

# **Enabler Test Requirements for Open Connection Manager API**

Candidate Version 1.0 – 19 June 2012

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# 1. Scope

The Enabler Test Requirements (ETR) document for the Enabler under consideration is created and maintained by the Technical Working Group (TWG) responsible for the technical specifications for the corresponding Enabler.

The ETR document is intended to cover at least those requirements collected in the Requirements Document (RD) and the Architecture Document (AD) in addition to any other items the TWG has identified as important enough to warrant attention from interoperability perspective and identify any technical functionalities that should be covered by testing.

# 2. References

## 2.1 Normative References

[3GPP TR 21.905]	"TR 21.905 Technical Specