parameters for possible values.
					If an unsupported codec value is set,
					CODEC MIME is used as the default
					audio codec and the G.711 codec is
					ignored.
Туре	0x1F			1	VoIP Configuration Conference Factory
					URI
Length	Var			2	
Value	$\rightarrow$	string	voip_config_confURI	Var	VoIP configuration conference factory
		-			URI.

# 3.12.3 Description of QMI\_IMS\_SETTINGS\_GET\_VOIP\_CONFIG REQ/RESP

The request message retrieves the VoIP configuration parameters from the requesting control point. The response message indicates success or failure based on the outcome of the request message processing by the service. The response message returns the VoIP configuration parameters to the control point.



#### 3.13 QMI IMS SETTINGS CONFIG IND REG

Sets the registration state for various settings service indications for the requesting control points.

## **IMSS** message ID

0x002A

#### **Version introduced**

Major - 1, Minor - 0

#### Request - QMI\_IMS\_SETTINGS\_CONFIG\_IND\_REG\_REQ 3.13.1

Message type

message type									
Request									
Sender									
Control point									
Mandatory TLVs	127 M. M								
None									
Optional TLVs	24.27 EDT. W								
Name	Version introduced	Version last modified							
SIP Configuration	1.0	1.0							
Registration Manager Configuration	1.0	1.0							
SMS Configuration	1.0	1.0							
User Configuration	1.0	1.0							
VoIP Configuration	1.0	1.0							
Presence Configuration	1.2	1.2							
Media Configuration	1.3	1.3							
QIPCall Configuration	1.7	1.7							
SIP Read-only Configuration	1.7	1.7							
Network Read-only Configuration	1.7	1.7							
Registration Manager Extended Configuration	1.13	1.13							
Policy Manager Configuration	1.14	1.14							
Presence Extended Configuration	1.16	1.16							
RCS Standalone Messaging Configuration	1.16	1.16							
Ut Interface Configuration	1.18	1.18							
Client Provisioning Configuration	1.22	1.22							

Field	Field	Field	Parameter	Size	Description
	value	type		(byte)	
Туре	0x10			1	SIP Configuration

Field	Field	Field	Parameter	Size	Description	
	value	type		(byte)		
Length	1			2		
Value	$\rightarrow$	boolean	sip_config	1	Values:	
					• $0x00$ – Disable	
					• 0x01 – Enable	
Туре	0x11			1	Registration Manager Configuration	
Length	1			2		
Value	$\rightarrow$	boolean	reg_mgr_config	1	Values:	
					• $0x00$ – Disable	
					• 0x01 – Enable	
Туре	0x12			1	SMS Configuration	
Length	1			2		
Value	$\rightarrow$	boolean	sms_config	1 👛	Values:	
			_ 2		• 0x00 – Disable	
					• 0x01 – Enable	
Туре	0x13			1	User Configuration	
Length	1			2		
Value	$\rightarrow$	boolean	user_config	1	Values:	
				_	• 0x00 – Disable	
				00	• $0x01$ – Enable	
Туре	0x14			21.3	VoIP Configuration	
Length	1		2	2	<i>g.</i>	
Value	$\rightarrow$	boolean	voip_config	e <sup>3</sup> 1	Values:	
			1 25	_	• $0x00$ – Disable	
			5,00		• $0x01$ – Enable	
Туре	0x15		6' 11'311'	1	Presence Configuration	
Length	1		00,-00	2		
Value	$\rightarrow$	boolean	presence_config	1	Values:	
					• 0x00 – Disable	
					• 0x01 – Enable	
Туре	0x16			1	Media Configuration	
Length	1			2		
Value	$\rightarrow$	boolean	media_config	1	Values:	
			_ 0		• $0x00$ – Disable	
					• $0x01$ – Enable	
Туре	0x17			1	QIPCall Configuration	
Length	1			2	-	
Value	$\rightarrow$	boolean	qipcall_config	1	Values:	
					• $0x00$ – Disable	
					• $0x01$ – Enable	
Туре	0x18			1	SIP Read-only Configuration	
Length	1			2	, , ,	
Value	$\rightarrow$	boolean	sip_read_only_config	1	Values:	
	•		1 7 - 7		• $0x00$ – Disable	
					• $0x01$ – Enable	
				1	Network Read-only Configuration	
Туре	0x19			1	Network Read-Only Configuration	

Field	Field	Field	Parameter	Size	Description
	value	type		(byte)	
Value	$\rightarrow$	boolean	network_read_only_config	1	Values:
					• $0x00$ – Disable
					• 0x01 – Enable
Type 0x12				1	Registration Manager Extended
					Configuration
Length	1			2	
Value	$\rightarrow$	boolean	reg_mgr_extended_config	1	Values:
					• $0x00$ – Disable
					• 0x01 – Enable
Туре	0x1B			1	Policy Manager Configuration
Length	1			2	
Value	$\rightarrow$	boolean	pol_mgr_config	1 💣	Values:
					• $0x00$ – Disable
					• 0x01 – Enable
Туре	0x1C			1	Presence Extended Configuration
Length	1			2	
Value	$\rightarrow$	boolean	presence_ext_config	1	Values:
				_	• $0x00$ – Disable
				~ 60	• 0x01 – Enable
Туре	0x1D			210	RCS Standalone Messaging
			.2	X. COLL	Configuration
Length	1		00,	2	
Value	$\rightarrow$	boolean	rcs_sm_config	1	Values:
		1	05 10		• $0x00$ – Disable
			16' Mai		• 0x01 – Enable
Туре	0x1E		30, 20,	1	Ut Interface Configuration
Length	1		90	2	
Value	$\rightarrow$	boolean	ut_config	1	Values:
					• 0x00 – Disable
					• 0x01 – Enable
Туре	0x1F			1	Client Provisioning Configuration
Length	1			2	
Value	$\rightarrow$	boolean	client_provisioning_config	1	Values:
					• 0x00 – Disable
					• 0x01 – Enable

# 3.13.2 Response - QMI\_IMS\_SETTINGS\_CONFIG\_IND\_REG\_RSP

## Message type

Response

#### Sender

**Settings Service** 

### **Mandatory TLVs**

The Result Code TLV (defined in Section 2.3.1) is always present in the response.

### **Optional TLVs**

None

#### **Error codes**

QMI_ERR_NONE	No error in the request
QMI_ERR_INTERNAL	Unexpected error occurred during processing
QMI_ERR_MALFORMED_MSG	Message was not formulated correctly by the control point
	or the message was corrupted during transmission
QMI_ERR_NO_MEMORY	Device could not allocate memory to formulate a response

# 3.13.3 Description of QMI\_IMS\_SETTINGS\_CONFIG\_IND\_REG REQ/RESP

This command is used by a control point to register for/deregister from various settings service indications. The control point's registration state variables control registration for indications, and are modified to reflect the settings indicated in the TLVs present in the request message.

By default, the service disables all the indications and the control point must send the IMS\_CONFIG\_IND\_REG\_REQ\_MSG message to register for the indications it is interested in.

The sip\_config field must be set to enable to register a control point for the SIP configuration indication, and disable to deregister. When this registration is enabled, the control point learns of SIP configuration updates via the QMI\_IMS\_SETTINGS\_SIP\_CONFIG\_IND indication.

The reg\_mgr\_config field must be set to enable to register a control point for the registration manager configuration indication and disable to deregister. When this registration is enabled, the control point learns of registration manager configuration updates via the QMI\_IMS\_SETTINGS\_REG\_MGR\_CONFIG\_IND indication.

The sms\_config field must be set to enable to register a control point for the SMS configuration indication, and disable to deregister. When this registration is enabled, the control point learns of SMS configuration updates via the QMI\_IMS\_SETTINGS\_SMS\_CONFIG\_IND indication.

The user\_config field must be set to enable to register a control point for the user configuration indication and disable to deregister. When this registration is enabled, the control point learns of user configuration updates via the QMI\_IMS\_SETTINGS\_USER\_CONFIG\_IND indication.

The voip\_config field must be set to enable to register a control point for the VoIP configuration indication, and disable to deregister. When this registration is enabled, the control point learns of VoIP configuration updates via the QMI\_IMS\_SETTINGS\_VOIP\_CONFIG\_IND indication.

The presence\_config field must be set to enable to register a control point for the presence configuration indication and disable to deregister. When this registration is enabled, the control point learns of presence configuration updates via the QMI\_IMS\_SETTINGS\_PRESENCE\_CONFIG\_IND indication.

The media\_config field must be set to enable to register a control point for the media configuration indication and disable to deregister. When this registration is enabled, the control point learns of media configuration updates via the QMI\_IMS\_SETTINGS\_MEDIA\_CONFIG\_IND indication.

The qipcall\_config field must be set to enable to register a control point for the QIPCall configuration indication and disable to deregister. When this registration is enabled, the control point learns of QIPCall configuration updates via the QMI\_IMS\_SETTINGS\_QIPCALL\_CONFIG\_IND indication.

The sip\_read\_only\_config field must be set to enable to register a control point for the SIP read-only configuration indication and disable to deregister. When this registration is enabled, the control point learns of SIP read-only configuration updates via the QMI\_IMS\_SETTINGS\_SIP\_READ\_ONLY\_CONFIG\_IND indication.

The network\_read\_only\_config field must be set to enable to register a control point for the network read-only configuration indication and disable to deregister. When this registration is enabled, the control point learns of network read-only configuration updates via the

QMI\_IMS\_SETTINGS\_NETWORK\_READ\_ONLY\_CONFIG\_IND indication.

The reg\_mgr\_extended\_config field must be set to enable to register a control point for the registration manager extended configuration indication and disable to deregister. When this registration is enabled, the control point learns of registration manager extended configuration updates via the QMI\_IMS\_SETTINGS\_REG\_MGR\_EXTENDED\_CONFIG\_IND indication.

The pol\_mgr\_config field must be set to enable to register a control point for the policy manager configuration indication and disable to deregister. When this registration is enabled, the control point learns of policy manager configuration updates via the QMI\_IMS\_SETTINGS\_POL\_MGR\_CONFIG\_IND indication.

The presence\_ext\_config field must be set to enable to register a control point for the presence extended configuration indication and disable to deregister. When this registration is enabled, the control point learns of presence extended configuration updates via the

QMI\_IMS\_SETTINGS\_PRESENCE\_EXT\_CONFIG\_IND indication.

The rcs\_sm\_config field must be set to enable to register a control point for the RCS standalone messaging configuration indication and disable to deregister. When this registration is enabled, the control point learns of RCS standalone messaging configuration updates via the QMI IMS SETTINGS RCS SM CONFIG IND indication.

The ut\_config field must be set to enable to register a control point for the Ut Interface configuration indication and disable to deregister. When this registration is enabled, the control point learns of Ut Interface configuration updates via the QMI\_IMS\_SETTINGS\_UT\_CONFIG\_IND indication.

The client\_provisioning\_config field must be set to enable to register a control point for the client provisioning configuration indication and disable to deregister. When this registration is enabled, the control point learns of client provisioning configuration updates via the QMI\_IMS\_SETTINGS\_CLIENT\_PROVISIONING\_CONFIG\_IND indication.

## 3.14 QMI\_IMS\_SETTINGS\_SIP\_CONFIG\_IND

Indicates when the SIP configuration parameters change.

**IMSS** message ID

0x002B

**Version introduced** 

Major - 1, Minor - 0

# 3.14.1 Indication - QMI\_IMS\_SETTINGS\_SIP\_CONFIG\_IND

Message type

Indication

Sender

**Settings Service** 

Scope

Per control point (unicast)

**Mandatory TLVs** 

None

Name	Version introduced	Version last modified
SIP Port Number	1.0	1.0
SIP Registration Timer	1.0	1.0
Subscribe Timer	1.0	1.0
Timer T1	1.0	1.0
Timer T2	1.0	1.0
Timer TF	1.0	1.0
Sigcomp Status	1.0	1.0
Timer TJ	1.4	1.10
Timer TJ Extended	1.10	1.10
Keep Alive Status	1.10	1.10
NAT-RTO Timer Value	1.10	1.10
SIP_TIMER_OPERATOR_MODE_A Timer	1.17	1.17
Value		
SIP Timer B Value	1.20	1.20
SIP GRUU Support Enable Flag	1.20	1.20
SIP Transport Protocol Switch Support	1.20	1.20

Name	Version introduced	Version last modified
SIP Maximum TCP Transport Backoff Timer	1.20	1.20
Value		
SIP GZIP Decoding Outbuffer Multiplier Value	1.20	1.20
SIP Timer D Value	1.23	1.23
SIP Timer T4	1.27	1.27
SIP Timer A	1.27	1.27
SIP Timer E	1.27	1.27
SIP Timer G	1.27	1.27
SIP Timer H	1.27	1.27
SIP Timer I	1.27	1.27
SIP Timer K	1.27	1.27

Field	Field	Field	Parameter	Size	Description
	value	type		(byte)	
Туре	0x10			1	SIP Port Number
Length	2			2	
Value	$\rightarrow$	uint16	sip_local_port	2	Primary call session control function SIP
				_	port number.
Туре	0x11			100	SIP Registration Timer
Length	4			2	
Value	$\rightarrow$	uint32	timer_sip_reg	4	Initial SIP registration duration, in
			00.	E. J.	seconds, from the UE.
Туре	0x12	1	V 025	1	Subscribe Timer
Length	4		5 50	2	
Value	$\rightarrow$	uint32	subscribe_timer	4	Duration, in seconds, of the subscription
			20, 20.		by the UE for IMS registration
			, 96 <sub>72</sub>		notifications.
Туре	0x13			1	Timer T1
Length	4			2	
Value	$\rightarrow$	uint32	timer_t1	4	RTT estimate, in milliseconds.
Туре	0x14			1	Timer T2
Length	4			2	
Value	$\rightarrow$	uint32	timer_t2	4	Maximum retransmit interval, in
					milliseconds, for non-invite requests and
					invite responses.
Туре	0x15			1	Timer TF
Length	4			2	
Value	$\rightarrow$	uint32	timer_tf	4	Non-invite transaction timeout timer, in
					milliseconds.
Туре	0x16			1	Sigcomp Status
Length	1			2	
Value	$\rightarrow$	boolean	sigcomp_enabled	1	Values:
					• TRUE – Enabled
					• FALSE – Disabled
Туре	0x17			1	Timer TJ
Length	2			2	

Field	Field	Field	Parameter	Size	Description	
	value	type		(byte)		
Value	$\rightarrow$	uint16	timer_tj	2	Wait time, in milliseconds, for the	
					non-invite request retransmission. If the	
					value exceeds the range of uint16, it is	
					set to 0xFFFF.	
Туре	0x18			1	Timer TJ Extended	
Length	4			2		
Value	$\rightarrow$	uint32	timer_tj_ext	4	Wait time, in milliseconds, for the	
					non-invite request retransmission.	
Туре	0x19			1	Keep Alive Status	
Length	1			2		
Value	$\rightarrow$	boolean	keepalive_enabled	1	Values:	
					• TRUE – Enable	
					• FALSE – Disable	
Туре	0x1A			1	NAT-RTO Timer Value	
Length	4			2		
Value	$\rightarrow$	uint32	nat_rto_timer	4	Request timeout value, in milliseconds,	
					used in NAT implementation.	
Туре	0x1B			1 <	SIP_TIMER_OPERATOR_MODE_A	
				00	Timer Value	
Length	4			2		
Value	$\rightarrow$	uint32	sip_timer_operator_	4	SIP timer operator mode A, in seconds;	
			mode_a	E. 4.	valid range of values is 0 to 30. If this	
			1 1	-	TLV is not included in the request, a	
			5 36		value of 6 seconds is used.	
Туре	0x1C		6 Mall	1	SIP Timer B Value	
Length	4		20, 40,	2		
Value	$\rightarrow$	uint32	timer_tb_value	4	SIP timer B's value, in milliseconds. If	
					this TLV is not included in the request, a	
					value of 0 is used.	
Туре	0x1D			1	SIP GRUU Support Enable Flag	
Length	1			2		
Value	$\rightarrow$	boolean	gruu_enabled	1	SIP GRUU support enable flag. If this	
-					TLV is not included in the request, a	
					value of FALSE is used.	
Туре	0x1E			1	SIP Transport Protocol Switch Support	
Length	1			2	r r r r r r r r r r r r r r r r r r r	
Value	$\rightarrow$	boolean	transport_switch_enabled	1	SIP transport protocol switching support	
	•			_	enable flag per RFC 3261. If this TLV is	
					not included in the request, a value of	
					FALSE is used.	
Туре	0x1F			1	SIP Maximum TCP Transport Backoff	
, Abe	OAII			1	Timer Value	
Length	4			2	Timer value	

Field	Field	Field	Parameter	Size	Description
	value	type		(byte)	•
Value	$\rightarrow$	uint32	tcp_max_backoff_timer_	4	Maximum timeout, in milliseconds, for
			value		TCP transport of SIP packets after which
					SIP packets are sent via UDP. If this TLV
					is not included in the request, a value of
					10000 (i.e., 10 seconds) is used.
Туре	0x20			1	SIP GZIP Decoding Outbuffer Multiplier
					Value
Length	1			2	
Value	$\rightarrow$	uint8	gzip_decoding_outbuffer_	1	SIP GZIP decoding outbuffer multiplier,
			multiplier		the compression multiplier value. If this
					TLV is not included in the request, a
				- 0	value of 40 is used.
Туре	0x21			1	SIP Timer D Value
Length	4			2	
Value	$\rightarrow$	uint32	timer_td_value	4	SIP timer D's value, in milliseconds.
				J.	Timer D is the wait time for response
				1	retransmits of the invite client
				_	transactions.
Туре	0x22			IQ <sup>Q</sup>	SIP Timer T4
Length	4			2	C4.
Value	$\rightarrow$	uint32	timer_t4	4	SIP timer T4's value, in milliseconds.
			000	54	Timer T4 is the maximum duration that a
			V 045	•	SIP message can remain in the network.
Туре	0x23		5 5	1	SIP Timer A
Length	4		6, No.	2	
Value	$\rightarrow$	uint32	timer_ta_value	4	SIP timer A's value, in milliseconds.
			95		Timer A is the INVITE request
					retransmit interval, for UDP only
Туре	0x24			1	SIP Timer E
Length	4	: .22		2	OTD : The last the last
Value	$\rightarrow$	uint32	timer_te_value	4	SIP timer E's value, in milliseconds.
					Timer E is the value Non-INVITE
_	0.05				request retransmit interval, for UDP only.
Туре	0x25			1	SIP Timer G
Length	4	:	4:	2	CID (' C') and a ''
Value	$\rightarrow$	uint32	timer_tg_value	4	SIP timer G's value, in milliseconds.
					Timer G is the value of INVITE
_	0-26			1	response retransmit interval.
Туре	0x26			1	SIP Timer H
Length	4	wint22	times the volume	2	CID times II's value in millioner J
Value	$\rightarrow$	uint32	timer_th_value	4	SIP timer H's value, in milliseconds.
					Timer H is the value of wait time for
<b>-</b>	027			1	ACK receipt.
Туре	0x27			1	SIP Timer I
Length	4			2	

Field	Field	Field	Parameter	Size	Description
	value	type		(byte)	
Value	$\rightarrow$	uint32	timer_ti_value	4	SIP timer I's value, in milliseconds.
					Timer I is the value of wait time for ACK
					retransmits.
Туре	0x28			1	SIP Timer K
Length	4			2	
Value	$\rightarrow$	uint32	timer_tk_value	4	SIP timer K's value, in milliseconds.
					Timer K is the value of wait time for
					response retransmits.

(3)

# 3.14.2 Description of QMI\_IMS\_SETTINGS\_SIP\_CONFIG\_IND

This indication is sent to the control points that have registered for it when there are updates to the SIP configuration parameters.

## 3.15 QMI\_IMS\_SETTINGS\_REG\_MGR\_CONFIG\_IND

Indicates when the registration manager configuration parameters change.

**IMSS** message ID

0x002C

**Version introduced** 

Major - 1, Minor - 0

## 3.15.1 Indication - QMI\_IMS\_SETTINGS\_REG\_MGR\_CONFIG\_IND

Message type

Indication

Sender

**Settings Service** 

Scope

Per control point (unicast)

**Mandatory TLVs** 

None

Name	Version introduced	Version last modified
Primary CSCF Port	1.0	1.0
CSCF Port	1.0	1.0
IMS Test Mode	1.0	1.0

Field	Field	Field	Parameter	Size	Description
	value	type		(byte)	
Туре	0x10			1	Primary CSCF Port
Length	2			2	
Value	$\rightarrow$	uint16	regmgr_config_pcscf_port	2	Primary CSCF port.
Туре	0x11			1	CSCF Port
Length	Var			2	
Value	$\rightarrow$	string	regmgr_primary_cscf	Var	CSCF port, fully qualified domain name.
Туре	0x12			1	IMS Test Mode
Length	1			2	
Value	$\rightarrow$	boolean	ims_test_mode	1	Values:
					• TRUE – Enabled
					• FALSE – Disabled

## 3.15.2 Description of QMI\_IMS\_SETTINGS\_REG\_MGR\_CONFIG\_IND

This indication is sent to the control points that have registered for it when there are updates to the registration manager configuration parameters.



## 3.16 QMI\_IMS\_SETTINGS\_SMS\_CONFIG\_IND

Indicates when the SMS configuration parameters change.

IMSS message ID

0x002D

**Version introduced** 

Major - 1, Minor - 0

## 3.16.1 Indication - QMI\_IMS\_SETTINGS\_SMS\_CONFIG\_IND

Message type

Indication

Sender

**Settings Service** 

Scope

Per control point (unicast)

**Mandatory TLVs** 

None

Name	Version introduced	Version last modified
SMS Format	1.0	1.0
SMS Over IP Network Indication Flag	1.0	1.0
Phone Context Universal Resource Identifier	1.0	1.0
SMS PSI String	1.27	1.27

Field	Field	Field	Parameter	Size	Description
	value	type		(byte)	
Туре	0x10			1	SMS Format
Length	1			2	
Value	$\rightarrow$	enum8	sms_format	1	Values: • IMS_SETTINGS_SMS_FORMAT_ 3GPP2 (0) – 3GPP2 • IMS_SETTINGS_SMS_FORMAT_ 3GPP (1) – 3GPP
Туре	0x11			1	SMS Over IP Network Indication Flag
Length	1			2	

Field	Field	Field	Parameter	Size	Description
	value	type		(byte)	
Value	$\rightarrow$	boolean	sms_over_ip_network_indic	atidn	Values:
					• TRUE – MO SMS turned on
					• FALSE – MO SMS turned off
Туре	0x12			1	Phone Context Universal Resource
					Identifier
Length	Var			2	
Value	$\rightarrow$	string	phone_context_uri	Var	Phone context universal resource
					identifier.
Туре	0x13			1	SMS PSI String
Length	Var			2	
Value	$\rightarrow$	string	sms_psi	Var	SMS PSI string value.

# 3.16.2 Description of QMI\_IMS\_SETTINGS\_SMS\_CONFIG\_IND

This indication is sent to the control points that have registered for it when there are updates to the SMS configuration parameters.

## 3.17 QMI\_IMS\_SETTINGS\_USER\_CONFIG\_IND

Indicates when the user configuration parameters change.

IMSS message ID

0x002E

**Version introduced** 

Major - 1, Minor - 0

# 3.17.1 Indication - QMI\_IMS\_SETTINGS\_USER\_CONFIG\_IND

Message type

Indication

Sender

**Settings Service** 

Scope

Per control point (unicast)

**Mandatory TLVs** 

None

Name	Version introduced	Version last modified	
IMS Domain Name	1.0	1.0	

Field	Field	Field	Parameter	Size	Description
	value	type		(byte)	
Туре	0x10			1	IMS Domain Name
Length	Var			2	
Value	$\rightarrow$	string	ims_domain	Var	IMS domain name.

## 3.17.2 Description of QMI\_IMS\_SETTINGS\_USER\_CONFIG\_IND

This indication is sent to the control points that have registered for it when there are updates to the user configuration parameters.



## 3.18 QMI\_IMS\_SETTINGS\_VOIP\_CONFIG\_IND

Indicates when the VoIP configuration parameters change.

IMSS message ID

0x002F

**Version introduced** 

Major - 1, Minor - 1

## 3.18.1 Indication - QMI\_IMS\_SETTINGS\_VOIP\_CONFIG\_IND

Message type

Indication

Sender

**Settings Service** 

Scope

Per control point (unicast)

**Mandatory TLVs** 

None

Name	Version introduced	Version last modified
Session Duration	1.1	1.1
Minimum Session Timer	1.1	1.1
Enable AMR WB	1.1	1.1
Enable SCR AMR NB	1.1	1.1
Enable SCR AMR WB	1.1	1.1
AMR NB Mode	1.1	1.1
AMR WB Mode	1.1	1.1
AMR NB Octet Aligned	1.1	1.1
AMR WB Octet Aligned	1.1	1.1
Ringing Timer Duration	1.1	1.1
Ringback Timer Duration	1.1	1.1
RTP/RTCP Inactivity Timer Duration	1.1	1.1
VoLTE to 1xRTT Silent Redial Flag	1.17	1.17
VoIP Preferred RTP Payload Type	1.19	1.19
VoIP Configuration Conference Factory URI	1.24	1.24

Field	Field	Field	Parameter	Size	Description	
	value	type		(byte)	-	
Туре	0x10			1	Session Duration	
Length	2			2		
Value	$\rightarrow$	uint16	session_expiry_timer	2	Session duration, in seconds.	
Туре	0x11			1	Minimum Session Timer	
Length	2			2		
Value	$\rightarrow$	uint16	min_session_expiry	2	Minimum allowed value, in seconds, for	
					the session timer.	
Туре	0x12			1	Enable AMR WB	
Length	1			2	<b>⊗</b>	
Value	$\rightarrow$	boolean	amr_wb_enable	1	Flag indicating AMR WB audio.	
					Values:	
					• TRUE – Enabled	
					• FALSE – Disabled	
Туре	0x13			1	Enable SCR AMR NB	
Length	1			2		
Value	$\rightarrow$	boolean	scr_amr_enable	1	Flag indicating SCR for AMR NB audio.	
					Values:	
				_<	• TRUE – Enabled	
				. 60	• FALSE – Disabled	
Туре	0x14			11	Enable SCR AMR WB	
Length	1		.0.	2		
Value	$\rightarrow$	boolean	scr_amr_wb_enable	& 1	Flag indicating SCR for AMR WB	
			2 000	•	audio.	
			05 10		Values:	
			16' 1ha.		• TRUE – Enabled	
			scr_amr_wb_enable		• FALSE – Disabled	
Туре	0x15		Ser	1	AMR NB Mode	
Length	1			2		
Value	$\rightarrow$	uint8	amr_mode	1	Bitmask indicating AMR NB modes.	
					Values:	
					• 0x1 – 4.75 kbps	
					• 0x2 – 5.15 kbps	
					• 0x4 – 5.9 kbps	
					• 0x8 – 6.17 kbps	
					$\bullet$ 0x10 – 7.4 kbps	
					• 0x20 – 7.95 kbps	
					• 0x40 – 10.2 kbps	
					• 0x80 – 12.2 kbps	
Туре	0x16			1	AMR WB Mode	
Length	2			2		

Field	Field	Field	Parameter	Size	Description	
	value	type		(byte)		
Value	$\rightarrow$	uint16	amr_wb_mode	2	Bitmask indicating AMR WB modes.	
					Values:	
					• $0x1 - 6.60$ kbps	
					• 0x2 – 8.85 kbps	
					• 0x4 – 12.65 kbps	
					• 0x8 – 14.25 kbps	
					• 0x10 – 15.85 kbps	
					• 0x20 – 18.25 kbps	
					• 0x40 – 19.85 kbps	
					• $0x80 - 23.05$ kbps	
					• $0x100 - 23.85$ kbps	
Туре	0x17			1	AMR NB Octet Aligned	
Length	1			2		
Value	$\rightarrow$	boolean	amr_octet_align	1	Flag indicating if the octet is aligned for	
					AMR NB audio.	
			4	30	AMR NB audio. Values:	
					• TRUE – Octet aligned	
					• FALSE – Octet not aligned, Bandwidth	
				00	Efficient mode	
Туре	0x18			\(\bar{1}\) \(\sigma\)	AMR WB Octet Aligned	
Length	1			2		
Value	$\rightarrow$	boolean	amr_wb_octet_align		Flag indicating if the octet is aligned for	
				~	AMR WB audio.	
			amr_wb_octet_align		Values:	
		1	C.O. Value		• TRUE – Octet aligned	
			200 1111		• FALSE – Octet not aligned, Bandwidth	
			2,000		Efficient mode	
Туре	0x19		Ö.,	1	Ringing Timer Duration	
Length	2			2		
Value	$\rightarrow$	uint16	ringing_timer	2	Duration, in seconds, of the ringing	
			6 6-		timer. The ringing timer starts on the	
					ringing event. If the call is not answered	
					within the duration of this timer, the call	
					is disconnected.	
Туре	0x1A			1	Ringback Timer Duration	
Length	2			2	5	
Value	$\rightarrow$	uint16	ringback_timer	2	Duration, in seconds, of the ringback	
			<i>6</i>	_	timers. The ringback timer starts on the	
					ringback event. If the call is not	
					answered within the duration of this	
					timer, the call is disconnected.	
Туре	0x1B			1	RTP/RTCP Inactivity Timer Duration	
Length	2			2		
Value	$\rightarrow$	uint16	rtp_rtcp_inactivity_timer	2	Duration, in seconds, of the RTP/RTCP	
value		unitio	rp_rep_machivity_timer	~	inactivity timer. If no RTP/RTCP packet	
					is received before the expiration of this	
					timer, the call is disconnected.	
					umer, the can is disconnected.	

Field	Field	Field	Parameter	Size	Description	
	value	type		(byte)		
Туре	0x1C			1	VoLTE to 1xRTT Silent Redial Flag	
Length	1			2		
Value	$\rightarrow$	boolean	voip_silent_redial_enabled	1	Flag that allows a device to silently	
					redial over 1xRTT. If this TLV is not	
					included in the request, a value of TRUE	
					(i.e., enabled) is used.	
Type	0x1D			1	VoIP Preferred RTP Payload Type	
Length	2			2		
Value	$\rightarrow$	uint16	voip_preferred_rtp_	2	Values for the VoIP preferred codec	
			payload_type		mode. Must be set only when G.711	
					support is required in addition to AMR	
					and AMR-WB.	
					Refer to Real-TimeTransport Protocol	
					(RTP) Parameters for possible values.	
					If an unsupported codec value is set,	
					CODEC MIME is used as the default	
					audio codec and the G.711 codec is	
				_	ignored.	
Type	0x1E			100	VoIP Configuration Conference Factory	
				2	URI	
Length	Var			2		
Value	$\rightarrow$	string	voip_config_confURI	Var	VoIP configuration conference factory	
			V 045		URI.	

## 3.18.2 Description of QMI\_IMS\_SETTINGS\_VOIP\_CONFIG\_IND

This indication is sent to the control points that have registered for it when there are updates to the VoIP configuration parameters.

#### QMI IMS SETTINGS SET PRESENCE CONFIG 3.19

Sets the IMS presence-related configuration parameters for the requesting control point.

**IMSS** message ID

0x0030

**Version introduced** 

Major - 1, Minor - 2

#### Request - QMI\_IMS\_SETTINGS\_SET\_PRESENCE\_CONFIG\_REQ 3.19.1

Message type

Request				
Sender				
Control point				
Mandatory TLVs	Nation 1			
None	THE Y. COLLINA			
Name	Version introduced	Version last modified		
Publish Expiry Timer	1.2	1.2		
Publish Extended Expiry Timer	1.2	1.2		
Minimum Publish Interval	1.2	1.2		
Capability Poll List Subscription Expiry Timer	1.2	1.2		
Discovery Capability Enabled	1.2	1.2		
Cache Capability Expiration	1.2	1.2		
Cache Availability Expiration	1.2	1.2		
Capability Poll Interval	1.2	1.2		
Maximum Subscription List Entries	1.2	1.2		
VoLTE User Opted In Status	1.2	1.2		
Last Published ETAG	1.13	1.13		
Last Published Time	1.13	1.13		
Last Negotiated Published Expire	1.13	1.13		
GZIP Enabled	1.13	1.13		
Presence Notification Wait Duration	1.13	1.13		
Publish Error Recovery Timer	1.13	1.16 (Deprecated)		

Field	Field	Field	Parameter	Size	Description
	value	type		(byte)	
Туре	0x10			1	Publish Expiry Timer

	type		(byte)		
4			2		
$\rightarrow$	uint32	publish_expiry_timer	4	Publish timer, in seconds, when publish	
				is sent on an IMS network using 4G	
				radio access technology.	
0x11			1	Publish Extended Expiry Timer	
4			2	1 3	
$\rightarrow$	uint32	publish_extended_expiry_	4	Publish extended timer, in seconds, when	
		timer		publish is sent on an IMS network in a	
				non-4G radio access technology or when	
				in Airplane Power-Down mode in a 4G	
				radio access technology.	
0x12			1 👛	Minimum Publish Interval	
4			2		
$\rightarrow$	uint32	minimum_publish_interval	4	Duration, in seconds, between successive	
		. =		publish requests.	
0x13			1	Capability Poll List Subscription Expiry	
				Timer	
4			2 <		
$\rightarrow$	uint32	capability poll list	400	Expiry timer value, in seconds, for the	
			2	list subscription request.	
0x14		2	× 10/	Discovery Capability Enabled	
1		06.	2	<b>J</b> 1 <b>J</b>	
$\rightarrow$	boolean	capability_discovery_	1	Flag indicating whether discovery	
		enable		capability is enabled.	
		6 Mall		Values:	
		007-07		• TRUE – Presence publishes/subscribes	
		750,		and processes any notification received.	
		~		• FALSE – Presence does not	
				publish/subscribe and ignores any	
				notification received	
0x15			1	Cache Capability Expiration	
4			2		
$\rightarrow$	uint32	capabilites_cache_	4	Duration of time, in seconds, for which	
		expiration		the retrieved capability is considered	
		•		valid.	
0x16			1	Cache Availability Expiration	
4			2	* *	
$\rightarrow$	uint32	availability_cache_	4	Duration of time, in seconds, for which	
		expiration		the retrieved availability is considered	
		•		valid.	
0x17			1	Capability Poll Interval	
4			2	*	
$\rightarrow$	uint32	capability poll interval	4	Duration of time, in seconds, between	
		· · · · · · · · · · · · · · · · · · ·		successive capability polling.	
0x18			1	Maximum Subscription List Entries	
				r	
	$ \begin{array}{c} 0x11\\ 4\\ \rightarrow\\ 0x12\\ 4\\ \rightarrow\\ 0x13\\ 4\\ \rightarrow\\ 0x14\\ 1\\ \rightarrow\\ 0x15\\ 4\\ \rightarrow\\ 0x17\\ 4\\ \rightarrow\\ 0x17\\ 4\\ \rightarrow\\  0x17\\ 4\\ \rightarrow\\  0x17\\ 0x$	$\begin{array}{c cccc} 0x11 & & & \\ \hline 4 & & & \\ \hline 0x12 & & & \\ \hline 4 & & & \\ \hline 0x13 & & & \\ \hline 0x13 & & & \\ \hline 0x14 & & & \\ \hline 1 & & & \\ \hline 0x14 & & & \\ \hline 1 & & & \\ \hline 0x15 & & & \\ \hline 4 & & & \\ \hline 0x16 & & & \\ \hline 4 & & & \\ \hline 0x16 & & & \\ \hline 0x17 & & & \\ \hline 4 & & & \\ \hline 0x17 & & & \\ \hline 4 & & & \\ \hline 0x17 & & & \\ \hline 4 & & & \\ \hline 0x17 & & & \\ \hline 4 & & & \\ \hline 0x17 & & & \\ \hline 4 & & & \\ \hline 0x17 & & & \\ \hline 4 & & & \\ \hline 0x17 & & & \\ 0x17 & & & \\ \hline 0x17 & & & \\ 0x17 & & $	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	

Field	Field	Field	Parameter	Size	Description	
	value	type		(byte)		
Value	$\rightarrow$	uint32	max_subcription_list_	4	Maximum number of entries that can be	
			entries		kept in the list subscription.	
Туре	0x19			1	VoLTE User Opted In Status	
Length	1			2		
Value	$\rightarrow$	boolean	volte_user_opted_in_status	1	Flag indicating whether VoLTE service	
					is accepted by the user. Values:	
					• TRUE – Accepted	
					• FALSE – Not accepted	
Туре	0x1A			1	Last Published ETAG	
Length	Var			2		
Value	$\rightarrow$	string	last_publish_etag	Var	Last published ETAG.	
Туре	0x1B			1 💣	Last Published Time	
Length	4			2		
Value	$\rightarrow$	uint32	last_published_time	4	Last published time.	
Туре	0x1C			1	Last Negotiated Published Expire	
Length	4			2		
Value	$\rightarrow$	uint32	last_negotiated_published_	4	Last negotiated published expire, in	
			expire	_	seconds.	
Туре	0x1D			12	GZIP Enabled	
Length	1			. 2 .		
Value	$\rightarrow$	boolean	gzip_enabled	, TO,	Flag indicating whether GZIP	
			00,	64.	compression enabled. Values:	
			27 025		• TRUE – Enabled	
		1	05 10		• FALSE – Disabled	
Туре	0x1E		16, Way	1	Presence Notification Wait Duration	
Length	2		30,00.	2		
Value	$\rightarrow$	uint16	presence_notify_wait_	2	Presence notification wait duration, in	
			duration		seconds.	
Туре	0x1F			1	Publish Error Recovery Timer	
					(Deprecated)	
Length	4			2		
Value	$\rightarrow$	uint32	publish_error_recovery_	4	Publish error recovery timer, in seconds.	
			timer		This TLV is deprecated and is now part	
					of QMI_IMS_SETTINGS_SET_	
					PRESENCE_EXT_CONFIG_REQ.	

## 3.19.2 Response - QMI\_IMS\_SETTINGS\_SET\_PRESENCE\_CONFIG\_RSP

Message type

Response

#### Sender

**Settings Service** 

#### **Mandatory TLVs**

The Result Code TLV (defined in Section 2.3.1) is always present in the response.

#### **Optional TLVs**

Name	Version introduced	Version last modified
Settings Standard Response Type	1.2	1.2

Field	Field	Field	Parameter	Size	Description
	value	type		(byte)	
Туре	0x10			1	Settings Standard Response Type
Length	1			2	
Value	$\rightarrow$	enum8	settings_resp	1	A settings-specific error code is returned
				ř	when the standard response error type is
				~	QMI_ERR_CAUSE_CODE.

# 3.19.3 Description of QMI\_IMS\_SETTINGS\_SET\_PRESENCE\_CONFIG REQ/RESP

The request message from the client sets the IMS presence configuration parameters for the requesting control point. The response message indicates success or failure based on the outcome of the request message processing by the service. When the request message does not contain any configuration parameters, the service does no processing and returns QMI\_RESULT\_SUCCESS.

## 3.20 QMI\_IMS\_SETTINGS\_GET\_PRESENCE\_CONFIG

Retrieves the presence-related configuration parameters.

IMSS message ID

0x0031

Version introduced

Major - 1, Minor - 2

## 3.20.1 Request - QMI\_IMS\_SETTINGS\_GET\_PRESENCE\_CONFIG\_REQ

Message type

Request

Sender

Control point

**Mandatory TLVs** 

None

**Optional TLVs** 

None

## 3.20.2 Response - QMI\_IMS\_SETTINGS\_GET\_PRESENCE\_CONFIG\_RSP

Message type

Response

Sender

**Settings Service** 

**Mandatory TLVs** 

The Result Code TLV (defined in Section 2.3.1) is always present in the response.

Name	Version introduced	Version last modified
Settings Standard Response Type	1.2	1.2
Publish Timer	1.2	1.2
Publish Extended Expiry	1.2	1.2
Minimum Publish Interval	1.2	1.2

Name	Version introduced	Version last modified
Capability Poll List Subscription Expiry Timer	1.2	1.2
Discovery Capability Enabled	1.2	1.2
Cache Capability Expiration	1.2	1.2
Cache Availability Expiration	1.2	1.2
Capability Poll Interval	1.2	1.2
Maximum Subscription List Entries	1.2	1.2
VoLTE User Opted In Status	1.2	1.2
Last Published Entity Tag	1.13	1.13
Last Published Time	1.13	1.13
Last Negotiated Published Expire	1.13	1.13
GNU ZIP Enabled	1.13	1.13
Presence Notification Wait Duration	1.13	1.13
Publish Error Recovery Timer	1.13	1.16 (Deprecated)

Field	Field	Field	Parameter	Size	Description
	value	type		(byte)	
Туре	0x10			1	Settings Standard Response Type
Length	1			2 <	
Value	$\rightarrow$	enum8	settings_resp	100	A settings-specific error code is returned
				2	when the standard response error type is
			.2	x. Coll	QMI_ERR_CAUSE_CODE.
Туре	0x11		00.	e 1	Publish Timer
Length	4		V 0.45	2	
Value	$\rightarrow$	uint32	publish_expiry_timer	4	Publish timer, in seconds, when publish
			6 Hair		is sent on an IMS network using 4G
			20,200		radio access technology.
Туре	0x12		90,	1	Publish Extended Expiry
Length	4			2	
Value	$\rightarrow$	uint32	publish_extended_expiry_	4	Publish extended timer, in seconds, when
			timer		publish is sent on an IMS network in a
					non-4G radio access technology, or when
					in Airplane Power-Down mode in a 4G
					radio access technology.
Туре	0x13			1	Minimum Publish Interval
Length	4			2	
Value	$\rightarrow$	uint32	minimum_publish_interval	4	Duration, in seconds, between successive
					publish requests.
Туре	0x14			1	Capability Poll List Subscription Expiry
					Timer
Length	4			2	
Value	$\rightarrow$	uint32	capability_poll_list_	4	Expiry timer value, in seconds, for the
			subscription_expiry_timer		list subscription request.
Туре	0x15			1	Discovery Capability Enabled
Length	1			2	

Field	Field value	Field type	Parameter	Size (byte)	Description
Value	$\rightarrow$	boolean	capability_discovery_ enable	1	Flag indicating whether or not discovery capability is enabled. Values:  • TRUE – Presence publishes/subscribes and processes any notifications received  • FALSE – Presence does not publish/subscribe and ignores any notification received
Туре	0x16			1	Cache Capability Expiration
Length	4			2	•
Value	$\rightarrow$	uint32	capabilites_cache_ expiration	4	Duration of time, in seconds, for which the retrieved capability is considered valid.
Туре	0x17			1	Cache Availability Expiration
Length	4			2	
Value	$\rightarrow$	uint32	availability_cache_ expiration	4	Duration of time, in seconds, for which the retrieved capability is considered valid.
Туре	0x18			1 <	Capability Poll Interval
Length	4			2	4
Value	$\rightarrow$	uint32	capability_poll_interval	24	Duration of time, in seconds, for which the retrieved capability is considered valid.
Туре	0x19	1	V 045	1	Maximum Subscription List Entries
Length	4		5,00	2	
Value	$\rightarrow$	uint32	max_subcription_list_ entries	4	Maximum number of entries that can be kept in the list subscription.
Туре	0x1A		200	1	VoLTE User Opted In Status
Length	1			2	
Value	$\rightarrow$	boolean	volte_user_opted_in_status	1	Flag indicating whether or not VoLTE service is accepted by the user. Values:  • TRUE – Accepted  • FALSE – Not accepted
Туре	0x1B			1	Last Published Entity Tag
Length	Var			2	
Value	$\rightarrow$	string	last_publish_etag	Var	Last published Entity Tag (ETAG).
Туре	0x1C			1	Last Published Time
Length	4			2	
Value	$\rightarrow$	uint32	last_published_time	4	Last published time.
Туре	0x1D			1	Last Negotiated Published Expire
Length	4			2	
Value	$\rightarrow$	uint32	last_negotiated_published_ expire	4	Last negotiated published expire, in seconds.
Туре	0x1E			1	GNU ZIP Enabled
Length	1			2	

Field	Field	Field	Parameter	Size	Description
	value	type		(byte)	
Value	$\rightarrow$	boolean	gzip_enabled	1	Flag indicating whether GZIP
					compression is enabled. Values:
					• TRUE – Enabled
					• FALSE – Disabled
Туре	0x1F			1	Presence Notification Wait Duration
Length	2			2	
Value	$\rightarrow$	uint16	presence_notify_wait_	2	Presence notification wait duration, in
			duration		seconds.
Туре	0x20			1	Publish Error Recovery Timer
					(Deprecated)
Length	4			2	
Value	$\rightarrow$	uint32	publish_error_recovery_	4	Publish error recovery timer, in seconds.
			timer		This TLV is deprecated and is now part
					of QMI_IMS_SETTINGS_GET_
					PRESENCE_EXT_CONFIG_REQ.

# 3.20.3 Description of QMI\_IMS\_SETTINGS\_GET\_PRESENCE\_CONFIG REQ/RESP

The request message retrieves the presence configuration parameters from the requesting control point. The response message indicates success or failure based on the outcome of the request message processing by the service. The response message returns the presence configuration parameters to the control point.

## 3.21 QMI\_IMS\_SETTINGS\_PRESENCE\_CONFIG\_IND

Indicates when the presence-related configuration parameters change.

IMSS message ID

0x0032

**Version introduced** 

Major - 1, Minor - 2

## 3.21.1 Indication - QMI\_IMS\_SETTINGS\_PRESENCE\_CONFIG\_IND

Message type

Indication

Sender

**Settings Service** 

Scope

Per control point (unicast)

**Mandatory TLVs** 

None

Name	Version introduced	Version last modified
Publish Timer	1.2	1.2
Publish Extended Timer	1.2	1.2
Minimum Publish Interval	1.2	1.2
Capability Poll List Subscription Expiry Timer	1.2	1.2
Discovery Capability Enabled	1.2	1.2
Cache Capability Expiration	1.2	1.2
Cache Availability Expiration	1.2	1.2
Capability Poll Interval	1.2	1.2
Maximum Subscription List Entries	1.2	1.2
VoLTE User Opted In Status	1.2	1.2
Last Published Entity Tag	1.13	1.13
Last Published Time	1.13	1.13
Last Negotiated Published Expire	1.13	1.13
GNU ZIP Enabled	1.13	1.13
Presence Notification Wait Duration	1.13	1.13
Publish Error Recovery Timer	1.13	1.16 (Deprecated)

Field	Field	Field	Parameter	Size	Description
	value	type		(byte)	
Туре	0x10			1	Publish Timer
Length	4			2	
Value	$\rightarrow$	uint32	publish_expiry_timer	4	Publish timer, in seconds, when publish
					is sent on an IMS network using 4G
					radio access technology.
Туре	0x11			1	Publish Extended Timer
Length	4			2	
Value	$\rightarrow$	uint32	publish_extended_expiry_	4	Publish extended timer, in seconds, when
			timer		publish is sent on an IMS network using
					non-4G radio access technology, or when
					in Airplane Power-Down mode using 4G
					radio access technology.
Туре	0x12			1	Minimum Publish Interval
Length	4			2	
Value	$\rightarrow$	uint32	minimum_publish_interval	4	Duration of time, in seconds, between
					successive publish requests.
Туре	0x13			1	Capability Poll List Subscription Expiry
				_	Timer
Length	4			20	-1
Value	$\rightarrow$	uint32	capability_poll_list_	. 4 .	Timer, in seconds, for the list subscribe
			subscription_expiry_timer	x. Coll.	request.
Туре	0x14		00.	e 1	Discovery Capability Enabled
Length	1		V 0.75	2	
Value	$\rightarrow$	boolean	capability_discovery_	1	Flag indicating whether or not discovery
			capability_discovery_ enable		capability is enabled. Values:
			20,000		• TRUE – Presence publishes/subscribes
			950		and processes any notifications received
					• FALSE – Presence does not
					publish/subscribe and ignores any
					notification received
Туре	0x15			1	Cache Capability Expiration
Length	4			2	
Value	$\rightarrow$	uint32	capabilites_cache_	4	Duration of time, in seconds, for which
			expiration		the retrieved capability is considered
					valid.
Туре	0x16			1	Cache Availability Expiration
Length	4			2	
Value	$\rightarrow$	uint32	availability_cache_	4	Duration of time, in seconds, for which
			expiration		the retrieved availability is considered
					valid.
Туре	0x17			1	Capability Poll Interval
Length	4			2	
Value	$\rightarrow$	uint32	capability_poll_interval	4	Duration of time, in seconds, for which
					the retrieved availability is considered
					valid.
Туре	0x18			1	Maximum Subscription List Entries
Length	4			2	Î

Field	Field	Field	Parameter	Size	Description
	value	type		(byte)	
Value	$\rightarrow$	uint32	max_subcription_list_	4	Maximum number of entries that can be
			entries		kept in the list subscription.
Туре	0x19			1	VoLTE User Opted In Status
Length	1			2	
Value	$\rightarrow$	boolean	volte_user_opted_in_status	1	Flag indicating whether or not VoLTE
					service is accepted by the user. Values:
					• TRUE – Accepted
					• FALSE – Not accepted
Туре	0x1A			1	Last Published Entity Tag
Length	Var			2	
Value	$\rightarrow$	string	last_publish_etag	Var	Last published ETAG.
Туре	0x1B			1 💣	Last Published Time
Length	4			2	
Value	$\rightarrow$	uint32	last_published_time	4	Last published time.
Туре	0x1C			1	Last Negotiated Published Expire
Length	4			2	
Value	$\rightarrow$	uint32	last_negotiated_published_	4	Last negotiated published expire, in
			expire	_	seconds.
Туре	0x1D			10	GNU ZIP Enabled
Length	1			. 2	
Value	$\rightarrow$	boolean	gzip_enabled	, T),	Flag indicating whether GZIP
			gzip_enabled	64.	compression enabled. Values:
			N 625		• TRUE – Enabled
			05, 40		• FALSE – Disabled
Туре	0x1E		16, W.o.	1	Presence Notification Wait Duration
Length	2		20,000	2	
Value	$\rightarrow$	uint16	presence_notify_wait_	2	Presence notification wait duration, in
			duration		seconds.
Туре	0x1F			1	Publish Error Recovery Timer
					(Deprecated)
Length	4			2	
Value	$\rightarrow$	uint32	publish_error_recovery_	4	Publish error recovery timer, in seconds.
			timer		This TLV is now deprecated and is now
					part of QMI_IMS_SETTINGS_
					PRESENCE_EXT_CONFIG_IND.

## 3.21.2 Description of QMI\_IMS\_SETTINGS\_PRESENCE\_CONFIG\_IND

This indication is sent to the control points that have registered for it when there are updates to the presence configuration parameters.

## 3.22 QMI\_IMS\_SETTINGS\_SET\_MEDIA\_CONFIG

Sets the IMS media-related configuration parameters for the requesting control point. (Deprecated)

#### IMSS message ID

0x0033

#### **Version introduced**

Major - 1, Minor - 3

#### Version deprecated

Major - 1, Minor - 29

## 3.22.1 Request - QMI\_IMS\_SETTINGS\_SET\_MEDIA\_CONFIG\_REQ

### Message type

Request

#### Sender

Control point

#### **Mandatory TLVs**

None

Name	Version introduced	Version last modified
H.264 Profile	1.3	1.3
H.264 Level	1.3	1.3
Video Bitrate	1.3	1.3
Video Refresh Rate	1.3	1.3
Video Display Resolution	1.3	1.3
Video Codec	1.3	1.3

Field	Field	Field	Parameter	Size	Description
	value	type		(byte)	
Туре	0x10			1	H.264 Profile
Length	4			2	

Field	Field	Field	Parameter	Size	Description
	value	type		(byte)	
Value	$\rightarrow$	enum	h264_profile	4	Profile used for the H.264 codec. Values:
					• IMS_SETTINGS_H264_PROFILE_
					BASELINE (0x00) – Baseline profile
					• IMS_SETTINGS_H264_PROFILE_
					MAIN (0x01) – Main profile
					• IMS_SETTINGS_H264_PROFILE_
					EXTENDED (0x02) – Extended profile
					• IMS_SETTINGS_H264_PROFILE_
					HIGH(0x03) - High profile
Туре	0x11			1	H.264 Level
Length	4			2	
Value	$\rightarrow$	enum	h264_level	4 _	Level used for the H.264 codec. Values:
					• IMS_SETTINGS_H264_LEVEL1
					(0x00) – Level 1
					• IMS_SETTINGS_H264_LEVEL1B
				7	(0x01) – Level 1b
					• IMS_SETTINGS_H264_LEVEL11
					(0x02) – Level 1.1
				00	• IMS_SETTINGS_H264_LEVEL12
				1	(0x03) – Level 1.2
				1. 010	• IMS_SETTINGS_H264_LEVEL13
			6.	24.	(0x04) – Level 1.3
			11 35		• IMS_SETTINGS_H264_LEVEL2
			2016.05.117.06.1 2016.05.117.06.1		(0x05) – Level 2
		1	6.0 hams		• IMS_SETTINGS_H264_LEVEL21
			07 77		(0x06) – Level 2.1
			7201		• IMS_SETTINGS_H264_LEVEL22
			0		(0x07) – Level 2.2
					• IMS_SETTINGS_H264_LEVEL3
					(0x08) – Level 3
					• IMS_SETTINGS_H264_LEVEL31
					(0x09) – Level 3.1
					• IMS_SETTINGS_H264_LEVEL32
					(0x0A) – Level 3.2
					• IMS_SETTINGS_H264_LEVEL4
					(0x0B) – Level 4
					• IMS_SETTINGS_H264_LEVEL41
					(0x0C) – Level 4.1
					• IMS_SETTINGS_H264_LEVEL42
					(0x0D) – Level 4.2
					• IMS_SETTINGS_H264_LEVEL5
					(0x0E) – Level 5
					• IMS_SETTINGS_H264_LEVEL51
					(0x0F) – Level 5.1
Туре	0x12			1	Video Bitrate
Length	2			2	
Value	$\rightarrow$	uint16	video_bitrate	2	Bitrate of the video, in kbps.

Field	Field	Field	Parameter	Size	Description
	value	type		(byte)	
Туре	0x13			1	Video Refresh Rate
Length	1			2	
Value	$\rightarrow$	uint8	video_frames_per_second	1	Video refresh rate, in frames per second.
Туре	0x14			1	Video Display Resolution
Length	4			2	
Value	$\rightarrow$	enum	video_resolution	4	Resolution of the video display. Values:  • IMS_SETTINGS_SQCIF_ RESOLUTION (0x00) – SQCIF  • IMS_SETTINGS_QCIF_ RESOLUTION (0x01) – QCIF  • IMS_SETTINGS_CIF_ RESOLUTION (0x02) – CIF  • IMS_SETTINGS_QQVGA_ RESOLUTION (0x03) – QQVGA  • IMS_SETTINGS_QVGA_ RESOLUTION (0x04) – QVGA  • IMS_SETTINGS_VGA_
					RESOLUTION (0x05) – VGA
Туре	0x15			IQ V	Video Codec
Length	4			2	Co.
Value	$\rightarrow$	enum	video_codec	4.1	Codec used for the video. Values:  • IMS_SETTINGS_CODEC_MPEG4_ XVID (0x00) – XVID MPEG4 codec  • IMS_SETTINGS_CODEC_MPEG4_ ISO (0x01) – ISO MPEG4 codec  • IMS_SETTINGS_CODEC_H263 (0x02) – H.263 codec  • IMS_SETTINGS_CODEC_H264 (0x03) – H.264 codec

## 3.22.2 Response - QMI\_IMS\_SETTINGS\_SET\_MEDIA\_CONFIG\_RSP

Message type

Response

Sender

Settings Service

#### **Mandatory TLVs**

The Result Code TLV (defined in Section 2.3.1) is always present in the response.

Name	Version introduced	Version last modified
Result Code	1.3	1.3

#### **Optional TLVs**

Name	Version introduced	Version last modified
Settings Standard Response Type	1.3	1.3

Field	Field	Field	Parameter	Size	Description
	value	type		(byte)	
Туре	0x10			1	Settings Standard Response Type
Length	1		-	2	
Value	$\rightarrow$	enum8	settings_resp	1	A settings-specific error code is returned
			, 0	r	when the standard response error type is
				6	QMI_ERR_CAUSE_CODE.

# 3.22.3 Description of QMI\_IMS\_SETTINGS\_SET\_MEDIA\_CONFIG REQ/RESP

This command is deprecated. There is no replacement.

The request message from the client sets the IMS media configuration parameters for the requesting control point. The response message indicates success or failure based on the outcome of the request message processing by the service. When the request message does not contain any configuration parameters, the service does no processing and returns QMI\_RESULT\_SUCCESS.

## 3.23 QMI IMS SETTINGS GET MEDIA CONFIG

Retrieves the media-related configuration parameters.

IMSS message ID

0x0034

Version introduced

Major - 1, Minor - 3

## 3.23.1 Request - QMI\_IMS\_SETTINGS\_GET\_MEDIA\_CONFIG\_REQ

Message type

Request

Sender

Control point

**Mandatory TLVs** 

None

**Optional TLVs** 

None

## 3.23.2 Response - QMI\_IMS\_SETTINGS\_GET\_MEDIA\_CONFIG\_RSP

Message type

Response

Sender

Settings Service

#### **Mandatory TLVs**

The Result Code TLV (defined in Section 2.3.1) is always present in the response.

Name	Version introduced	Version last modified
Result Code	1.3	1.3

Name	Version introduced	Version last modified
Settings Standard Response Type	1.3	1.3
H.264 Profile	1.3	1.3
H.264 Level	1.3	1.3
Video Bitrate	1.3	1.3
Video Refresh Rate	1.3	1.3
Video Display Resolution	1.3	1.3
Video Codec	1.3	1.3
Lipsync Drop Upper Limit	1.29	1.29
Lipsync Drop Lower Limit	1.29	1.29
RTP MTU Size	1.29	1.29
QDJ Time Warping Enable Option	1.29	1.29
QDJ IBA Maximum Value	1.29	1.29
QDJ Maximum Frames to Start Dequeue	1.29	1.29
QDJ Maximum Dejitter Delay	1.29	1.29
QDJ Minimum Dejitter Delay	1.29	1.29
QDJ Optimization2 Information	1.29	1.29
QDJ Maximum Frames at Run	1.29	1.29
QDJ Maximum Bumped Delay	1.29	1.29
QDJ Jitter Increment	1.29	1.29
QDJ Target Underflow Rate	1.29	1.29
QDJ Drop Threshold	1.29	1.29
Gmin	1.29	1.29
Transmit System Delay	1.29	1.29
Receive System Delay	1.29	1.29
Audio Offload	1.29	1.29

Field	Field	Field	Parameter	Size	Description
	value	type		(byte)	
Туре	0x10			1	Settings Standard Response Type
Length	1			2	
Value	$\rightarrow$	enum8	settings_resp	1	A settings-specific error code is returned
					when the standard response error type is
					QMI_ERR_CAUSE_CODE.
Туре	0x11			1	H.264 Profile
Length	4			2	
Value	$\rightarrow$	enum	h264_profile	4	Profile used for H.264 codec. Values:
					• IMS_SETTINGS_H264_PROFILE_
					BASELINE (0x00) – Baseline profile
					• IMS_SETTINGS_H264_PROFILE_
					MAIN (0x01) – Main profile
					• IMS_SETTINGS_H264_PROFILE_
					EXTENDED (0x02) – Extended profile
					• IMS_SETTINGS_H264_PROFILE_
					HIGH (0x03) – High profile

Field	Field	Field	Parameter	Size	Description
	value	type		(byte)	•
Туре	0x12			1	H.264 Level
Length	4			2	
Value	$\rightarrow$	enum	h264_level	4	Level used for H.264 codec. Values:
					• IMS_SETTINGS_H264_LEVEL1
					(0x00) – Level 1
					• IMS_SETTINGS_H264_LEVEL1B
					(0x01) – Level 1b
					• IMS_SETTINGS_H264_LEVEL11
					(0x02) – Level 1.1
					• IMS_SETTINGS_H264_LEVEL12
					(0x03) – Level 1.2
					• IMS_SETTINGS_H264_LEVEL13
				-	(0x04) – Level 1.3
					• IMS_SETTINGS_H264_LEVEL2
					(0x05) – Level 2
				7	• IMS_SETTINGS_H264_LEVEL21
					(0x06) – Level 2.1
					• IMS_SETTINGS_H264_LEVEL22
				0	(0x07) – Level 2.2
				2	• IMS_SETTINGS_H264_LEVEL3
			2	x. "OLL.	(0x08) – Level 3
			06.	er.	• IMS_SETTINGS_H264_LEVEL31
			2016.05.17.060.25V	and the second	(0x09) – Level 3.1
			5 10		• IMS_SETTINGS_H264_LEVEL32
			6. hall		(0x0A) – Level 3.2
			201-101		• IMS_SETTINGS_H264_LEVEL4
			100		(0x0B) – Level 4
					• IMS_SETTINGS_H264_LEVEL41
					(0x0C) – Level 4.1
					• IMS_SETTINGS_H264_LEVEL42
					(0x0D) – Level 4.2
					• IMS_SETTINGS_H264_LEVEL5
					(0x0E) – Level 5
					• IMS_SETTINGS_H264_LEVEL51
	0.15				(0x0F) – Level 5.1
Туре	0x13			1	Video Bitrate
Length	2			2	
Value	$\rightarrow$	uint16	video_bitrate	2	Bitrate of the video, in kbps.
Туре	0x14			1	Video Refresh Rate
Length	1			2	
Value	$\rightarrow$	uint8	video_frames_per_second	1	Video refresh rate, in frames per second.
Туре	0x15			1	Video Display Resolution
Length	4			2	

Field	Field	Field	Parameter	Size	Description
	value	type		(byte)	-
Value	$\rightarrow$	enum	video_resolution	4	Resolution of the video display. Values:  • IMS_SETTINGS_SQCIF_  RESOLUTION (0x00) – SQCIF  • IMS_SETTINGS_QCIF_  RESOLUTION (0x01) – QCIF
Туре	0x16				• IMS_SETTINGS_CIF_ RESOLUTION (0x02) – CIF • IMS_SETTINGS_QQVGA_ RESOLUTION (0x03) – QQVGA • IMS_SETTINGS_QVGA_ RESOLUTION (0x04) – QVGA • IMS_SETTINGS_VGA_ RESOLUTION (0x05) – VGA  Video Codec
Length	4			2	Video Codec
Value	$\rightarrow$	enum	video_codec	4 AD	Codec used for the video. Values:  • IMS_SETTINGS_CODEC_MPEG4_ XVID (0x00) – XVID MPEG4 codec  • IMS_SETTINGS_CODEC_MPEG4_ ISO (0x01) – ISO MPEG4 codec  • IMS_SETTINGS_CODEC_H263 (0x02) – H.263 codec  • IMS_SETTINGS_CODEC_H264 (0x03) – H.264 codec
Туре	0x17		C'O'Valus	1	Lipsync Drop Upper Limit
Length	2			2	
Value	$\rightarrow$	uint16	lipsync_drop_upper_limit	2	Lipsync drop upper limit in units of video samples for video clock rate of 90kHz.
Туре	0x18			1	Lipsync Drop Lower Limit
Length	2			2	
Value	$\rightarrow$	uint16	lipsync_drop_lower_limit	2	Lipsync drop lower limit in units of video samples for video clock rate of 90kHz.
Туре	0x19			1	RTP MTU Size
Length	2			2	DEED 16 1 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2
Value	$\rightarrow$	uint16	rtp_mtu_size	2	RTP Maximum Transmission Unit (MTU) size.
Туре	0x1A			1	QDJ Time Warping Enable Option
Length	1	1 1		2	Contract Daily 1 ff (CDD)
Value	$\rightarrow$	boolean	qdj_time_warping_enabled	1	Qualcomm Dejitter buffer (QDJ) time warping. Values:  • TRUE – Enable  • FALSE – Disable
Туре	0x1B			1	QDJ IBA Maximum Value
Length	1			2	

Field	Field	Field	Parameter	Size	Description
	value	type		(byte)	
Value	$\rightarrow$	uint8	qdj_iba_max	1	Maximum number of chances given to a
					frame, which decides underflow in QDJ.
					While dequeuing a frame with sequence
					number x, this value is the maximum
					number of times to wait and look for x
					before moving to the next frame (x+1)
					dequeue.
Туре	0x1C			1	QDJ Maximum Frames to Start Dequeue
Length	1			2	⊕
Value	$\rightarrow$	uint8	qdj_max_frames_at_start	1	Number of frames required in QDJ to
					start a dequeue.
Туре	0x1D			1	QDJ Maximum Dejitter Delay
Length	1			2	
Value	$\rightarrow$	uint8	qdj_max_delay	1	Maximum QDJ dejitter delay, in
					milliseconds.
Туре	0x1E			1	QDJ Minimum Dejitter Delay
Length	1			2	
Value	$\rightarrow$	uint8	qdj_min_delay	1 <	Minimum QDJ dejitter delay, in
				~ 60	milliseconds.
Туре	0x1F			21	QDJ Optimization2 Information
Length	5			2	
Value	$\rightarrow$	boolean	qdj_optimization2_enabled	271	qdj_optimization2 enabled Flag.
		uint16	qdj_go_through_threshold	2	QDJ go through threshold value in
			65 Mg		Frame count, This will be used only
			16, 112		when QDJ optimization 2 is enabled
		uint16	qdj_drop_threshold	2	QDJ drop threshold - Maximum delay in
			200		frame in milliseconds, This will be used
					only when QDJ optimization 2 is enabled
Туре	0x20			1	QDJ Maximum Frames at Run
Length	1			2	
Value	$\rightarrow$	uint8	qdj_max_frames_at_run	1	Maximum number of frames to keep in
					the queue. The oldest frame is dropped if
					received at frame (this value+1).
Туре	0x21			1	QDJ Maximum Bumped Delay
Length	1			2	

Field	Field value	Field type	Parameter	Size (byte)	Description
Value	ightarrow	uint8	qdj_max_bumped_up_ delay	1	QDJ maximum bumped delay, in milliseconds. This is QDJ-specific and used to decide whether to change the maximum target delay if the underflow is too large. The target delay varies from the minimum target delay to the maximum target delay. However, in certain extreme conditions where the underflow is huge or frequent packet bundling occurs, QDJ bumps up the
					target delay to a value higher than the maximum delay, but not greater than the maximum bumped delay.
Type	0x22			1	QDJ Jitter Increment
Length	1			2	
Value	$\rightarrow$	uint8	qdj_jitter_increment	1	QDJ step delay, in milliseconds. This value is used when updating QDJ for each talk spurt.
Туре	0x23			100	QDJ Target Underflow Rate
Length	2		A 174	2	
Value	$\rightarrow$	uint16	qdj_target_underflow	2	Percentage of QDJ underflow, multiplied by 1000.
Туре	0x24		1 2	1	QDJ Drop Threshold
Length	2		(5/ \@ F	2	
Value	$\rightarrow$	uint16	qdj_default_jitter	2	QDJ default jitter: the initial default jitter, in milliseconds, to be added in QDJ play out.
Туре	0x25			1	Gmin
Length	1			2	
Value	$\rightarrow$	uint8	gmin	1	Number of frames in a run that defines a gap and burst matrices in RTCP XR report per RFC 3611.
Туре	0x26			1	Transmit System Delay
Length	1			2	
Value	$\rightarrow$	uint8	tx_system_delay	1	Tx system delay, in milliseconds, that is used to calculate the end system delay in an RTCP XR report.
Туре	0x27			1	Receive System Delay
Length	1			2	
Value	$\rightarrow$	uint8	rx_system_delay	1	Rx system delay, in milliseconds, that is used to calculate the end system delay in an RTCP XR report.
Туре	0x28			1	Audio Offload
Length	1			2	

Field	Field	Field	Parameter	Size	Description
	value	type		(byte)	
Value	$\rightarrow$	enum8	audio_offload	1	Audio offload option. Values:
					• IMS_SETTINGS_AUDIO_OFFLOAD_
					AP (1) – Audio offload to AP
					• IMS_SETTINGS_AUDIO_OFFLOAD_
					NONE (2) – No audio offload
					• IMS_SETTINGS_AUDIO_OFFLOAD_
					MODEM (3) – Audio offload to
					MODEM

# 3.23.3 Description of QMI\_IMS\_SETTINGS\_GET\_MEDIA\_CONFIG REQ/RESP

The request message retrieves the media configuration parameters for the requesting control point. The response message indicates success or failure based on the outcome of the request message processing by the service. The response message returns the media configuration parameters to the control point.

## 3.24 QMI\_IMS\_SETTINGS\_MEDIA\_CONFIG\_IND

Indicates when the media-related configuration parameters change.

#### **IMSS** message ID

0x0035

#### **Version introduced**

Major - 1, Minor - 3

## 3.24.1 Indication - QMI\_IMS\_SETTINGS\_MEDIA\_CONFIG\_IND

#### Message type

Indication

#### Sender

**Settings Service** 

#### Scope

Per control point (unicast)

#### **Mandatory TLVs**

None

Name	Version introduced	Version last modified
H.264 Profile	1.3	1.3
H.264 Level	1.3	1.3
Video Bitrate	1.3	1.3
Video Refresh Rate	1.3	1.3
Video Display Resolution	1.3	1.3
Video Codec	1.3	1.3
Lipsync Drop Upper Limit	1.29	1.29
Lipsync Drop Lower Limit	1.29	1.29
RTP MTU Size	1.29	1.29
QDJ Time Warping Enable Option	1.29	1.29
QDJ IBA Maximum Value	1.29	1.29
QDJ Maximum Frames to Start Dequeue	1.29	1.29
QDJ Maximum Dejitter Delay	1.29	1.29
QDJ Minimum Dejitter Delay	1.29	1.29
QDJ Optimization2 Information	1.29	1.29
QDJ Maximum Frames at Run	1.29	1.29
QDJ Maximum Bumped Delay	1.29	1.29

Name	Version introduced	Version last modified
QDJ Jitter Increment	1.29	1.29
QDJ Target Underflow Rate	1.29	1.29
QDJ Drop Threshold	1.29	1.29
Gmin	1.29	1.29
Transmit System Delay	1.29	1.29
Receive System Delay	1.29	1.29
Audio Offload	1.29	1.29

Field	Field	Field	Parameter	Size	Description
	value	type		(byte)	
Туре	0x10			1	H.264 Profile
Length	4			2	
Value	$\rightarrow$	enum	h264_profile	4	Profile used for H.264 codec. Values:
					• IMS_SETTINGS_H264_PROFILE_
					BASELINE (0x00) – Baseline profile
					• IMS_SETTINGS_H264_PROFILE_
					MAIN (0x01) – Main profile
					• IMS_SETTINGS_H264_PROFILE_
				00	EXTENDED (0x02) – Extended profile
				2	• IMS_SETTINGS_H264_PROFILE_
			2	X. Oll	HIGH (0x03) – High profile
Туре	0x11		6.	I'	H.264 Level
Length	4		N 049	2	

Field	Field	Field	Parameter	Size	Description
	value	type		(byte)	·
Value	$\rightarrow$	enum	h264_level	4	Level used for H.264 codec. Values:
					• IMS_SETTINGS_H264_LEVEL1
					(0x00) – Level 1
					• IMS_SETTINGS_H264_LEVEL1B
					(0x01) – Level 1b
					• IMS_SETTINGS_H264_LEVEL11
					(0x02) – Level 1.1
					• IMS_SETTINGS_H264_LEVEL12
					(0x03) – Level 1.2
					• IMS_SETTINGS_H264_LEVEL13
					(0x04) – Level 1.3
				- 0	• IMS_SETTINGS_H264_LEVEL2
				-	(0x05) – Level 2
					• IMS_SETTINGS_H264_LEVEL21
					(0x06) – Level 2.1
					• IMS_SETTINGS_H264_LEVEL22
			, 0		(0x07) – Level 2.2 • IMS_SETTINGS_H264_LEVEL3
				6	(0x08) – Level 3
				187	• IMS_SETTINGS_H264_LEVEL31
				N. W.	(0x09) – Level 3.1
			63	100.	• IMS_SETTINGS_H264_LEVEL32
			10,9	0	(0x0A) – Level 3.2
			2016-05-17 06 25		• IMS_SETTINGS_H264_LEVEL4
		1	0, 340		(0x0B) – Level 4
			10, 11,		• IMS_SETTINGS_H264_LEVEL41
			27, 000		(0x0C) – Level 4.1
			0.0		• IMS_SETTINGS_H264_LEVEL42
					(0x0D) – Level 4.2
					• IMS_SETTINGS_H264_LEVEL5
					(0x0E) – Level 5
					• IMS_SETTINGS_H264_LEVEL51
					(0x0F) – Level 5.1
Туре	0x12			1	Video Bitrate
Length	2			2	
Value	$\rightarrow$	uint16	video_bitrate	2	Bitrate of the video, in kbps.
Туре	0x13			1	Video Refresh Rate
Length	1			2	
Value	$\rightarrow$	uint8	video_frames_per_second	1	Video refresh rate, in frames per second.
Туре	0x14			1	Video Display Resolution
Length	4			2	

Field	Field	Field	Parameter	Size	Description
	value	type		(byte)	
Value	$\rightarrow$	enum	video_resolution	4	Resolution of the video display. Values:
					• IMS_SETTINGS_SQCIF_
					RESOLUTION (0x00) – SQCIF
					• IMS_SETTINGS_QCIF_
					RESOLUTION (0x01) – QCIF
					• IMS_SETTINGS_CIF_
					RESOLUTION (0x02) – CIF
					• IMS_SETTINGS_QQVGA_
					RESOLUTION (0x03) – QQVGA
					• IMS_SETTINGS_QVGA_
					RESOLUTION (0x04) – QVGA
					• IMS_SETTINGS_VGA_
					RESOLUTION (0x05) – VGA
Туре	0x15			1	Video Codec
	4			2	Video Codec
Length			aidea aadaa	4	Codec used for the video. Values:
Value	$\rightarrow$	enum	video_codec	4	
				1	• IMS_SETTINGS_CODEC_MPEG4_
				_	XVID (0x00) – XVID MPEG4 codec
				~ 6\	• IMS_SETTINGS_CODEC_MPEG4_
				2	ISO (0x01) – ISO MPEG4 codec
			2	x. Oll.	• IMS_SETTINGS_CODEC_H263
			00.	E. J.	(0x02) - H.263 codec
			1 25		• IMS_SETTINGS_CODEC_H264
					(0x03) - H.264 codec
Туре	0x16	1	E. Lan	1	Lipsync Drop Upper Limit
Length	2		07.7	2	
Value	$\rightarrow$	uint16	lipsync_drop_upper_limit	2	Lipsync drop upper limit in units of
			5		video samples for video clock rate of
					90kHz.
Туре	0x17			1	Lipsync Drop Lower Limit
Length	2			2	1 7 1
Value	$\rightarrow$	uint16	lipsync_drop_lower_limit	2	Lipsync drop lower limit in units of
			Folia - arob - 10 Wei - mint	_	video samples for video clock rate of
					90kHz.
Typo	0x18			1	RTP MTU Size
Type				2	KII WII O SIZA
Length	2				DTD MTH ::
Value	$\rightarrow$	uint16	rtp_mtu_size	2	RTP MTU size.
Туре	0x19			1	QDJ Time Warping Enable Option
Length	1			2	
Value	$\rightarrow$	boolean	qdj_time_warping_enabled	1	Qualcomm Dejitter buffer (QDJ) time
					warping. Values:
					• TRUE – Enable
					• FALSE – Disable
Туре	0x1A			1	QDJ IBA Maximum Value
Length	1			2	-
9					

Field	Field	Field	Parameter	Size	Description
	value	type		(byte)	
Value	$\rightarrow$	uint8	qdj_iba_max	1	Maximum number of chances given to a
					frame, which decides underflow in QDJ.
					While dequeuing a frame with sequence
					number x, this value is the maximum
					number of times to wait and look for x
					before moving to the next frame $(x+1)$
					dequeue.
Туре	0x1B			1	QDJ Maximum Frames to Start Dequeue
Length	1			2	<b>(S)</b>
Value	$\rightarrow$	uint8	qdj_max_frames_at_start	1	Number of frames required in QDJ to
					start a dequeue.
Туре	0x1C			1 _	QDJ Maximum Dejitter Delay
Length	1			2	
Value	$\rightarrow$	uint8	qdj_max_delay	1	Maximum QDJ dejitter delay, in
					milliseconds.
Туре	0x1D			1	QDJ Minimum Dejitter Delay
Length	1			2	
Value	$\rightarrow$	uint8	qdj_min_delay	1 <	Minimum QDJ dejitter delay, in
				. 60	milliseconds.
Туре	0x1E			11	QDJ Optimization2 Information
Length	5		.0.	2	
Value	$\rightarrow$	boolean	qdj_optimization2_enabled	e <sup>3</sup> 1	qdj_optimization2 enabled Flag.
		uint16	qdj_go_through_threshold	2	QDJ go through threshold value in
			5 10		Frame count, This will be used only
			16 Mai		when QDJ optimization 2 is enabled
		uint16	qdj_drop_threshold	2	QDJ drop threshold - Maximum delay in
			200		frame in milliseconds, This will be used
					only when QDJ optimization 2 is enabled
Туре	0x1F			1	QDJ Maximum Frames at Run
Length	1			2	
Value	$\rightarrow$	uint8	qdj_max_frames_at_run	1	Maximum number of frames to keep in
					the queue. The oldest frame is dropped if
					received at frame (this value+1).
Туре	0x20			1	QDJ Maximum Bumped Delay
Length	1			2	

Field	Field	Field	Parameter	Size	Description
	value	type		(byte)	
Value	$\rightarrow$	uint8	qdj_max_bumped_up_ delay	1	QDJ maximum bumped delay, in milliseconds. This is QDJ-specific and used to decide whether to change the maximum target delay if the underflow is too large. The target delay varies from the minimum target delay to the maximum target delay. However, in certain extreme conditions where the underflow is huge or frequent packet bundling occurs, QDJ bumps up the target delay to a value higher than the maximum delay, but not greater than the maximum bumped delay.
Туре	0x21			1	QDJ Jitter Increment
Length	1			2	
Value	$\rightarrow$	uint8	qdj_jitter_increment		QDJ step delay, in milliseconds. This value is used when updating QDJ for each talk spurt.
Туре	0x22			100	QDJ Target Underflow Rate
Length	2			2	The state of the s
Value	$\rightarrow$	uint16	qdj_target_underflow	2	Percentage of QDJ underflow, multiplied by 1000.
Туре	0x23		N 045	1	QDJ Drop Threshold
Length	2		5/10	2	_
Value	$\rightarrow$	uint16	qdj_default_jitter	2	QDJ default jitter: the initial default jitter, in milliseconds, to be added in QDJ play out.
Type	0x24			1	Gmin
Length	1			2	
Value	$\rightarrow$	uint8	gmin	1	Number of frames in a run that defines a gap and burst matrices in RTCP XR report per RFC 3611.
Туре	0x25			1	Transmit System Delay
Length	1			2	
Value	$\rightarrow$	uint8	tx_system_delay	1	Tx system delay, in milliseconds, that is used to calculate the end system delay in an RTCP XR report.
Туре	0x26			1	Receive System Delay
Length	1			2	
Value	$\rightarrow$	uint8	rx_system_delay	1	Rx system delay, in milliseconds, that is used to calculate the end system delay in an RTCP XR report.
Туре	0x27			1	Audio Offload
Length	1			2	

Field	Field	Field	Parameter	Size	Description
	value	type		(byte)	
Value	$\rightarrow$	enum8	audio_offload	1	Audio offload option. Values:
					• IMS_SETTINGS_AUDIO_OFFLOAD_
					AP (1) – Audio offload to AP
					• IMS_SETTINGS_AUDIO_OFFLOAD_
					NONE (2) – No audio offload
					• IMS_SETTINGS_AUDIO_OFFLOAD_
					MODEM (3) – Audio offload to
					MODEM

## 3.24.2 Description of QMI\_IMS\_SETTINGS\_MEDIA\_CONFIG\_IND

This indication is sent to the control points that have registered for it when there are updates to the media configuration parameters.

#### QMI IMS SETTINGS SET QIPCALL CONFIG 3.25

Sets the IMS QIPCall-related configuration parameters for the requesting control point.

#### **IMSS** message ID

0x0036

#### **Version introduced**

Major - 1, Minor - 7

#### Request - QMI\_IMS\_SETTINGS\_SET\_QIPCALL\_CONFIG\_REQ 3.25.1

Message type

Request							
Sender							
Control point	00						
Mandatory TLVs	27 July						
None Optional TLVs	24.27 P.D. Jah						
Name	Version introduced	Version last modified					
VT Calling Status	1.7	1.7					
Mobile Data Status	1.7	1.7					
VoLTE Status	1.13	1.13					
Emergency Call Timer	1.16	1.16					
VT Quality Selector	1.19	1.19					
Smallest RTP Port Number	1.27	1.27					
Largest RTP Port Number	1.27	1.27					
AMR-WB Octet Aligned Payload Type	1.27	1.27					
AMR-WB Bandwidth Efficient Payload Type	1.27	1.27					
AMR Octet Aligned Payload Type	1.27	1.27					
AMR Bandwidth Efficient Payload Type	1.27	1.27					
DTMF Wideband Payload Type	1.27	1.27					
DTMF Narrowband Payload Type	1.27	1.27					
AMR Default Encoding Mode	1.27	1.27					

Field	Field	Field	Parameter	Size	Description
	value	type		(byte)	
Туре	0x10			1	VT Calling Status
Length	1			2	

Field	Field	Field	Parameter	Size	Description	
	value	type		(byte)	***	
Value	$\rightarrow$	boolean	vt_calling_enabled	1	Values:	
					• TRUE – Enable	
					• FALSE – Disable	
Туре	0x11			1	Mobile Data Status	
Length	1			2		
Value	$\rightarrow$	boolean	mobile_data_enabled	1	Values:	
					• TRUE – Enable	
					• FALSE – Disable	
Туре	0x12			1	VoLTE Status	
Length	1			2		
Value	$\rightarrow$	boolean	volte_enabled	1	Values:	
					• TRUE – Enable	
					• FALSE – Disable	
Туре	0x13		-	1	Emergency Call Timer	
Length	4			2		
Value	$\rightarrow$	uint32	emerg_call_timer	4	Emergency call timer.	
Туре	0x14			1	VT Quality Selector	
Length	4			2 <		
Value	$\rightarrow$	enum	vt_quality_selector	4	Values for video quality in a	
				2	videotelephony (VT) call. If this TLV is	
			2	x. "OLL	not present in the request, a value of	
			06.	e. A.	IMS_SETTINGS_VT_QUALITY_	
			1 24	1000°	LEVEL_0(i.e., high quality) is used.	
			5 36		Values:	
		1	S. C. Mall		• IMS_SETTINGS_VT_QUALITY_	
			07.77		LEVEL_0 (0x00) – VT quality selector	
			120		level 0	
			Ů.		• IMS_SETTINGS_VT_QUALITY_	
					LEVEL_1 (0x01) – VT quality selector	
					level 1	
Туре	0x15			1	Smallest RTP Port Number	
Length	2			2		
Value	$\rightarrow$	uint16	speech_start_port	2	Smallest RTP port number for a speech	
	,		-r	_	codec.	
Туре	0x16			1	Largest RTP Port Number	
Length	2			2	Zagostiti i ottivamooi	
Value	$\xrightarrow{\mathcal{L}}$	uint16	speech_end_port	2	Largest RTP port number for a speech	
value	$\rightarrow$	umitio	specen_end_port		codec.	
Туре	0x17			1	AMR-WB Octet Aligned Payload Type	
	2			2	AMIN-WB OCICI Aligned Fayibad Type	
Length		nin+1.6	ome rub oatat alianad		Dynamia navlaod type for AMD WD '-	
Value	$\rightarrow$	uint16	amr_wb_octet_aligned_	2	Dynamic payload type for AMR-WB in	
			dynamic_pt		octet-aligned packetization.	
_	0.10			4	Valid range of values: 96 to 127.	
Туре	0x18			1	AMR-WB Bandwidth Efficient Payload	
					Type	
Length	2			2		

Field	Field	Field	Parameter	Size	Description
	value	type		(byte)	
Value	$\rightarrow$	uint16	amr_wb_bandwidth_	2	Dynamic payload type for AMR-WB in
			efficient_ dynamic_pt		bandwidth-efficient packetization.
					Valid range of values: 96 to 127.
Туре	0x19			1	AMR Octet Aligned Payload Type
Length	2			2	
Value	$\rightarrow$	uint16	amr_octet_aligned_	2	Dynamic payload type for AMR in
			dynamic_pt		octet-aligned packetization.
					Valid range of values: 96 to 127.
Туре	0x1A			1	AMR Bandwidth Efficient Payload Type
Length	2			2	
Value	$\rightarrow$	uint16	amr_bandwidth_efficient_d	yna <b>2</b> nic_	pDynamic payload type for AMR in
					bandwidth-efficient packetization.
				- 1	Valid range of values: 96 to 127.
Туре	0x1B			1	DTMF Wideband Payload Type
Length	2			2	
Value	$\rightarrow$	uint16	dtmf_wb_dynamic_pt	2	Dynamic payload type for DTMF at
					wideband.
				_<	Valid range of values: 96 to 127.
Туре	0x1C			, k <sup>O</sup>	DTMF Narrowband Payload Type
Length	2			2	
Value	$\rightarrow$	uint16	dtmf_nb_dynamic_pt	2	Dynamic payload type for DTMF at
			00.	E.J.	narrowband.
			1 025		Valid range of values: 96 to 127.
Туре	0x1D		5 3	1	AMR Default Encoding Mode
Length	1		16' Na	2	
Value	$\rightarrow$	uint8	amr_default_mode	1	AMR default encoding mode.
			90		

## 3.25.2 Response - QMI\_IMS\_SETTINGS\_SET\_QIPCALL\_CONFIG\_RSP

### Message type

Response

#### Sender

Settings Service

### **Mandatory TLVs**

The Result Code TLV (defined in Section 2.3.1) is always present in the response.

Name	Version introduced	Version last modified
Result Code	1.7	1.7

### **Optional TLVs**

Name	Version introduced	Version last modified
Settings Standard Response Type	1.7	1.7

Field	Field	Field	Parameter	Size	Description
	value	type		(byte)	
Туре	0x10			1	Settings Standard Response Type
Length	1			2	
Value	$\rightarrow$	enum8	settings_resp	1	A settings-specific error code is returned
					when the standard response error type is
					QMI_ERR_CAUSE_CODE.

# 3.25.3 Description of QMI\_IMS\_SETTINGS\_SET\_QIPCALL\_CONFIG REQ/RESP

The request message from the client sets the IMS QIPCall configuration parameters for the requesting control point. The response message indicates success or failure based on the outcome of the request message processing by the service. When the request message does not contain any configuration parameters, the service does no processing and returns QMI\_RESULT\_SUCCESS.

### 3.26 QMI\_IMS\_SETTINGS\_GET\_QIPCALL\_CONFIG

Retrieves the QIPCall-related configuration parameters.

**IMSS** message ID

0x0037

**Version introduced** 

Major - 1, Minor - 7

### 3.26.1 Request - QMI\_IMS\_SETTINGS\_GET\_QIPCALL\_CONFIG\_REQ

Message type

Request

Sender

Control point

**Mandatory TLVs** 

None

**Optional TLVs** 

None

## 3.26.2 Response - QMI\_IMS\_SETTINGS\_GET\_QIPCALL\_CONFIG\_RSP

Message type

Response

Sender

**Settings Service** 

### **Mandatory TLVs**

The Result Code TLV (defined in Section 2.3.1) is always present in the response.

Name	Version introduced	Version last modified	
Result Code	1.7	1.7	

Name	Version introduced	Version last modified
Settings Standard Response Type	1.7	1.7
VT Calling Status	1.7	1.7
Mobile Data Status	1.7	1.7
VoLTE Status	1.13	1.13
Emergency Call Timer	1.16	1.16
VT Quality Selector	1.19	1.19
Smallest RTP Port Number	1.27	1.27
Largest RTP Port Number	1.27	1.27
AMR-WB Octet Aligned Payload Type	1.27	1.27
AMR-WB Bandwidth Efficient Payload Type	1.27	1.27
AMR Octet Aligned Payload Type	1.27	1.27
AMR Bandwidth Efficient Payload Type	1.27	1.27
DTMF Wideband Payload Type	1.27	1.27
DTMF Narrowband Payload Type	1.27	1.27
AMR Default Encoding Mode	1.27	1.27

Field	Field	Field	Parameter	Size	Description
	value	type		(byte)	
Туре	0x10			, T)	Settings Standard Response Type
Length	1		100,1	2	
Value	$\rightarrow$	enum8	settings_resp	1	A settings-specific error code is returned
		1	05 110		when the standard response error type is
			16 Tho		QMI_ERR_CAUSE_CODE.
Туре	0x11		20,000	1	VT Calling Status
Length	1		96,	2	
Value	$\rightarrow$	boolean	vt_calling_enabled	1	Values:
					• TRUE – Enable
					• FALSE – Disable
Туре	0x12			1	Mobile Data Status
Length	1			2	
Value	$\rightarrow$	boolean	mobile_data_enabled	1	Values:
					• TRUE – Enable
					• FALSE – Disable
Type	0x13			1	VoLTE Status
Length	1			2	
Value	$\rightarrow$	boolean	volte_enabled	1	Values:
					• TRUE – Enable
					• FALSE – Disable
Туре	0x14			1	Emergency Call Timer
Length	4			2	
Value	$\rightarrow$	uint32	emerg_call_timer	4	Emergency call timer.
Туре	0x15			1	VT Quality Selector
Length	4			2	

Field	Field	Field	Parameter	Size	Description
	value	type		(byte)	
Value	$\rightarrow$	enum	vt_quality_selector	4	Values for video quality in a VT call.
					Values:
					• IMS_SETTINGS_VT_QUALITY_
					LEVEL_0 (0x00) – VT quality selector
					level 0
					• IMS_SETTINGS_VT_QUALITY_
					LEVEL_1 (0x01) – VT quality selector
					level 1
Туре	0x16			1	Smallest RTP Port Number
Length	2			2	
Value	$\rightarrow$	uint16	speech_start_port	2	Smallest RTP port number for the speech
					codec.
Туре	0x17			1	Largest RTP Port Number
Length	2			2	
Value	$\rightarrow$	uint16	speech_end_port	2	Largest RTP port number for the speech
					codec.
Туре	0x18			1	AMR-WB Octet Aligned Payload Type
Length	2			2	
Value	$\rightarrow$	uint16	amr_wb_octet_aligned_	200	Dynamic payload type for AMR-WB in
			dynamic_pt	2/2	octet-aligned packetization.
Туре	0x19			×. [0]	AMR-WB Bandwidth Efficient Payload
	_		00,	5 m	Туре
Length	2		7, 92	2	
Value	$\rightarrow$	uint16	amr_wb_bandwidth_	2	Dynamic payload type for AMR-WB in
	0.4.		efficient_dynamic_pt		bandwidth-efficient packetization.
Туре	0x1A		20,00	1	AMR Octet Aligned Payload Type
Length	2		250	2	
Value	$\rightarrow$	uint16	amr_octet_aligned_	2	Dynamic payload type for AMR in
	0.45		dynamic_pt		octet-aligned packetization.
Туре	0x1B			1	AMR Bandwidth Efficient Payload Type
Length	2	1 .16	1 1 11 60	2	B
Value	$\rightarrow$	uint16	amr_bandwidth_efficient_	2	Dynamic payload type for AMR in
	0.46		dynamic_pt		bandwidth-efficient packetization.
Туре	0x1C			1	DTMF Wideband Payload Type
Length	2			2	
Value	$\rightarrow$	uint16	dtmf_wb_dynamic_pt	2	Dynamic payload type for DTMF at wideband.
Туре	0x1D			1	DTMF Narrowband Payload Type
Length	2			2	
			1, C 1 1	2	Dynamic payload type for DTMF at
Value	$\rightarrow$	uint16	dtmf_nb_dynamic_pt	~	Dynamic payload type for DTMT at
Value		uint16	dtmf_nb_dynamic_pt	2	narrowband.
Value Type		uint16	dtmr_nb_dynamic_pt	1	
	$\rightarrow$	uint16	dtmr_nb_dynamic_pt		narrowband.

## 3.26.3 Description of QMI\_IMS\_SETTINGS\_GET\_QIPCALL\_CONFIG REQ/RESP

The request message retrieves the QIPCall configuration parameters for the requesting control point. The response message indicates success or failure based on the outcome of the request message processing by the service. The response message returns the QIPCall configuration parameters to the control point.



## 3.27 QMI\_IMS\_SETTINGS\_QIPCALL\_CONFIG\_IND

Indicates when the QIPCall-related configuration parameters change.

**IMSS** message ID

0x0038

**Version introduced** 

Major - 1, Minor - 7

## 3.27.1 Indication - QMI\_IMS\_SETTINGS\_QIPCALL\_CONFIG\_IND

Message type

Indication

Sender

**Settings Service** 

Scope

Per control point (unicast)

**Mandatory TLVs** 

None

Name	Version introduced	Version last modified
VT Calling Status	1.7	1.7
Mobile Data Status	1.7	1.7
VoLTE Status	1.13	1.13
Emergency Call Timer	1.16	1.16
VT Quality Selector	1.19	1.19
Smallest RTP Port Number	1.27	1.27
Largest RTP Port Number	1.27	1.27
AMR-WB Octet Aligned Payload Type	1.27	1.27
AMR-WB Bandwidth Efficient Payload Type	1.27	1.27
AMR Octet Aligned Payload Type	1.27	1.27
AMR Bandwidth Efficient Payload Type	1.27	1.27
DTMF Wideband Payload Type	1.27	1.27
DTMF Narrowband Payload Type	1.27	1.27
AMR Default Encoding Mode	1.27	1.27

Field	Field	Field	Parameter	Size	Description
	value	type		(byte)	•
Туре	0x10			1	VT Calling Status
Length	1			2	-
Value	$\rightarrow$	boolean	vt_calling_enabled	1	Values:
			_ &_		• TRUE – Enable
					• FALSE – Disable
Туре	0x11			1	Mobile Data Status
Length	1			2	
Value	$\rightarrow$	boolean	mobile_data_enabled	1	Values:
					• TRUE – Enable
					• FALSE – Disable
Туре	0x12			1	VoLTE Status
Length	1			2	
Value	$\rightarrow$	boolean	volte_enabled	1	Values:
			_		• TRUE – Enable
					• FALSE – Disable
Туре	0x13			1	Emergency Call Timer
Length	4			2	-
Value	$\rightarrow$	uint32	emerg_call_timer	4 <	Emergency call timer.
Туре	0x14			.100	VT Quality Selector
Length	4			2	
Value	$\rightarrow$	enum	vt_quality_selector	4	Values for video quality in a VT call.
			06.	E. J.	Values:
		1	V 200		• IMS_SETTINGS_VT_QUALITY_
			5,00		LEVEL_0 (0x00) – VT quality selector
			6. (13)		level 0
			20,00		• IMS_SETTINGS_VT_QUALITY_
			Sec.		LEVEL_1 (0x01) – VT quality selector
					level 1
Туре	0x15			1	Smallest RTP Port Number
Length	2			2	
Value	$\rightarrow$	uint16	speech_start_port	2	Smallest RTP port number for the speech
					codec.
Туре	0x16			1	Largest RTP Port Number
Length	2			2	
Value	$\rightarrow$	uint16	speech_end_port	2	Largest RTP port number for the speech
			-		codec.
Туре	0x17			1	AMR-WB Octet Aligned Payload Type
Length	2			2	
Value	$\rightarrow$	uint16	amr_wb_octet_aligned_	2	Dynamic payload type for AMR-WB in
			dynamic_pt		octet-aligned packetization.
Туре	0x18		*	1	AMR-WB Bandwidth Efficient Payload
.					Type
Length	2			2	
Value	$\rightarrow$	uint16	amr_wb_bandwidth_	2	Dynamic payload type for AMR-WB in
			efficient_dynamic_pt		bandwidth-efficient packetization.
			·	1	4
Туре	0x19			1	AMR Octet Aligned Payload Type

Field	Field	Field	Parameter	Size	Description
	value	type		(byte)	
Value	$\rightarrow$	uint16	amr_octet_aligned_	2	Dynamic payload type for AMR in
			dynamic_pt		octet-aligned packetization.
Туре	0x1A			1	AMR Bandwidth Efficient Payload Type
Length	2			2	
Value	$\rightarrow$	uint16	amr_bandwidth_efficient_	2	Dynamic payload type for AMR in
			dynamic_pt		bandwidth-efficient packetization.
Туре	0x1B			1	DTMF Wideband Payload Type
Length	2			2	
Value	$\rightarrow$	uint16	dtmf_wb_dynamic_pt	2	Dynamic payload type for DTMF at
					wideband.
Туре	0x1C			1	DTMF Narrowband Payload Type
Length	2			2	
Value	$\rightarrow$	uint16	dtmf_nb_dynamic_pt	2	Dynamic payload type for DTMF at
					narrowband.
Туре	0x1D			1	AMR Default Encoding Mode
Length	1			2	
Value	$\rightarrow$	uint8	amr_default_mode	1	AMR default encoding mode.

## 3.27.2 Description of QMI\_IMS\_SETTINGS\_QIPCALL\_CONFIG\_IND

This indication is sent to the control points that have registered for it when there are updates to the QIPCall configuration parameters.

## 3.28 QMI\_IMS\_SETTINGS\_GET\_SIP\_READ\_ONLY\_CONFIG

Retrieves the SIP read-only-related configuration parameters.

IMSS message ID

0x0039

Version introduced

Major - 1, Minor - 7

# 3.28.1 Request - QMI\_IMS\_SETTINGS\_GET\_SIP\_READ\_ONLY\_- CONFIG\_REQ

Message type

Request

Sender

Control point

**Mandatory TLVs** 

None

**Optional TLVs** 

None

# 3.28.2 Response - QMI\_IMS\_SETTINGS\_GET\_SIP\_READ\_ONLY\_- CONFIG\_RSP

Message type

Response

Sender

**Settings Service** 

#### **Mandatory TLVs**

The Result Code TLV (defined in Section 2.3.1) is always present in the response.

Name	Version introduced	Version last modified	
Result Code	1.7	1.7	

Name	Version introduced	Version last modified
Settings Response	1.7	1.7
Timer T4	1.7	1.7
TCP Threshold Value	1.7	1.7
Compact Form Enabled	1.7	1.7
Authentication Scheme	1.7	1.7
Initial Authorization Type	1.7	1.7
Authorization Header Value	1.7	1.7
Proxy Route Value	1.7	1.7

Field	Field	Field	Parameter	Size	Description
	value	type		(byte)	
Туре	0x10			1	Settings Response
Length	1			2	
Value	$\rightarrow$	enum8	settings_resp	1	A settings-specific error code is returned
					when the standard response error type is
				_	QMI_ERR_CAUSE_CODE.
Туре	0x11			100	Timer T4
Length	4			2	
Value	$\rightarrow$	uint32	timer_t4	4	Maximum duration, in milliseconds, that
			06.	E. J.	a message remains in the network.
Туре	0x12		V 200	1	TCP Threshold Value
Length	2		5 5	2	
Value	$\rightarrow$	uint16	tcp_threshold_value	2	Defines the packet size limiting value, in
			20,000		bytes.
Туре	0x13		200	1	Compact Form Enabled
Length	1			2	*
Value	$\rightarrow$	boolean	compact_form_enabled	1	Indicates whether the SIP compact form
			. – –		is enabled.
Туре	0x14			1	Authentication Scheme
Length	4			2	
Value	$\rightarrow$	enum	settings_auth_scheme	4	Authentication scheme configuration.
					Values:
					• IMS_SETTINGS_CONFIG_AUTH_
					SCHEME_NONE (0x00) – No scheme
					used
					• IMS_SETTINGS_CONFIG_AUTH_
					SCHEME_DIGEST (0x01) – Digest
					• IMS_SETTINGS_CONFIG_AUTH_
					SCHEME_SAG (0x02) – Token
					• IMS_SETTINGS_CONFIG_AUTH_
					SCHEME_AKA (0x03) – AKA
					• IMS_SETTINGS_CONFIG_AUTH_
					SCHEME_CAVE (0x04) – CAVE
					• IMS_SETTINGS_CONFIG_AUTH_
					SCHEME_AKAV2 (0x05) – AKAv2

Field	Field	Field	Parameter	Size	Description
	value	type		(byte)	
Туре	0x15			1	Initial Authorization Type
Length	4			2	
Value	$\rightarrow$	enum	settings_initial_auth_config	4	Initial authorization type value. Values:
					• IMS_SETTINGS_CONFIG_INITIAL_
					$AUTH_NONE (0x00) - None$
					• IMS_SETTINGS_CONFIG_INITIAL_
					AUTH_AUTHORIZATION (0x01) -
					Authorization
					• IMS_SETTINGS_CONFIG_INITIAL_
					AUTH_PROXY_AUTHORIZATION
					(0x02) – Proxy authorization
Туре	0x16			1 _	Authorization Header Value
Length	Var			2	
Value	$\rightarrow$	string	auth_header_value	Var	Authorization header value.
Туре	0x17			1	Proxy Route Value
Length	Var			2	
Value	$\rightarrow$	string	proxy_route_value	Var	Route value to be used by the shared
				_	configuration.

# 3.28.3 Description of QMI\_IMS\_SETTINGS\_GET\_SIP\_READ\_ONLY\_CONFIG REQ/RESP

The request message from the client gets the SIP configuration read-only parameters from the requesting control point. The response message indicates success or failure based on the outcome of the request message processing by the service. The response message returns the SIP configuration parameters to the control point.

### 3.29 QMI\_IMS\_SETTINGS\_SIP\_READ\_ONLY\_CONFIG\_IND

Indicates when the SIP read-only-related configuration parameters change.

**IMSS** message ID

0x003A

**Version introduced** 

Major - 1, Minor - 7

### 3.29.1 Indication - QMI\_IMS\_SETTINGS\_SIP\_READ\_ONLY\_CONFIG\_IND

Message type

Indication

Sender

**Settings Service** 

Scope

Per control point (unicast)

**Mandatory TLVs** 

None

Name	Version introduced	Version last modified
Timer T4	1.7	1.7
TCP Threshold Value	1.7	1.7
Compact Form Enabled	1.7	1.7
Authentication Scheme	1.7	1.7
Initial Authorization Type	1.7	1.7
Authorization Header Value	1.7	1.7
Proxy Route Value	1.7	1.7

Field	Field	Field	Parameter	Size	Description
	value	type		(byte)	
Туре	0x10			1	Timer T4
Length	4			2	
Value	$\rightarrow$	uint32	timer_t4	4	Maximum duration, in milliseconds, that
					a message remains in the network.
Туре	0x11			1	TCP Threshold Value
Length	2			2	
Value	$\rightarrow$	uint16	tcp_threshold_value	2	Packet size limiting value, in bytes.

Field	Field	Field	Parameter	Size	Description
	value	type		(byte)	
Туре	0x12			1	Compact Form Enabled
Length	1			2	
Value	$\rightarrow$	boolean	compact_form_enabled	1	Indicates whether the SIP compact form
					is enabled.
Туре	0x13			1	Authentication Scheme
Length	4			2	
Value	$\rightarrow$	enum	settings_auth_scheme	4	Authentication scheme configuration.
					Values:
					• IMS_SETTINGS_CONFIG_AUTH_
					SCHEME_NONE (0x00) – No scheme
					used
					• IMS_SETTINGS_CONFIG_AUTH_
				-	SCHEME_DIGEST (0x01) – Digest
					• IMS_SETTINGS_CONFIG_AUTH_
					SCHEME_SAG (0x02) – Token
					• IMS_SETTINGS_CONFIG_AUTH_
					SCHEME_AKA (0x03) – AKA
				_	• IMS_SETTINGS_CONFIG_AUTH_
				~ 60	SCHEME_CAVE (0x04) – CAVE
				2/2	• IMS_SETTINGS_CONFIG_AUTH_
			,2	x. 'O',	SCHEME_AKAV2 (0x05) – AKAv2
Туре	0x14		00.	1/3	Initial Authorization Type
Length	4		V 25	2	
Value	$\rightarrow$	enum	settings_initial_auth_config	4	Initial authorization type value. Values:
			2016-0 Than		• IMS_SETTINGS_CONFIG_INITIAL_
			30,00		AUTH_NONE (0x00) – None
			Ser		• IMS_SETTINGS_CONFIG_INITIAL_
					AUTH_AUTHORIZATION (0x01) –
					Authorization
					• IMS_SETTINGS_CONFIG_INITIAL_
					AUTH_PROXY_AUTHORIZATION
	0.15			-	(0x02) – Proxy authorization
Туре	0x15			1	Authorization Header Value
Length	Var			2	
Value	$\rightarrow$	string	auth_header_value	Var	Authorization header value.
Туре	0x16			1	Proxy Route Value
Length	Var			2	
Value	$\rightarrow$	string	proxy_route_value	Var	Route value to be used by the shared
					configuration.

## 3.29.2 Description of QMI\_IMS\_SETTINGS\_SIP\_READ\_ONLY\_CONFIG\_-IND

This indication is sent to the control points that have registered for it when there are updates to the SIP read-only configuration parameters.



# 3.30 QMI\_IMS\_SETTINGS\_GET\_NETWORK\_READ\_ONLY\_CONFIG

Retrieves the network read-only-related configuration parameters.

**IMSS** message ID

0x003D

Version introduced

Major - 1, Minor - 7

# 3.30.1 Request - QMI\_IMS\_SETTINGS\_GET\_NETWORK\_READ\_ONLY\_- CONFIG\_REQ

Message type

Request

Sender

Control point

**Mandatory TLVs** 

None

**Optional TLVs** 

None

# 3.30.2 Response - QMI\_IMS\_SETTINGS\_GET\_NETWORK\_READ\_ONLY\_- CONFIG\_RSP

Message type

Response

Sender

Settings Service

### **Mandatory TLVs**

The Result Code TLV (defined in Section 2.3.1) is always present in the response.

Name	Version introduced	Version last modified	
Result Code	1.7	1.7	

Name	Version introduced	Version last modified
Settings Response	1.7	1.7
IPv6 Enabled	1.7	1.7
IPSec Integrity Scheme	1.7	1.7
IPSec Encryption Algorithm	1.7	1.7
Chunk Size of MSRP Packet	1.19	1.19

Field	Field	Field	Parameter	Size	Description
	value	type		(byte)	
Туре	0x10			1	Settings Response
Length	1			2	A.
Value	$\rightarrow$	enum8	settings_resp	$\mathcal{N}_{\mathcal{N}}$	A settings-specific error code is returned
			6	1.00	when the standard response error type is
			1000	~ ·	QMI_ERR_CAUSE_CODE.
Туре	0x11		, , , , , , , , , , , , , , , , , , ,	1	IPv6 Enabled
Length	1		0, 400	2	
Value	$\rightarrow$	boolean	ipv6_enabled	1	Indicates whether the IPV6 address is
			N. 301.		enabled.
Туре	0x12		00	1	IPSec Integrity Scheme
Length	8			2	
Value	$\rightarrow$	mask	ip_sec_int_scheme	8	Bitmask indicating the integrity
					algorithm combination. Values:
					• IMS_SETTINGS_INTEG_ALGO_
					HMAC_SHA_1_96 (0x01) -
					HMAC-SHA-1-96 algorithm is used for
					IPSec integrity
					• IMS_SETTINGS_INTEG_ALGO_
					HMAC_MD5_96 (0x02) -
					HMAC-MD5-96 algorithm is used for
					IPSec integrity
Туре	0x13			1	IPSec Encryption Algorithm
Length	8			2	

Field	Field	Field	Parameter	Size	Description
	value	type		(byte)	
Value	$\rightarrow$	mask	ip_sec_enc_algo	8	Bitmask indicating the IPSec encryption
					algorithm combination. Values:
					<ul><li>IMS_SETTINGS_ENCRYPT_</li></ul>
					ALGO_NULL (0x01) – NULL
					algorithm is used for IPSec encryption
					<ul><li>IMS_SETTINGS_ENCRYPT_</li></ul>
					ALGO_AES_CBC (0x02) – AES-CBC
					algorithm is used for IPSec encryption
					<ul><li>IMS_SETTINGS_ENCRYPT_</li></ul>
					ALGO_DES_EDE3_CBC (0x04) -
					DES-EDE3-CBC algorithm is used for
					IPSec encryption
Туре	0x14			1	Chunk Size of MSRP Packet
Length	2			2	
Value	$\rightarrow$	uint16	msrp_pkt_size	2	Indicates MSRP packet chunk size in KB
					(kilobytes). Default value: 2KB.

# 3.30.3 Description of QMI\_IMS\_SETTINGS\_GET\_NETWORK\_READ\_-ONLY\_CONFIG REQ/RESP

The request message retrieves the network read-only configuration parameters from the requesting control point. The response message indicates success or failure based on the outcome of the request message processing by the service. The response message returns the network read-only configuration parameters to the control point.

# 3.31 QMI\_IMS\_SETTINGS\_NETWORK\_READ\_ONLY\_CONFIG\_-IND

Indicates when the network read-only-related configuration parameters change.

IMSS message ID

0x003E

Version introduced

Major - 1, Minor - 7

# 3.31.1 Indication - QMI\_IMS\_SETTINGS\_NETWORK\_READ\_ONLY\_- CONFIG\_IND

Message type

Indication

Sender

**Settings Service** 

Scope

Per control point (unicast)

**Mandatory TLVs** 

None

Name	Version introduced	Version last modified
IPv6 Enabled	1.7	1.7
IPSec Integrity Scheme	1.7	1.7
IPSec Encryption Algorithm	1.7	1.7
Chunk Size of MSRP Packet	1.19	1.19

Field	Field	Field	Parameter	Size	Description
	value	type		(byte)	
Туре	0x10			1	IPv6 Enabled
Length	1			2	
Value	$\rightarrow$	boolean	ipv6_enabled	1	Indicates whether the IPv6 address is
					enabled.
Туре	0x11			1	IPSec Integrity Scheme
Length	8			2	

Field	Field	Field	Parameter	Size	Description	
	value	type		(byte)		
Value	$\rightarrow$	mask	ip_sec_int_scheme	8	Bitmask indicating the integrity	
					algorithm combination. Values:	
					• IMS_SETTINGS_INTEG_ALGO_	
					HMAC_SHA_1_96 (0x01) -	
					HMAC-SHA-1-96 algorithm is used for	
					IPSec integrity	
					• IMS_SETTINGS_INTEG_ALGO_	
					HMAC_MD5_96 (0x02) -	
					HMAC-MD5-96 algorithm is used for	
					IPSec integrity	
Туре	0x12			1	IPSec Encryption Algorithm	
Length	8			2		
Value	$\rightarrow$	mask	ip_sec_enc_algo	8	Bitmask indicating the IPSec encryption	
					algorithm combination. Values:	
					• IMS_SETTINGS_ENCRYPT_	
					ALGO_NULL (0x01) – NULL	
					algorithm is used for IPSec encryption	
				_	• IMS_SETTINGS_ENCRYPT_	
				.00	ALGO_AES_CBC (0x02) – AES-CBC	
				2 1	algorithm is used for IPSec encryption	
			2	x. 'OU.	• IMS_SETTINGS_ENCRYPT_	
			06.	E. J.	ALGO_DES_EDE3_CBC (0x04) -	
			N 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	and the second	DES-EDE3-CBC algorithm is used for	
			5 10		IPSec encryption	
Туре	0x13		6, 4311	1	Chunk Size of MSRP Packet	
Length	2		20,00	2		
Value	$\rightarrow$	uint16	msrp_pkt_size	2	Indicates MSRP packet chunk size in KB	
			V		(kilobytes). Default value: 2 kB.	

# 3.31.2 Description of QMI\_IMS\_SETTINGS\_NETWORK\_READ\_ONLY\_-CONFIG\_IND

This indication is sent to the control points that have registered for it when there are updates to the network read-only configuration parameters.

### 3.32 QMI\_IMS\_SETTINGS\_GET\_VOIP\_READ\_ONLY\_CONFIG

Retrieves the VoIP read-only-related configuration parameters.

IMSS message ID

0x003F

Version introduced

Major - 1, Minor - 10

# 3.32.1 Request - QMI\_IMS\_SETTINGS\_GET\_VOIP\_READ\_ONLY\_- CONFIG\_REQ

Message type

Request

Sender

Control point

**Mandatory TLVs** 

None

**Optional TLVs** 

None

# 3.32.2 Response - QMI\_IMS\_SETTINGS\_GET\_VOIP\_READ\_ONLY\_- CONFIG\_RSP

Message type

Response

Sender

**Settings Service** 

#### **Mandatory TLVs**

The Result Code TLV (defined in Section 2.3.1) is always present in the response.

Name	Version introduced	Version last modified
Result Code	1.10	1.10

### **Optional TLVs**

Name	Version introduced	Version last modified
Settings Response	1.10	1.10
VoIP Configuration Expiration	1.10	1.10
VoIP Session Timer Enabled	1.10	1.10

Field	Field	Field	Parameter	Size	Description
	value	type		(byte)	
Туре	0x10			1	Settings Response
Length	1			2	
Value	$\rightarrow$	enum8	settings_resp	1	A settings-specific error code is returned
					when the standard response error type is
					QMI_ERR_CAUSE_CODE.
Туре	0x11			1	VoIP Configuration Expiration
Length	2			2	
Value	$\rightarrow$	uint16	voip_config_expires	2	VoIP configuration expiration timer.
Туре	0x12			1	VoIP Session Timer Enabled
Length	1			2 <	
Value	$\rightarrow$	boolean	voip_session_timer_	12	Indicates whether the VoIP session is
			enabled	2	timer enabled.

# 3.32.3 Description of QMI\_IMS\_SETTINGS\_GET\_VOIP\_READ\_ONLY\_CONFIG REQ/RESP

The request message retrieves the VoIP read-only configuration parameters from the requesting control point. The response message indicates success or failure based on the outcome of the request message processing by the service. The response message returns the VoIP read-only configuration parameters to the control point.

### 3.33 QMI\_IMS\_SETTINGS\_GET\_USER\_READ\_ONLY\_CONFIG

Retrieves the user read-only-related configuration parameters.

IMSS message ID

0x0040

Version introduced

Major - 1, Minor - 10

# 3.33.1 Request - QMI\_IMS\_SETTINGS\_GET\_USER\_READ\_ONLY\_- CONFIG\_REQ

Message type

Request

Sender

Control point

**Mandatory TLVs** 

None

**Optional TLVs** 

None

# 3.33.2 Response - QMI\_IMS\_SETTINGS\_GET\_USER\_READ\_ONLY\_- CONFIG\_RSP

Message type

Response

Sender

**Settings Service** 

### **Mandatory TLVs**

The Result Code TLV (defined in Section 2.3.1) is always present in the response.

Name	Version introduced	Version last modified
Result Code	1.10	1.10

### **Optional TLVs**

Name	Version introduced	Version last modified
Settings Response	1.10	1.10
Registration Configuration User Name	1.10	1.10
Registration Configuration Private URI	1.10	1.10
Registration Configuration Display Name	1.12	1.12

Field	Field	Field	Parameter	Size	Description
	value	type		(byte)	•
Туре	0x10			1	Settings Response
Length	1			2	
Value	$\rightarrow$	enum8	settings_resp	1	A settings-specific error code is returned
					when the standard response error type is
					QMI_ERR_CAUSE_CODE.
Туре	0x11			1	Registration Configuration User Name
Length	Var			2	
Value	$\rightarrow$	string	reg_config_userName	Var	Registration configuration user name.
Туре	0x12			1 <	Registration Configuration Private URI
Length	Var			2	2
Value	$\rightarrow$	string	reg_config_privateURI	Var	Registration configuration private URI.
Туре	0x13		.0	, To,	Registration Configuration Display
			00,	54.	Name
Length	Var	1	7 62	2	
Value	$\rightarrow$	string16	reg_config_displayName	Var	Registration configuration display name.

### 3.33.3 Description of QMI\_IMS\_SETTINGS\_GET\_USER\_READ\_ONLY\_-CONFIG REQ/RESP

The request message retrieves the user read-only configuration parameters from the requesting control point. The response message indicates success or failure based on the outcome of the request message processing by the service. The response message returns the user read-only configuration parameters to the control point.

# 3.34 QMI\_IMS\_SETTINGS\_GET\_REG\_MGR\_READ\_ONLY\_CONFIG

Retrieves the registration manager read-only-related configuration parameters.

**IMSS** message ID

0x0041

Version introduced

Major - 1, Minor - 10

# 3.34.1 Request - QMI\_IMS\_SETTINGS\_GET\_REG\_MGR\_READ\_ONLY\_- CONFIG\_REQ

Message type

Request

Sender

Control point

**Mandatory TLVs** 

None

**Optional TLVs** 

None

# 3.34.2 Response - QMI\_IMS\_SETTINGS\_GET\_REG\_MGR\_READ\_ONLY\_- CONFIG\_RSP

Message type

Response

Sender

Settings Service

### **Mandatory TLVs**

The Result Code TLV (defined in Section 2.3.1) is always present in the response.

Name	Version introduced	Version last modified
Result Code	1.10	1.10

Name	Version introduced	Version last modified
Settings Response	1.10	1.10
Registration Configuration Mode	1.10	1.10
RegMgr PDP Profile Name	1.10	1.10

Field	Field	Field	Parameter	Size	Description
	value	type		(byte)	
Туре	0x10			1	Settings Response
Length	1			2	
Value	$\rightarrow$	enum8	settings_resp	1,0	A settings-specific error code is returned
				184	when the standard response error type is
				N. W.	QMI_ERR_CAUSE_CODE.
Туре	0x11		63	1.P	Registration Configuration Mode
Length	4		10,5	2	
Value	$\rightarrow$	enum	settings_regmgr_mode_	4	Registration configuration mode value.
		1	config		Values:
			config		<ul><li>IMS_SETTINGS_REGMGR_CONFIG_</li></ul>
			2000		IETF (0x00) – IETF Configuration mode
			80		• IMS_SETTINGS_REGMGR_CONFIG_
					EARLY_IMS (0x01) – Early IMS
					Configuration mode
					<ul><li>IMS_SETTINGS_REGMGR_CONFIG_</li></ul>
					IMS $(0x02)$ – IMS Configuration mode
					• IMS_SETTINGS_REGMGR_CONFIG_
					$IMS_NO_IPSEC (0x03) - IMS No$
					IPSec Configuration mode
					<ul><li>IMS_SETTINGS_REGMGR_CONFIG_</li></ul>
					IMS_NONE $(0x04)$ – No configuration
					mode
Туре	0x12			1	RegMgr PDP Profile Name
Length	Var			2	
Value	$\rightarrow$	string	regmgr_pdp_profilename	Var	Registration manager PDP profile name.

# 3.34.3 Description of QMI\_IMS\_SETTINGS\_GET\_REG\_MGR\_READ\_-ONLY CONFIG REQ/RESP

The request message retrieves the registration manager read-only configuration parameters from the requesting control point. The response message indicates success or failure based on the outcome of the request message processing by the service. The response message returns the registration manager read-only configuration parameters to the control point.



# 3.35 QMI\_IMS\_SETTINGS\_GET\_RCS\_AUTO\_CONFIG\_READ\_-ONLY\_CONFIG

Retrieves the RCS automatic configuration read-only-related configuration parameters.

**IMSS** message ID

0x0042

Version introduced

Major - 1, Minor - 10

3.35.1 Request - QMI\_IMS\_SETTINGS\_GET\_RCS\_AUTO\_CONFIG\_-READ\_ONLY\_CONFIG\_REQ

Message type

Request

Sender

Control point

**Mandatory TLVs** 

None

**Optional TLVs** 

None

3.35.2 Response - QMI\_IMS\_SETTINGS\_GET\_RCS\_AUTO\_CONFIG\_-READ\_ONLY\_CONFIG\_RSP

Message type

Response

Sender

Settings Service

### **Mandatory TLVs**

The Result Code TLV (defined in Section 2.3.1) is always present in the response.

Name	Version introduced	Version last modified
Result Code	1.10	1.10

Name	Version introduced	Version last modified
Settings Response	1.10	1.10
Device Type	1.10	1.10
RCS PDP Profile Name	1.10	1.10
Internet PDP Profile Name	1.10	1.10
PCO Configuration Priority	1.10	1.10
ISIM Configuration Priority	1.10	1.10
Preconfiguration Priority	1.10	1.10
Automatic Configuration Priority	1.10	1.10
RCS LTE FT List	1.10	1.10
RCS HSPA FT List	1.10	1.10
RCS Wi-Fi FT List	1.10	1.10
Disable Auto Configuration	1.16	1.16

Field	Field	Field	Parameter	Size	Description
	value	type	0, 300	(byte)	
Туре	0x10		10 111	1	Settings Response
Length	1		2, 2011	2	
Value	$\rightarrow$	enum8	settings_resp	1	A settings-specific error code is returned
					when the standard response error type is
					QMI_ERR_CAUSE_CODE.
Туре	0x11			1	Device Type
Length	1			2	
Value	$\rightarrow$	uint8	rcsOnly_device_type	1	RCS device type configuration.
Туре	0x12			1	RCS PDP Profile Name
Length	Var			2	
Value	$\rightarrow$	string	rcs_pdp_profilename	Var	RCS APN profile name.
Type	0x13			1	Internet PDP Profile Name
Length	Var			2	
Value	$\rightarrow$	string	internet_pdp_profilename	Var	Internet APN profile name.
Туре	0x14			1	PCO Configuration Priority
Length	1			2	
Value	$\rightarrow$	uint8	pco_config_priority	1	Priority of PCO configuration
Туре	0x15			1	ISIM Configuration Priority
Length	1			2	
Value	$\rightarrow$	uint8	isim_config_priority	1	Priority of ISIM configuration.
Туре	0x16			1	Preconfiguration Priority
Length	1			2	
Value	$\rightarrow$	uint8	preconfig_priority	1	Preconfiguration priority.

Field	Field	Field	Parameter	Size	Description
	value	type		(byte)	
Туре	0x17			1	Automatic Configuration Priority
Length	1			2	
Value	$\rightarrow$	uint8	autoconfig_priority	1	Automatic configuration priority.
Туре	0x18			1	RCS LTE FT List
Length	Var			2	
Value	$\rightarrow$	string	rcs_lte_ft_list	Var	List of RCS FTs to be supported in the
					LTE RAT.
Туре	0x19			1	RCS HSPA FT List
Length	Var			2	9
Value	$\rightarrow$	string	rcs_hspa_ft_list	Var	List of RCS FTs to be supported in the
					HSPA RAT.
Type	0x1A			1	RCS Wi-Fi FT List
Length	Var			2	
Value	$\rightarrow$	string	rcs_wifi_ft_list	Var	List of RCS FTs to be supported in the
					Wi-Fi <sup>®</sup> RAT.
Type	0x1B			1	Disable Auto Configuration
Length	1			2	
Value	$\rightarrow$	boolean	disable_auto_config	1 /	Flag indicating whether to disable auto
				18	configuration of RCS. Values:
				200	• TRUE – Disable
				2,00	• FALSE – Enable

## 3.35.3 Description of QMI\_IMS\_SETTINGS\_GET\_RCS\_AUTO\_CONFIG\_-READ\_ONLY\_CONFIG REQ/RESP

The request message retrieves the RCS automatic configuration read-only configuration parameters from the requesting control point. The response message indicates success or failure based on the outcome of the request message processing by the service. The response message returns the RCS automatic configuration read-only configuration parameters to the control point.

## 3.36 QMI\_IMS\_SETTINGS\_GET\_RCS\_IMSCORE\_AUTO\_-CONFIG\_READ\_ONLY\_CONFIG

Retrieves the RCS IMS core automatic configuration read-only-related configuration parameters.

**IMSS** message ID

0x0043

Version introduced

Major - 1, Minor - 10

3.36.1 Request - QMI\_IMS\_SETTINGS\_GET\_RCS\_IMSCORE\_AUTO\_-CONFIG\_READ\_ONLY\_CONFIG\_REQ

Message type

Request

Sender

Control point

**Mandatory TLVs** 

None

**Optional TLVs** 

None

3.36.2 Response - QMI\_IMS\_SETTINGS\_GET\_RCS\_IMSCORE\_AUTO\_-CONFIG\_READ\_ONLY\_CONFIG\_RSP

Message type

Response

Sender

Settings Service

### **Mandatory TLVs**

The Result Code TLV (defined in Section 2.3.1) is always present in the response.

Name	Version introduced	Version last modified	
Result Code	1.10	1.10	

#### **Optional TLVs**

Name	Version introduced	Version last modified
Settings Response	1.10	1.10
RCS Timer T1	1.10	1.10
RCS Timer T2	1.10	1.10
RCS Timer T4	1.10	1.10

Field	Field	Field	Parameter	Size	Description
	value	type		(byte)	
Туре	0x10			1	Settings Response
Length	1			2	
Value	$\rightarrow$	enum8	settings_resp	_\1 <sup>2</sup> \".	A settings-specific error code is returned
				N. W.	when the standard response error type is
			63	10.	QMI_ERR_CAUSE_CODE.
Туре	0x11		10,9	<u>~</u> 1	RCS Timer T1
Length	4		77.00	2	
Value	$\rightarrow$	uint32	rcs_timer_t1	4	SIP timer 1 is retrieved using RCS
			70. Tu		automatic configuration.
Туре	0x12		22,000	1	RCS Timer T2
Length	4		0	2	
Value	$\rightarrow$	uint32	rcs_timer_t2	4	SIP timer 2 is retrieved using RCS
					automatic configuration.
Туре	0x13			1	RCS Timer T4
Length	4			2	
Value	$\rightarrow$	uint32	rcs_timer_t4	4	SIP timer 4 is retrieved using RCS
					automatic configuration.

## 3.36.3 Description of QMI\_IMS\_SETTINGS\_GET\_RCS\_IMSCORE\_-AUTO\_CONFIG\_READ\_ONLY\_CONFIG REQ/RESP

The request message retrieves the RCS IMS core automatic configuration read-only configuration parameters from the requesting control point. The response message indicates success or failure based on the outcome of the request message processing by the service. The response message returns the RCS IMS core automatic configuration read-only configuration parameters to the control point.

#### 3.37 QMI IMS SETTINGS SET REG MGR EXTENDED CONFIG

Sets the IMS registration manager extended configuration parameters for the requesting control point.

**IMSS** message ID

0x0044

**Version introduced** 

Major - 1, Minor - 13

#### Request - QMI\_IMS\_SETTINGS\_SET\_REG\_MGR\_EXTENDED\_-3.37.1 **CONFIG REQ**

CONFIG_NEQ					
Message type	M				
Request	<b>O</b> ,				
Sender					
Control point	27 PU 199				
Mandatory TLVs	Sar Coll				
None					
Control point  Mandatory TLVs  None  Optional TLVs					
Name	Version introduced	Version last modified			
Reregistration Delay	1.13	1.13			
Delay Length for iRAT Transition	1.17	1.19 (Deprecated)			
RegRetryBaseTime	1.28	1.28			
RegRetryMaxTime	1.28	1.28			

Field	Field	Field	Parameter	Size	Description
	value	type		(byte)	
Туре	0x10			1	Reregistration Delay
Length	2			2	
Value	$\rightarrow$	uint16	reregistration_delay	2	IMS reregistration wait time when RAT
					transitions from eHRPD to LTE, in
					seconds.
Туре	0x11			1	Delay Length for iRAT Transition
					(Deprecated)
Length	2			2	

Field	Field	Field	Parameter	Size	Description
	value	type		(byte)	
Value	$\rightarrow$	uint16	t_delay	2	Delay length for an Inter-Radio Access
					Technology (iRAT) transition, in
					seconds; allowed integer value range is 0
					to 600. If this TLV is not present in the
					request, a value of 0 is used.
					<b>Note:</b> This TLV is deprecated; it was a
					duplicate. Use the Reregistration Delay
					TLV instead.
Type	0x12			1	RegRetryBaseTime
Length	2			2	
Value	$\rightarrow$	uint16	reg_retry_base_time	2	RegRetryBaseTime value, in seconds.
					RegRetryBaseTime is the value of the
					base-time parameter of the flow recovery
					algorithm.
Type	0x13			1	RegRetryMaxTime
Length	2			2	
Value	$\rightarrow$	uint16	reg_retry_max_time	2	RegRetryMaxTime value, in seconds.
				_<	RegRetryMaxTime is the value of the
				. 0	max-time parameter of the flow recovery
				2 1	algorithm.

# 3.37.2 Response - QMI\_IMS\_SETTINGS\_SET\_REG\_MGR\_EXTENDED\_-CONFIG\_RSP

### Message type

Response

### Sender

Settings Service

### **Mandatory TLVs**

The Result Code TLV (defined in Section 2.3.1) is always present in the response.

Name	Version introduced	Version last modified
Settings Standard Response Type	1.13	1.13

Field	Field	Field	Parameter	Size	Description
	value	type		(byte)	
Туре	0x10			1	Settings Standard Response Type
Length	1			2	

Field	Field	Field	Parameter	Size	Description
	value	type		(byte)	
Value	$\rightarrow$	enum8	settings_resp	1	A settings-specific error code is returned
					when the standard response error type is
					QMI_ERR_CAUSE_CODE.

## 3.37.3 Description of QMI\_IMS\_SETTINGS\_SET\_REG\_MGR\_-EXTENDED\_CONFIG REQ/RESP

The request message from the client sets the IMS QIPCall configuration parameters for the requesting control point. The response message indicates success or failure based on the outcome of the request message processing by the service. When the request message does not contain any configuration parameters, the service does no processing and returns QMI\_RESULT\_SUCCESS.

2016-05-17 06:24:27 P.D.T.M.

### 3.38 QMI\_IMS\_SETTINGS\_GET\_REG\_MGR\_EXTENDED\_CONFIG

Retrieves the registration manager extended configuration parameters.

IMSS message ID

0x0045

Version introduced

Major - 1, Minor - 13

## 3.38.1 Request - QMI\_IMS\_SETTINGS\_GET\_REG\_MGR\_EXTENDED\_-CONFIG REQ

Message type

Request

Sender

Control point

**Mandatory TLVs** 

None

**Optional TLVs** 

None

# 3.38.2 Response - QMI\_IMS\_SETTINGS\_GET\_REG\_MGR\_EXTENDED\_- CONFIG\_RSP

Message type

Response

Sender

**Settings Service** 

#### **Mandatory TLVs**

The Result Code TLV (defined in Section 2.3.1) is always present in the response.

Name	Version introduced	Version last modified	
Result Code	1.13	1.13	

Name	Version introduced	Version last modified
Settings Standard Response Type	1.13	1.13
Reregistration Delay	1.13	1.13
Delay Length for iRAT Transition	1.17	1.19 (Deprecated)
RegRetryBaseTime	1.28	1.28
RegRetryMaxTime	1.28	1.28

Field	Field	Field	Parameter	Size	Description
	value	type		(byte)	
Туре	0x10			1	Settings Standard Response Type
Length	1			2	
Value	$\rightarrow$	enum8	settings_resp	1	A settings-specific error code is returned
					when the standard response error type is
					QMI_ERR_CAUSE_CODE.
Туре	0x11			1	Reregistration Delay
Length	2			2	
Value	$\rightarrow$	uint16	reregistration_delay	2 <	IMS reregistration wait time when RAT
				100	transitions from eHRPD to LTE, in
				2	seconds.
Туре	0x12		.0.	, 10,	Delay Length for iRAT Transition
			06.	57.	(Deprecated)
Length	2		7, 92	2	
Value	$\rightarrow$	uint16	t_delay	2	The length of the delay for an iRAT
			16. That		transition, in seconds; allowed integer
			30,00		value range is 0 to 600. If this TLV is not
			900		present in the request, a value of 0 is
					used.
					<b>Note:</b> This TLV is deprecated and was a
					duplicate. Use the Reregistration Delay
					TLV instead.
Туре	0x13			1	RegRetryBaseTime
Length	2			2	
Value	$\rightarrow$	uint16	reg_retry_base_time	2	RegRetryBaseTime value, in seconds.
					RegRetryBaseTime is the value of the
					base-time parameter of the flow recovery
					algorithm.
Туре	0x14			1	RegRetryMaxTime
Length	2			2	
Value	$\rightarrow$	uint16	reg_retry_max_time	2	RegRetryMaxTime value, in seconds.
					RegRetryMaxTime is the value of the
					max-time parameter of the flow recovery
					algorithm.

## 3.38.3 Description of QMI\_IMS\_SETTINGS\_GET\_REG\_MGR\_-EXTENDED CONFIG REQ/RESP

The request message gets the registration manager extended configuration parameters from the requesting control point. The response message indicates success or failure based on the outcome of the request message processing by the service. The response message returns the registration manager extended configuration parameters to the control point.



## 3.39 QMI\_IMS\_SETTINGS\_REG\_MGR\_EXTENDED\_CONFIG\_IND

Indicates when the registration manager extended configuration parameters change.

**IMSS** message ID

0x0046

**Version introduced** 

Major - 1, Minor - 13

## 3.39.1 Indication - QMI\_IMS\_SETTINGS\_REG\_MGR\_EXTENDED\_- CONFIG\_IND

Message type

Indication

Sender

**Settings Service** 

Scope

Per control point (unicast)

**Mandatory TLVs** 

None

Name	Version introduced	Version last modified
Reregistration Delay	1.13	1.13
Delay Length for iRAT Transition	1.17	1.19 (Deprecated)
RegRetryBaseTime	1.28	1.28
RegRetryMaxTime	1.28	1.28

Field	Field	Field	Parameter	Size	Description
	value	type		(byte)	
Туре	0x10			1	Reregistration Delay
Length	2			2	
Value	$\rightarrow$	uint16	reregistration_delay	2	IMS reregistration wait time when RAT transitions from eHRPD to LTE, in seconds.
Туре	0x11			1	Delay Length for iRAT Transition (Deprecated)
Length	2			2	

Field	Field	Field	Parameter	Size	Description
	value	type		(byte)	
Value	$\rightarrow$	uint16	t_delay	2	Length of the delay for an iRAT
					transition, in seconds; allowed integer
					value range is 0 to 600. If this TLV is not
					present in the request, a value of 0 is
					used.
					<b>Note:</b> This TLV is deprecated and was a
					duplicate. Use the Reregistration Delay
					TLV instead.
Туре	0x12			1	RegRetryBaseTime
Length	2			2	
Value	$\rightarrow$	uint16	reg_retry_base_time	2	RegRetryBaseTime value, in seconds.
					RegRetryBaseTime is the value of the
					base-time parameter of the flow recovery
					algorithm.
Туре	0x13			1	RegRetryMaxTime
Length	2			2	
Value	$\rightarrow$	uint16	reg_retry_max_time	2	RegRetryMaxTime value, in seconds.
				_<	RegRetryMaxTime is the value of the
				. 60	max-time parameter of the flow recovery
				2	algorithm.

# 3.39.2 Description of QMI\_IMS\_SETTINGS\_REG\_MGR\_EXTENDED\_-CONFIG\_IND

This indication is sent to the control points that have registered for it when there are updates to the registration manager extended configuration parameters.

## 3.40 QMI\_IMS\_SETTINGS\_SET\_POL\_MGR\_CONFIG

Sets the IMS policy manager configuration parameters for the requesting control point. (Deprecated)

#### IMSS message ID

0x0047

#### **Version introduced**

Major - 1, Minor - 14

#### Version deprecated

Major - 1, Minor - 19

## 3.40.1 Request - QMI\_IMS\_SETTINGS\_SET\_POL\_MGR\_CONFIG\_REQ

### Message type

Request

Sender

Control point

#### **Mandatory TLVs**

None

Name	Version introduced	Version last modified
Policy Manager RAT APN Information Array	1.14	1.14
Policy Manager RAT APN Fallback and Service	1.14	1.14
Priority Information Array		
Policy Manager Allowed Services Over WLAN	1.14	1.14
Policy Manager Add All Feature Tags	1.14	1.14
Policy Manager ACS Priority	1.14	1.14
Policy Manager ISIM Priority	1.14	1.14
Policy Manager NV Priority	1.14	1.14
Policy Manager PCO Priority	1.14	1.14
Policy Manager IMS Service Priority	1.14	1.14
Policy Manager Access Point Name List	1.14	1.14

Field	Field	Field	Parameter	Size	Description
	value	type		(byte)	
Туре	0x10			1	Policy Manager RAT APN Information
					Array
					(Array of RAT and APN and their
					information parameters.)
Length	70			2	
Value	$\rightarrow$	uint16	rat	2	RAT.
		uint8	apn_type_apn_index	1	APN type APN index.
		uint16	service_mask	2	Service mask.
		uint8	auth_type_security_type	1	Authentication type security type.
		uint8	ip_type_info	1	IP type info.
Туре	0x11			1	Policy Manager RAT APN Fallback and
					Service Priority Information Array
					(Array of RAT and APN and their
					fallback and service priority information
					parameters.)
Length	40			2	
Value	$\rightarrow$	uint16	pol_mgr_rat_apn_fallback	2	Sequence of the fallback APN for a
					particular RAT.
		uint16	pol_mgr_service_priority_	2	Priority of a specific service on WWAN
			wwan	200	over WLAN.
Туре	0x12			101	Policy Manager Allowed Services Over
			00.	E. J.	WLAN
Length	8	1	V 045	2	
Value	$\rightarrow$	mask	pol_mgr_allowed_	8	Bitmask indicating which services are
			services_wlan		allowed over WLAN.
Туре	0x13		20,00	1	Policy Manager Add All Feature Tags
Length	1		800	2	
Value	$\rightarrow$	boolean	pol_mgr_add_all_fts	1	Indicates whether to add all feature tag
					list or application.
Туре	0x14			1	Policy Manager ACS Priority
Length	1			2	
Value	$\rightarrow$	uint8	pol_mgr_acs_priority	1	Priority of ACS values.
Туре	0x15			1	Policy Manager ISIM Priority
Length	1			2	
Value	$\rightarrow$	uint8	pol_mgr_isim_priority	1	Priority of ISIM values.
Туре	0x16			1	Policy Manager NV Priority
Length	1			2	
Value	$\rightarrow$	uint8	pol_mgr_nv_priority	1	Priority of preconfiguration NV values.
Туре	0x17			1	Policy Manager PCO Priority
Length	1			2	
Value	$\rightarrow$	uint8	pol_mgr_pco_priority	1	Priority of PCO values.
Туре	0x18			1	Policy Manager IMS Service Priority
Length	8			2	•
Value	$\rightarrow$	mask	pol_mgr_ims_service_	8	Bitmask indicating the services that are
			status		enabled on the device.
Туре	0x19			1	Policy Manager Access Point Name List
	-				(IMS access point names.)
					(INIS access point names.)

Field	Field	Field	Parameter	Size	Description
	value	type		(byte)	
Length	Var			2	
Value	$\rightarrow$	uint8	pol_mgr_apn_name_len	1	Number of sets of the following
					elements:
					• pol_mgr_apn_name
		string	pol_mgr_apn_name	Var	Access point.

## 3.40.2 Response - QMI\_IMS\_SETTINGS\_SET\_POL\_MGR\_CONFIG\_RSP

#### Message type

Response

#### Sender

**Settings Service** 

#### **Mandatory TLVs**

The Result Code TLV (defined in Section 2.3.1) is always present in the response.

#### **Optional TLVs**

Name	N 60°	Version introduced	Version last modified
Settings Standard Response Type	05 410	1.14	1.14

Field	Field	Field	Parameter	Size	Description
	value	type		(byte)	
Туре	0x10			1	Settings Standard Response Type
Length	1			2	
Value	$\rightarrow$	enum8	settings_resp	1	A settings-specific error code is returned
					when the standard response error type is
					QMI_ERR_CAUSE_CODE.

## 3.40.3 Description of QMI\_IMS\_SETTINGS\_SET\_POL\_MGR\_CONFIG REQ/RESP

This command is deprecated. There is no replacement.

The request message sets the IMS policy manager configuration parameters for the requesting control point. The response message indicates success or failure based on the outcome of the request message processing by the service. When the request message does not contain any configuration parameters, the service does no processing and returns QMI\_RESULT\_SUCCESS.

## 3.41 QMI\_IMS\_SETTINGS\_GET\_POL\_MGR\_CONFIG

Retrieves the policy manager configuration parameters.

IMSS message ID

0x0048

Version introduced

Major - 1, Minor - 14

## 3.41.1 Request - QMI\_IMS\_SETTINGS\_GET\_POL\_MGR\_CONFIG\_REQ

Message type

Request

Sender

Control point

**Mandatory TLVs** 

None

**Optional TLVs** 

None

## 3.41.2 Response - QMI\_IMS\_SETTINGS\_GET\_POL\_MGR\_CONFIG\_RSP

Message type

Response

Sender

**Settings Service** 

#### **Mandatory TLVs**

The Result Code TLV (defined in Section 2.3.1) is always present in the response.

Name	Version introduced	Version last modified
Result Code	1.14	1.14

Name	Version introduced	Version last modified
Settings Standard Response Type	1.14	1.14
Policy Manager RAT APN Information Array	1.14	1.14
Policy Manager RAT APN Fallback and Service	1.14	1.14
Priority Information Array		
Policy Manager Allowed Services Over WLAN	1.14	1.14
Policy Manager Add All Feature Tags	1.14	1.14
Policy Manager ACS Priority	1.14	1.14
Policy Manager ISIM Priority	1.14	1.14
Policy Manager NV Priority	1.14	1.14
Policy Manager PCO Priority	1.14	1.14
Policy Manager IMS Service Priority	1.14	1.14
Policy Manager Access Point Name List	1.14	1.14

Field	Field	Field	Parameter	Size	Description
	value	type		(byte)	
Туре	0x10			1 <	Settings Standard Response Type
Length	1			2	1
Value	$\rightarrow$	enum8	settings_resp	21,0	A settings-specific error code is returned
			.2	X. COM	when the standard response error type is
			000	57.	QMI_ERR_CAUSE_CODE.
Туре	0x11		2016-05-17 06 A	1	Policy Manager RAT APN Information
			05, 40		Array
			16. Way		(Array of RAT and APN and their
			30,00.		fallback and service priority information
			200		parameters.)
Length	70			2	
Value	$\rightarrow$	uint16	rat	2	RAT.
		uint8	apn_type_apn_index	1	APN type APN index.
		uint16	service_mask	2	Service mask.
		uint8	auth_type_security_type	1	Authentication type security type.
		uint8	ip_type_info	1	IP type info.
Туре	0x12			1	Policy Manager RAT APN Fallback and
					Service Priority Information Array
					(Array of RAT and APN and their
					fallback and service priority information
					parameters.)
Length	40			2	
Value	$\rightarrow$	uint16	pol_mgr_rat_apn_fallback	2	Sequence of the fallback APN for a
					particular RAT.
		uint16	pol_mgr_service_priority_	2	Priority of a specific service on WWAN
			wwan		over WLAN.
Туре	0x13			1	Policy Manager Allowed Services Over
					WLAN
Length	8			2	

Field	Field	Field	Parameter	Size	Description
	value	type		(byte)	
Value	$\rightarrow$	mask	pol_mgr_allowed_	8	Bitmask indicating which services are
			services_wlan		allowed over WLAN.
Туре	0x14			1	Policy Manager Add All Feature Tags
Length	1			2	
Value	$\rightarrow$	boolean	pol_mgr_add_all_fts	1	Indicates whether to add all the feature
					tag list or application.
Туре	0x15			1	Policy Manager ACS Priority
Length	1			2	
Value	$\rightarrow$	uint8	pol_mgr_acs_priority	1	Priority of ACS values.
Туре	0x16			1	Policy Manager ISIM Priority
Length	1			2	
Value	$\rightarrow$	uint8	pol_mgr_isim_priority	1 0	Priority of ISIM values.
Туре	0x17			1	Policy Manager NV Priority
Length	1			2	
Value	$\rightarrow$	uint8	pol_mgr_nv_priority	1	Priority of preconfiguration NV values.
Туре	0x18			1	Policy Manager PCO Priority
Length	1		, ()	2	
Value	$\rightarrow$	uint8	pol_mgr_pco_priority	1 <	Priority of PCO values.
Туре	0x19			18	Policy Manager IMS Service Priority
Length	8			. 2 .	
Value	$\rightarrow$	mask	pol_mgr_ims_service_	8	Bitmask indicating which services are
			status	07	enabled on the device.
Туре	0x1A		7, 62	1	Policy Manager Access Point Name List
		1	05 410		(IMS access point names.)
Length	Var		10, THE	2	
Value	$\rightarrow$	uint8	pol_mgr_apn_name_len	1	Number of sets of the following
			900		elements:
					• pol_mgr_apn_name
		string	pol_mgr_apn_name	Var	Access point.

## 3.41.3 Description of QMI\_IMS\_SETTINGS\_GET\_POL\_MGR\_CONFIG REQ/RESP

The request message gets the policy manager configuration parameters from the requesting control point. The response message indicates success or failure based on the outcome of the request message processing by the service. The response message returns the policy manager configuration parameters to the control point.

## 3.42 QMI\_IMS\_SETTINGS\_POL\_MGR\_CONFIG\_IND

Indicates when the policy manager configuration parameters change.

IMSS message ID

0x0049

**Version introduced** 

Major - 1, Minor - 14

## 3.42.1 Indication - QMI\_IMS\_SETTINGS\_POL\_MGR\_CONFIG\_IND

Message type

Indication

Sender

**Settings Service** 

Scope

Per control point (unicast)

**Mandatory TLVs** 

None

Name	Version introduced	Version last modified
Policy Manager RAT APN Information Array	1.14	1.14
Policy Manager RAT APN Fallback and Service	1.14	1.14
Priority Information Array		
Policy Manager Allowed Services Over WLAN	1.14	1.14
Policy Manager Add All Feature Tags	1.14	1.14
Policy Manager ACS Priority	1.14	1.14
Policy Manager ISIM Priority	1.14	1.14
Policy Manager NV Priority	1.14	1.14
Policy Manager PCO Priority	1.14	1.14
Policy Manager IMS Service Priority	1.14	1.14
Policy Manager Access Point Name List	1.14	1.14

Field	Field	Field	Parameter	Size	Description
	value	type		(byte)	
Туре	0x10			1	Policy Manager RAT APN Information
					Array
					(Array of RAT and APN information
					parameters.)
Length	70			2	
Value	$\rightarrow$	uint16	rat	2	RAT.
		uint8	apn_type_apn_index	1	APN type APN index.
		uint16	service_mask	2	Service mask.
		uint8	auth_type_security_type	1	Authentication type security type.
		uint8	ip_type_info	1	IP type info.
Туре	0x11			1	Policy Manager RAT APN Fallback and
					Service Priority Information Array
					(Array of RAT and APN and their
					fallback and service priority information
				18	parameters.)
Length	40			2	
Value	$\rightarrow$	uint16	pol_mgr_rat_apn_fallback	2	Sequence of the fallback APN for a
				_	particular RAT.
		uint16	pol_mgr_service_priority_	2	Priority of a specific service on WWAN
			wwan	2/2	over WLAN.
Туре	0x12		.2	×. 9/	Policy Manager Allowed Services Over
			00.	E.J.	WLAN
Length	8	4	1 2	2	
Value	$\rightarrow$	mask	pol_mgr_allowed_	8	Bitmask indicating which services are
			services_wlan		allowed over WLAN.
Туре	0x13		20,00	1	Policy Manager Add All Feature Tags
Length	1		50	2	
Value	$\rightarrow$	boolean	pol_mgr_add_all_fts	1	Indicates whether to add all the feature
					tag list or application.
Туре	0x14			1	Policy Manager ACS Priority
Length	1			2	
Value	$\rightarrow$	uint8	pol_mgr_acs_priority	1	Priority of ACS values.
Туре	0x15			1	Policy Manager ISIM Priority
Length	1			2	
Value	$\rightarrow$	uint8	pol_mgr_isim_priority	1	Priority of ISIM values.
Туре	0x16			1	Policy Manager NV Priority
Length	1			2	
Value	$\rightarrow$	uint8	pol_mgr_nv_priority	1	Priority of preconfiguration NV values.
Туре	0x17			1	Policy Manager PCO Priority
Length	1			2	
Value	$\rightarrow$	uint8	pol_mgr_pco_priority	1	Priority of PCO values.
Туре	0x18			1	Policy Manager IMS Service Priority
Length	8			2	
Value	$\rightarrow$	mask	pol_mgr_ims_service_	8	Bitmask indicating the services that are
			status	<u></u> _	enabled on the device.
Туре	0x19			1	Policy Manager Access Point Name List
					(IMS access point names.)

Field	Field	Field	Parameter	Size	Description
	value	type		(byte)	
Length	Var			2	
Value	$\rightarrow$	uint8	pol_mgr_apn_name_len	1	Number of sets of the following
					elements:
					• pol_mgr_apn_name
		string	pol_mgr_apn_name	Var	Access point.

### 3.42.2 Description of QMI\_IMS\_SETTINGS\_POL\_MGR\_CONFIG\_IND

This indication is sent to the control points that have registered for it when there are updates to the policy manager configuration parameters.

#### QMI IMS SETTINGS SET PRESENCE EXT CONFIG 3.43

Sets the IMS presence extended-related configuration parameters for the requesting control point.

**IMSS** message ID

0x004A

**Version introduced** 

Major - 1, Minor - 16

#### Request - QMI\_IMS\_SETTINGS\_SET\_PRESENCE\_EXT\_-3.43.1 **CONFIG REQ**

Message type	72	
Request		
Sender		
Control point	27 80 114	
Mandatory TLVs	24.27 ED IM	
None		
Optional TLVs		
Name	Version introduced	Version last modified
Publish Error Recovery Timer	1.16	1.16
Publish User Agent	1.30	1.30

Field	Field	Field	Parameter	Size	Description
	value	type		(byte)	
Туре	0x10			1	Publish Error Recovery Timer
Length	4			2	
Value	$\rightarrow$	uint32	publish_error_recovery_	4	Publish error recovery timer, in seconds.
			timer		
Туре	0x11			1	Publish User Agent
Length	Var			2	
Value	$\rightarrow$	string	publish_user_agent	Var	User agent.

## 3.43.2 Response - QMI\_IMS\_SETTINGS\_SET\_PRESENCE\_EXT\_CONFIG\_RSP

Message type

Response

Sender

**Settings Service** 

#### **Mandatory TLVs**

The Result Code TLV (defined in Section 2.3.1) is always present in the response.

Name	Version introduced	Version last modified
Result Code	1.16	1.16

#### **Optional TLVs**

Name	Version introduced	Version last modified
Settings Standard Response Type	1.16	1.16

Field	Field	Field	Parameter	Size	Description
	value	type	5 5	(byte)	
Туре	0x10		6. 112	1	Settings Standard Response Type
Length	1		20, 20,	2	
Value	$\rightarrow$	enum8	settings_resp	1	A settings-specific error code is returned
					when the standard response error type is
					QMI_ERR_CAUSE_CODE.

## 3.43.3 Description of QMI\_IMS\_SETTINGS\_SET\_PRESENCE\_EXT\_-CONFIG REQ/RESP

The request message from the client sets the IMS presence extended configuration parameters for the requesting control point. The response message indicates success or failure based on the outcome of the request message processing by the service. When the request message does not contain any configuration parameters, the service does no processing and returns QMI\_RESULT\_SUCCESS.

## 3.44 QMI\_IMS\_SETTINGS\_GET\_PRESENCE\_EXT\_CONFIG

Retrieves the presence extended-related configuration parameters.

IMSS message ID

0x004B

Version introduced

Major - 1, Minor - 16

## 3.44.1 Request - QMI\_IMS\_SETTINGS\_GET\_PRESENCE\_EXT\_- CONFIG REQ

Message type

Request

Sender

Control point

**Mandatory TLVs** 

None

**Optional TLVs** 

None

# 3.44.2 Response - QMI\_IMS\_SETTINGS\_GET\_PRESENCE\_EXT\_- CONFIG\_RSP

Message type

Response

Sender

Settings service

### **Mandatory TLVs**

The Result Code TLV (defined in Section 2.3.1) is always present in the response.

Name	Version introduced	Version last modified
Result Code	1.16	1.16

#### **Optional TLVs**

Name	Version introduced	Version last modified
Settings Standard Response Type	1.19	1.19
Publish Error Recovery Timer	1.16	1.16
Publish User Agent	1.30	1.30

Field	Field	Field	Parameter	Size	Description
	value	type		(byte)	
Туре	0x10			1	Settings Standard Response Type
Length	1			2	
Value	$\rightarrow$	enum8	settings_resp	1	A settings-specific error code is returned
					when the standard response error type is
					QMI_ERR_CAUSE_CODE.
Туре	0x11			1	Publish Error Recovery Timer
Length	4			2	
Value	$\rightarrow$	uint32	publish_error_recovery_	4	Publish error recovery timer, in seconds.
			timer	1	
Туре	0x12			1 <	Publish User Agent
Length	Var			2	3
Value	$\rightarrow$	string	publish_user_agent	Var	User agent.

## 3.44.3 Description of QMI\_IMS\_SETTINGS\_GET\_PRESENCE\_EXT\_-CONFIG REQ/RESP

The request message retrieves the presence extended configuration parameters from the requesting control point. The response message indicates success or failure based on the outcome of the request message processing by the service. The response message returns the presence extended configuration parameters to the control point.

## 3.45 QMI\_IMS\_SETTINGS\_PRESENCE\_EXT\_CONFIG\_IND

Indicates when the presence extended-related configuration parameters change.

IMSS message ID

0x004C

**Version introduced** 

Major - 1, Minor - 16

## 3.45.1 Indication - QMI\_IMS\_SETTINGS\_PRESENCE\_EXT\_CONFIG\_IND

Message type

Indication

Sender

**Settings Service** 

Scope

Per control point (unicast)

**Mandatory TLVs** 

None

Name	Version introduced	Version last modified
Publish Error Recovery Timer	1.16	1.16
Publish User Agent	1.30	1.30

Field	Field	Field	Parameter	Size	Description
	value	type		(byte)	
Туре	0x10			1	Publish Error Recovery Timer
Length	4			2	
Value	$\rightarrow$	uint32	publish_error_recovery_	4	Publish error recovery timer, in seconds.
			timer		
Туре	0x11			1	Publish User Agent
Length	Var			2	
Value	$\rightarrow$	string	publish_user_agent	Var	User agent.

## 3.45.2 Description of QMI\_IMS\_SETTINGS\_PRESENCE\_EXT\_CONFIG\_-IND

This indication is sent to the control points that have registered for it when there are updates to the presence extended configuration parameters.



#### QMI IMS SETTINGS SET RCS SM CONFIG 3.46

Sets the IMS RCS standalone messaging configuration parameters for the requesting control point.

#### **IMSS** message ID

0x004D

#### **Version introduced**

Major - 1, Minor - 16

#### Request - QMI\_IMS\_SETTINGS\_SET\_RCS\_SM\_CONFIG\_REQ 3.46.1

Message type

Request								
Sender								
Control point	•							
Mandatory TLVs	24.27 PC ton							
None	5, 60,							
Optional TLVs								
Name	Version introduced	Version last modified						
RCS Standalone Messaging Authorization	1.16	1.16						
RCS Standalone Message Maximum Size	1.16	1.16						
RCS Standalone Message Explorer URI	1.16	1.16						

Field	Field	Field	Parameter	Size	Description
	value	type		(byte)	
Туре	0x10			1	RCS Standalone Messaging
					Authorization
Length	1			2	
Value	$\rightarrow$	boolean	standalone_message_auth	1	Values:
					• TRUE - Authorized
					• FALSE - Unauthorized
Туре	0x11			1	RCS Standalone Message Maximum
					Size
Length	4			2	
Value	$\rightarrow$	uint32	standalone_message_max_	4	Maximum size of a standalone message.
			size		
Туре	0x12			1	RCS Standalone Message Explorer URI
Length	Var			2	
Value	$\rightarrow$	string	standalone_message_	Var	Standalone message explorer URI.
			explorer_uri		

### Response - QMI IMS SETTINGS SET RCS SM CONFIG RSP

#### Message type

Response

#### Sender

**Settings Service** 

#### **Mandatory TLVs**

The Result Code TLV (defined in Section 2.3.1) is always present in the response.

Name	Version introduced	Version last modified
Result Code	1.16	1.16

#### **Optional TLVs**

Optiona	I TLVs			OI		
		N	ame	Versio	n introduced	Version last modified
Setting	s Standa	ard Respo	nse Type	80	1.16	1.16
A.2 OH. 134						
Field	Field	Field	Parameter	Size		Description

Field	Field	Field	Parameter	Size	Description
	value	type	1 3	(byte)	
Туре	0x10		67,00	1	Settings Standard Response Type
Length	1		C. C. Walley	2	
Value	$\rightarrow$	enum8	settings_resp	1	A settings-specific error code is returned
			2,50		when the standard response error type is
			Q.		QMI_ERR_CAUSE_CODE.

#### Description of QMI IMS SETTINGS SET RCS SM CONFIG 3.46.3 **REQ/RESP**

The request message sets the IMS RCS standalone messaging configuration parameters for the requesting control point. The response message indicates success or failure based on the outcome of the request message processing by the service. When the request message does not contain any configuration parameters, the service does no processing and returns QMI\_RESULT\_SUCCESS.

## 3.47 QMI IMS SETTINGS GET RCS SM CONFIG

Retrieves the RCS standalone messaging configuration parameters.

IMSS message ID

0x004E

Version introduced

Major - 1, Minor - 16

## 3.47.1 Request - QMI\_IMS\_SETTINGS\_GET\_RCS\_SM\_CONFIG\_REQ

Message type

Request

Sender

Control point

**Mandatory TLVs** 

None

**Optional TLVs** 

None

## 3.47.2 Response - QMI\_IMS\_SETTINGS\_GET\_RCS\_SM\_CONFIG\_RSP

Message type

Response

Sender

Settings service

#### **Mandatory TLVs**

The Result Code TLV (defined in Section 2.3.1) is always present in the response.

Name	Version introduced	Version last modified
Result Code	1.16	1.16

#### **Optional TLVs**

Name	Version introduced	Version last modified
Settings Standard Response Type	1.16	1.16
RCS Standalone Messaging Authorization	1.16	1.16
RCS Standalone Message Maximum Size	1.16	1.16
RCS Standalone Message Explorer URI	1.16	1.16

Field	Field	Field	Parameter	Size	Description
	value	type		(byte)	
Туре	0x10			1	Settings Standard Response Type
Length	1			2	
Value	$\rightarrow$	enum8	settings_resp	1 @	A settings-specific error code is returned
					when the standard response error type is
					QMI_ERR_CAUSE_CODE.
Туре	0x11			1	RCS Standalone Messaging
					Authorization
Length	1			2	
Value	$\rightarrow$	boolean	standalone_message_auth	1 <	Values:
				160	• TRUE - Authorized
				2 1	• FALSE - Unauthorized
Туре	0x12		.2	x. To,,	RCS Standalone Message Maximum
			00,	E.J.	Size
Length	4	1	N 925	2	
Value	$\rightarrow$	uint32	standalone_message_max_	4	Maximum size of a standalone message.
			size		
Туре	0x13		20, 40,	1	RCS Standalone Message Explorer URI
Length	Var		90	2	
Value	$\rightarrow$	string	standalone_message_	Var	Standalone message explorer URI.
			explorer_uri		

## 3.47.3 Description of QMI\_IMS\_SETTINGS\_GET\_RCS\_SM\_CONFIG REQ/RESP

The request message retrieves the RCS standalone messaging configuration parameters from the requesting control point. The response message indicates success or failure based on the outcome of the request message processing by the service. The response message returns the RCS standalone messaging configuration parameters to the control point.

## 3.48 QMI\_IMS\_SETTINGS\_RCS\_SM\_CONFIG\_IND

Indicates when the RCS standalone messaging configuration parameters change.

**IMSS** message ID

0x004F

**Version introduced** 

Major - 1, Minor - 16

## 3.48.1 Indication - QMI\_IMS\_SETTINGS\_RCS\_SM\_CONFIG\_IND

Message type

Indication

Sender

**Settings Service** 

Scope

Per control point (unicast)

**Mandatory TLVs** 

None

Name	Version introduced	Version last modified
RCS Standalone Messaging Authorization	1.16	1.16
RCS Standalone Message Maximum Size	1.16	1.16
RCS Standalone Message Explorer URI	1.16	1.16

Field	Field	Field	Parameter	Size	Description
	value	type		(byte)	
Туре	0x10			1	RCS Standalone Messaging
					Authorization
Length	1			2	
Value	$\rightarrow$	boolean	standalone_message_auth	1	Values:
					TRUE - Authorized
					FALSE - Unauthorized
Туре	0x11			1	RCS Standalone Message Maximum
					Size
Length	4			2	
Value	$\rightarrow$	uint32	standalone_message_max_	4	Maximum size of a standalone message.
			size		

Field	Field	Field	Parameter	Size	Description
	value	type		(byte)	
Туре	0x12			1	RCS Standalone Message Explorer URI
Length	Var			2	
Value	$\rightarrow$	string	standalone_message_	Var	Standalone message explorer URI.
			explorer_uri		

### 3.48.2 Description of QMI\_IMS\_SETTINGS\_RCS\_SM\_CONFIG\_IND

This indication is sent to the control points that have registered for it when there are updates to the RCS standalone messaging configuration parameters.

#### QMI\_IMS\_SETTINGS\_SET\_UT\_CONFIG 3.49

Sets the IMS Ut Interface configuration parameters for the requesting control point.

**IMSS** message ID

0x0050

**Version introduced** 

Major - 1, Minor - 18

#### Request - QMI\_IMS\_SETTINGS\_SET\_UT\_CONFIG\_REQ 3.49.1

Message type

Request	W.						
Sender							
Control point	Control point						
Mandatory TLVs	24:27 POIN						
None	5, 0,						
Optional TLVs							
Name	Version introduced	Version last modified					
Disable Ut Interface Status	1.18	1.18					
Ut Interface Access Point Name	1.21	1.21					
Ut Interface IP Address Type	1.21	1.21					

Field	Field	Field	Parameter	Size	Description
	value	type		(byte)	
Туре	0x10			1	Disable Ut Interface Status
Length	1			2	
Value	$\rightarrow$	boolean	disable_ut	1	Values:
					• TRUE – Disable
					• FALSE – Enable (default)
					If this TLV is not included in the request,
					a value of FALSE (i.e., Enable) is used.
Туре	0x11			1	Ut Interface Access Point Name
Length	Var			2	
Value	$\rightarrow$	string	ut_apn_name	Var	Ut Interface APN string.
Туре	0x12			1	Ut Interface IP Address Type
Length	4			2	

Field	Field	Field	Parameter	Size	Description
	value	type		(byte)	
Value	$\rightarrow$	enum	ut_ip_addr_type	4	Ut Interface IP address type. If this TLV
					is not present in the request, a value of
					IMS_SETTINGS_IP_TYPE_
					UNKNOWN is used. Values:
					• IMS_SETTINGS_IP_TYPE_
					UNKNOWN (0x00) – Unknown IP
					address type
					• IMS_SETTINGS_IP_TYPE_ IPV4
					(0x01) – IPv4 address
					• IMS_SETTINGS_IP_TYPE_ IPV6
					(0x02) – IPv6 address

## 3.49.2 Response - QMI\_IMS\_SETTINGS\_SET\_UT\_CONFIG\_RSP

Message type

Response

Sender

Settings Service

**Mandatory TLVs** 

The Result Code TLV (defined in Section 2.3,1) is always present in the response.

Name	Version introduced	Version last modified
Result Code	1.18	1.18

Name	Version introduced	Version last modified
Settings Standard Response Type	1.18	1.18

Field	Field	Field	Parameter	Size	Description
	value	type		(byte)	
Туре	0x10			1	Settings Standard Response Type
Length	1			2	
Value	$\rightarrow$	enum8	settings_resp	1	A settings-specific error code is returned when the standard response error type is QMI_ERR_CAUSE_CODE.

### 3.49.3 Description of QMI\_IMS\_SETTINGS\_SET\_UT\_CONFIG REQ/RESP

The request message sets the IMS Ut Interface configuration parameters for the requesting control point. The response message indicates success or failure based upon the outcome of the request message processing by the service. When the request message does not contain any configuration parameters, the service does no processing and returns QMI RESULT SUCCESS.



## 3.50 QMI\_IMS\_SETTINGS\_GET\_UT\_CONFIG

Retrieves the Ut Interface configuration parameters.

IMSS message ID

0x0051

Version introduced

Major - 1, Minor - 18

## 3.50.1 Request - QMI\_IMS\_SETTINGS\_GET\_UT\_CONFIG\_REQ

Message type

Request

Sender

Control point

**Mandatory TLVs** 

None

**Optional TLVs** 

None

## 3.50.2 Response - QMI\_IMS\_SETTINGS\_GET\_UT\_CONFIG\_RSP

Message type

Response

Sender

**Settings Service** 

**Mandatory TLVs** 

The Result Code TLV (defined in Section 2.3.1) is always present in the response.

Name	Version introduced	Version last modified
Settings Response	1.18	1.18
Disable Ut Interface Status	1.18	1.18
Ut Interface Access Point Name	1.21	1.21
Ut Interface IP Address Type	1.21	1.21

Field	Field	Field	Parameter	Size	Description
	value	type		(byte)	
Туре	0x10			1	Settings Response
Length	1			2	
Value	$\rightarrow$	enum8	settings_resp	1	Settings response.
Туре	0x11			1	Disable Ut Interface Status
Length	1			2	
Value	$\rightarrow$	boolean	disable_ut	1	Values:
					• TRUE – Disable
					• FALSE – Enable
Туре	0x12			1	Ut Interface Access Point Name
Length	Var			2	
Value	$\rightarrow$	string	ut_apn_name	Var	Ut Interface APN string.
Type	0x13			1	Ut Interface IP Address Type
Length	4			2	
Value	$\rightarrow$	enum	ut_ip_addr_type	4	Ut Interface IP address type. Values:
					• IMS_SETTINGS_IP_TYPE_
					UNKNOWN (0x00) – Unknown IP
				;	address type
				_	• IMS_SETTINGS_IP_TYPE_ IPV4
				160	(0x01) – IPv4 address
				2	• IMS_SETTINGS_IP_TYPE_ IPV6
				x. COL.	(0x02) – IPv6 address

## 3.50.3 Description of QMI\_IMS\_SETTINGS\_GET\_UT\_CONFIG REQ/RESP

The request message from the client gets the Ut Interface configuration parameters from the requesting control point. The response message indicates success or failure based on the outcome of the request message processing by the service. The response message returns the Ut Interface configuration parameters to the control point.

## 3.51 QMI\_IMS\_SETTINGS\_UT\_CONFIG\_IND

Indicates when the Ut Interface configuration parameters change.

**IMSS** message ID

0x0052

**Version introduced** 

Major - 1, Minor - 18

## 3.51.1 Indication - QMI\_IMS\_SETTINGS\_UT\_CONFIG\_IND

Message type

Indication

Sender

**Settings Service** 

Scope

Per control point (unicast)

**Mandatory TLVs** 

None

Name	Version introduced	Version last modified
Ut Interface Disable Status	1.18	1.18
Ut Interface Access Point Name	1.21	1.21
Ut Interface IP Address Type	1.21	1.21

Field	Field	Field	Parameter	Size	Description
	value	type		(byte)	
Туре	0x10			1	Ut Interface Disable Status
Length	1			2	
Value	$\rightarrow$	boolean	ut_disabled	1	Values:
					• TRUE – Disable
					• FALSE – Enable
Туре	0x11			1	Ut Interface Access Point Name
Length	Var			2	
Value	$\rightarrow$	string	ut_apn_name	Var	Ut Interface APN string.
Туре	0x12			1	Ut Interface IP Address Type
Length	4			2	

Field	Field	Field	Parameter	Size	Description
	value	type		(byte)	
Value	$\rightarrow$	enum	ut_ip_addr_type	4	Ut Interface IP address type. Values:
					• IMS_SETTINGS_IP_TYPE_
					UNKNOWN (0x00) – Unknown IP
					address type
					• IMS_SETTINGS_IP_TYPE_ IPV4
					(0x01) – IPv4 address
					• IMS_SETTINGS_IP_TYPE_ IPV6
					(0x02) – IPv6 address

## 3.51.2 Description of QMI\_IMS\_SETTINGS\_UT\_CONFIG\_IND

This indication is sent to the control points that have registered for it when there are updates to the Ut Interface configuration parameters.

#### 3.52 QMI\_IMS\_SETTINGS\_SET\_CLIENT\_PROVISIONING\_-**CONFIG**

Sets the IMS client provisioning configuration parameters for the requesting control point.

IMSS message ID

0x0053

Version introduced

Major - 1, Minor - 22

#### Request - QMI\_IMS\_SETTINGS\_SET\_CLIENT\_PROVISIONING\_-3.52.1 **CONFIG REQ**

Message type		
Request		
Sender	180 14	
Control point	N. Comit	
Sender Control point Mandatory TLVs None Optional TLVs	HEA.	
None		
Optional TLVs		
Name	Version introduced	Version last modified
Enable Client Provisioning	1.22	1.22
Enable VoLTE Support Through Client	1.22	1.22
Provisioning		
Enable VT Support Through Client Provisioning	1.22	1.22
Enable Presence Support Through Client	1.22	1.22
Provisioning		
Wi-Fi Call Setting	1.25	1.25
Wi-Fi Call Preference Setting	1.25	1.05
Will i can i reference setting	1.23	1.25

Field	Field	Field	Parameter	Size	Description
	value	type		(byte)	
Туре	0x10			1	Enable Client Provisioning
Length	1			2	

Field	Field	Field	Parameter	Size	Description
	value	type		(byte)	
Value	$\rightarrow$	boolean	enable_client_provisioning	1	Values:
					• TRUE – Enable
					• FALSE – Disable (default)
					If this TLV is not included in the request,
					a value of FALSE (i.e., Disable) is used.
Туре	0x11			1	Enable VoLTE Support Through Client
					Provisioning
Length	1			2	
Value	$\rightarrow$	boolean	enable_volte	1	Values:
					• TRUE – Enable
					• FALSE – Disable (default)
				-	If this TLV is not included in the request,
				-	a value of FALSE (i.e., Disable) is used.
Туре	0x12			1	Enable VT Support Through Client
					Provisioning
Length	1			2	
Value	$\rightarrow$	boolean	enable_vt	1	Values:
				_	• TRUE – Enable
				. 00	• FALSE – Disable (default)
				2 3	If this TLV is not included in the request,
			.2	x. OU.	a value of FALSE (i.e., Disable) is used.
Туре	0x13		00.	1/3	Enable Presence Support Through Client
		1	V 045		Provisioning
Length	1		5,00	2	
Value	$\rightarrow$	boolean	enable_presence	1	Values:
			20, 20.		• TRUE – Enable
			782		• FALSE – Disable (default)
					If this TLV is not included in the request,
					a value of FALSE (i.e., Disable) is used.
Туре	0x14			1	Wi-Fi Call Setting
Length	4			2	
Value	$\rightarrow$	enum	wifi_call	4	Wi-Fi Call (WFC) status. Values:
					• IMS_SETTINGS_WFC_STATUS_
					NOT_SUPPORTED (0) – WFC is not
					supported
					• IMS_SETTINGS_WFC_STATUS_
					ON (1) – WFC is enabled
					• IMS_SETTINGS_WFC_STATUS_
	0 1 =				OFF (2) – WFC is disabled
Туре	0x15			1	Wi-Fi Call Preference Setting
Length	4			2	

Field	Field	Field	Parameter	Size	Description
	value	type		(byte)	
Value	$\rightarrow$	enum	wifi_call_preference	4	WFC preference mode. Values:
					• IMS_SETTINGS_WFC_CALL_
					PREF_NONE (0) – None
					• IMS_SETTINGS_WFC_WLAN_
					PREFERRED (1) – WLAN preferred
					mode
					• IMS_SETTINGS_WFC_WLAN_
					ONLY (2) – WLAN only mode
					• IMS_SETTINGS_WFC_CELLULAR_
					PREFERRED (3) – Cellular preferred
					mode
					• IMS_SETTINGS_WFC_CELLULAR_
					ONLY (4) – Cellular only mode
Туре	0x16			1	Wi-Fi Call Roaming Setting
Length	4			2	
Value	$\rightarrow$	enum	wifi_call_roaming	4	WFC roaming mode. Values:
					• IMS_SETTINGS_WFC_ROAMING_
				_	NOT_SUPPORTED (0) – WFC roaming
				0	is not supported
				2	• IMS_SETTINGS_WFC_ROAMING_
			2	x. 'OU.	ENABLED (1) – WFC roaming is
			06.	E. 4.	enabled
			1 205	h.	• IMS_SETTINGS_WFC_ROAMING_
			5' 100'		DISABLED (2) – WFC roaming is
			5. Valle		disabled

## 3.52.2 Response - QMI\_IMS\_SETTINGS\_SET\_CLIENT\_PROVISIONING\_-CONFIG\_RSP

Message type

Response

Sender

**Settings Service** 

### **Mandatory TLVs**

The Result Code TLV (defined in Section 2.3.1) is always present in the response.

Name	Version introduced	Version last modified	
Result Code	1.22	1.22	

#### **Optional TLVs**

Name	Version introduced	Version last modified
Settings Standard Response Type	1.22	1.22

Field	Field	Field	Parameter	Size	Description
	value	type		(byte)	
Туре	0x10			1	Settings Standard Response Type
Length	1			2	
Value	$\rightarrow$	enum8	settings_resp	1	A settings-specific error code is returned
					when the standard response error type is
					QMI_ERR_CAUSE_CODE.

## 3.52.3 Description of QMI\_IMS\_SETTINGS\_SET\_CLIENT\_-PROVISIONING\_CONFIG REQ/RESP

The request message sets the IMS client provisioning configuration parameters for the requesting control point. The response message indicates success or failure based on the outcome of the request message processing by the service. When the request message does not contain any configuration parameters, the service does no processing and returns QMI\_RESULT\_SUCCESS.

## 3.53 QMI\_IMS\_SETTINGS\_GET\_CLIENT\_PROVISIONING\_-CONFIG

Retrieves the client provisioning configuration parameters.

**IMSS** message ID

0x0054

**Version introduced** 

Major - 1, Minor - 22

## 3.53.1 Request - QMI\_IMS\_SETTINGS\_GET\_CLIENT\_PROVISIONING\_-CONFIG REQ

Message type

Request

Sender

Control point

**Mandatory TLVs** 

None

**Optional TLVs** 

None

## 3.53.2 Response - QMI\_IMS\_SETTINGS\_GET\_CLIENT\_PROVISIONING\_-CONFIG\_RSP

Message type

Response

Sender

Settings Service

### **Mandatory TLVs**

The Result Code TLV (defined in Section 2.3.1) is always present in the response.

Name	Version introduced	Version last modified	
Result Code	1.22	1.22	

Name	Version introduced	Version last modified
Settings Response	1.22	1.22
Enable Client Provisioning	1.22	1.22
Enable VoLTE Support Through Client	1.22	1.22
Provisioning		
Enable VT Support Through Client Provisioning	1.22	1.22
Enable Presence Support Through Client	1.22	1.22
Provisioning	30	
Wi-Fi Call Setting	1.25	1.25
Wi-Fi Call Preference Setting	1.25	1.25
Wi-Fi Call Roaming Setting	1.26	1.26

Field	Field	Field	Parameter	Size	Description
	value	type	100,7	(byte)	
Туре	0x10		, y . 60°	1	Settings Response
Length	1		0, 410	2	
Value	$\rightarrow$	enum8	settings_resp	1	Settings response.
Туре	0x11		2000	1	Enable Client Provisioning
Length	1		800	2	
Value	$\rightarrow$	boolean	enable_client_provisioning	1	Values:
					• TRUE – Enable
					• FALSE – Disable (default)
Туре	0x12			1	Enable VoLTE Support Through Client
					Provisioning
Length	1			2	
Value	$\rightarrow$	boolean	enable_volte	1	Values:
					• TRUE – Enable
					• FALSE – Disable (default)
Туре	0x13			1	Enable VT Support Through Client
					Provisioning
Length	1			2	
Value	$\rightarrow$	boolean	enable_vt	1	Values:
					• TRUE – Enable
					• FALSE – Disable (default)
Туре	0x14			1	Enable Presence Support Through Client
					Provisioning
Length	1			2	

Field	Field	Field	Parameter	Size	Description
	value	type		(byte)	
Value	$\rightarrow$	boolean	enable_presence	1	Values:
			_		• TRUE – Enable
					• FALSE – Disable (default)
Туре	0x15			1	Wi-Fi Call Setting
Length	4			2	
Value	$\rightarrow$	enum	wifi_call	4	WFC status. Values:
					• IMS_SETTINGS_WFC_STATUS_
					NOT_SUPPORTED (0) – WFC is not
					supported
					• IMS_SETTINGS_WFC_STATUS_
					ON (1) – WFC is enabled
					• IMS_SETTINGS_WFC_STATUS_
					OFF (2) – WFC is disabled
Туре	0x16			1	Wi-Fi Call Preference Setting
Length	4			2	
Value	$\rightarrow$	enum	wifi_call_preference	4	WFC preference mode. Values:
			= =		• IMS SETTINGS WFC CALL
				/	PREF_NONE (0) – None
				00	_ ` ` `
				1	PREFERRED (1) – WLAN preferred
				1. 010	mode
			6.	34.	• IMS_SETTINGS_WFC_WLAN_
			17 25		ONLY (2) – WLAN only mode
			67,70		• IMS_SETTINGS_WFC_CELLULAR_
		1	2016-05-17062 2016-05-170628		PREFERRED (3) – Cellular preferred
			07077		mode
			2,50		• IMS_SETTINGS_WFC_CELLULAR_
			0		ONLY (4) – Cellular only mode
Туре	0x17			1	Wi-Fi Call Roaming Setting
Length	4			2	
Value	$\rightarrow$	enum	wifi_call_roaming	4	WFC roaming mode. Values:
			_		• IMS_SETTINGS_WFC_ROAMING_
					NOT_SUPPORTED (0) – WFC roaming
					is not supported
					• IMS_SETTINGS_WFC_ROAMING_
					ENABLED (1) – WFC roaming is
					enabled
					• IMS_SETTINGS_WFC_ROAMING_
					DISABLED (2) – WFC roaming is
					disabled

## 3.53.3 Description of QMI\_IMS\_SETTINGS\_GET\_CLIENT\_-PROVISIONING CONFIG REQ/RESP

The request message from the client gets the client provisioning configuration parameters from the requesting control point. The response message indicates success or failure based upon the outcome of the request message processing by the service. The response message returns the client provisioning configuration parameters to the control point.



## 3.54 QMI\_IMS\_SETTINGS\_CLIENT\_PROVISIONING\_CONFIG\_- IND

Indicates when the client provisioning configuration parameters change.

IMSS message ID

0x0055

Version introduced

Major - 1, Minor - 22

## 3.54.1 Indication - QMI\_IMS\_SETTINGS\_CLIENT\_PROVISIONING\_- CONFIG\_IND

Message type

Indication

Sender

**Settings Service** 

Scope

Per control point (unicast)

**Mandatory TLVs** 

None

Name	Version introduced	Version last modified
Client Provisioning Enabled Status	1.22	1.22
Enabled VoLTE Support Through Client	1.22	1.22
Provisioning		
Enabled VT Support Through Client Provisioning	1.22	1.22
Enabled Presence Support Through Client	1.22	1.22
Provisioning		
Wi-Fi Call Setting	1.25	1.25
Wi-Fi Call Preference Setting	1.25	1.25
Wi-Fi Call Roaming Setting	1.26	1.26

Field	Field	Field	Parameter	Size	Description
	value	type		(byte)	
Туре	0x10			1	Client Provisioning Enabled Status
Length	1			2	

Field	Field	Field	Parameter	Size	Description
	value	type		(byte)	-
Value	$\rightarrow$	boolean	client_provisioning_	1	Values:
			enabled		• TRUE – Enable
					• FALSE – Disable (default)
Туре	0x11			1	Enabled VoLTE Support Through Client
					Provisioning
Length	1			2	
Value	$\rightarrow$	boolean	volte_enabled	1	Values:
					• TRUE – Enable
					• FALSE – Disable (default)
Туре	0x12			1	Enabled VT Support Through Client
					Provisioning
Length	1			2	
Value	$\rightarrow$	boolean	vt_enabled	1	Values:
					• TRUE – Enable
					• FALSE – Disable (default)
Туре	0x13			1	Enabled Presence Support Through
					Client Provisioning
Length	1			2 <	
Value	$\rightarrow$	boolean	presence_enabled	100	Values:
			_	2	TRUE – Enable
			2	X. O.	• FALSE – Disable (default)
Туре	0x14		6.	e 1	Wi-Fi Call Setting
Length	4		1 22	2	
Value	$\rightarrow$	enum	wifi_call	4	WFC status. Values:
		1	- Growalls		• IMS_SETTINGS_WFC_STATUS_
			07.77		NOT_SUPPORTED (0) – WFC is not
			750		supported
			Ų.		• IMS_SETTINGS_WFC_STATUS_
					ON (1) – WFC is enabled
					• IMS_SETTINGS_WFC_STATUS_
					OFF (2) – WFC is disabled
Туре	0x15			1	Wi-Fi Call Preference Setting
Length	4			2	
Value	$\rightarrow$	enum	wifi_call_preference	4	WFC preference mode. Values:
			•		• IMS_SETTINGS_WFC_CALL_
					PREF_NONE (0) – None
					• IMS_SETTINGS_WFC_WLAN_
					PREFERRED (1) – WLAN preferred
					mode
					• IMS_SETTINGS_WFC_WLAN_
					ONLY (2) – WLAN only mode
					• IMS_SETTINGS_WFC_CELLULAR_
					PREFERRED (3) – Cellular preferred
					mode
					• IMS_SETTINGS_WFC_CELLULAR_
				I	l
					ONLY (4) – Cellular only mode

Field	Field	Field	Parameter	Size	Description
	value	type		(byte)	
Length	4			2	
Value	$\rightarrow$	enum	wifi_call_roaming	4	WFC roaming mode. Values:
					• IMS_SETTINGS_WFC_ROAMING_
					NOT_SUPPORTED (0) – WFC roaming
					is not supported
					• IMS_SETTINGS_WFC_ROAMING_
					ENABLED (1) – WFC roaming is
					enabled
					• IMS_SETTINGS_WFC_ROAMING_
					DISABLED (2) – WFC roaming is
					disabled

## 3.54.2 Description of QMI\_IMS\_SETTINGS\_CLIENT\_PROVISIONING\_-CONFIG\_IND

This indication is sent to the control points that have registered for it when there are updates to the client provisioning configuration parameters.

## 3.55 QMI\_IMS\_SETTINGS\_SET\_APCS\_COMPLETE\_CONFIG

Sets the APCS\_COMPLETE status for the requesting control point.

IMSS message ID

0x0056

Version introduced

Major - 1, Minor - 27

# 3.55.1 Request - QMI\_IMS\_SETTINGS\_SET\_APCS\_COMPLETE\_- CONFIG\_REQ

Message type

Request

Sender

Control point

**Mandatory TLVs** 

None

**Optional TLVs** 

None

# 3.55.2 Response - QMI\_IMS\_SETTINGS\_SET\_APCS\_COMPLETE\_- CONFIG\_RESP

Message type

Response

Sender

**Settings Service** 

#### **Mandatory TLVs**

The Result Code TLV (defined in Section 2.3.1) is always present in the response.

Name	Version introduced	Version last modified
Result Code	1.18	1.18

#### **Optional TLVs**

Name	Version introduced	Version last modified
Settings Standard Response Type	1.18	1.18

Field	Field	Field	Parameter	Size	Description
	value	type		(byte)	
Туре	0x10			1	Settings Standard Response Type
Length	1			2	
Value	$\rightarrow$	enum8	settings_resp	1	A settings-specific error code is returned when the standard response error type is
					QMI_ERR_CAUSE_CODE.

## 3.55.3 Description of QMI\_IMS\_SETTINGS\_SET\_APCS\_COMPLETE\_-CONFIG REQ/RESP

The request message sets the APCS\_COMPLETE indication to IMS. The response message indicates success or failure based on the outcome of the request message processing by the service.

When the request message does not contain any configuration parameters, the service does no processing and returns QMI\_RESULT\_SUCCESS.

## A References

## A.1 Related Documents

Title	Number
Qualcomm Technologies	
QMI Client API Interface Specification	80-N1123-1
QMI Common Service Interface API Interface Specification	80-N1123-2
Qualcomm Messaging Interface (QMI) Architecture	80-VB816-1
Standards	
SIP: Session Initiation Protocol	RFC 3261
RTP Control Protocol Extended Reports (RTCP XR)	RFC 3611
Resources	
Real-Time Transport Protocol (RTP) Parameters	www.iana.org

## A.2 Acronyms and Terms

Acronym or term	Definition
ACS	adjacent channel selectivity
AMR	adaptive multirate codec
APN	access point name
CSCF	call session control function
ETAG	entity tag
FT	file transfer
GRUU	Globally Routable User-Agent URI
GZIP	GNU Zip
HSPA	high-speed packet access
IMS	IP multimedia subsystem
IMSS	IP multimedia subsystem settings
iRAT	inter-radio access technology
ISIM	IP multimedia services identity module
MO	mobile-originated
MSRP	Message Session Relay Protocol
MTU	Maximum Transmission Unit
NAT	network access translation
NB	narrowband
NV	nonvolatile
PCO	protocol configuration option
PDP	Packet Data Protocol
QDJ	Qualcomm Dejitter buffer

Acronym or term	Definition		
QMI	Qualcomm messaging interface		
RAT	radio access technology		
RCS	rich communication services		
RTCP	RTP Control Protocol		
RTO	requested time out		
RTP	Real-Time Transport Protocol		
RTT	round-trip time		
SCR	source controlled rate		
SIP	Session Initiation Protocol		
SMS	short messaging service		
TLV	type-length-value		
UE	user equipment		
URI	universal resource identifier		
VoIP	voice over Internet Protocol		
VoLTE	voice over LTE		
VT	videotelephony		
WB	wideband		
WFC	Wi-Fi <sup>®</sup> call		
	To 16.05.217.06.24.27.RDT.NN  To 16.05.217.06.24.27.RDT.NN  To 16.05.217.06.24.27.RDT.NN		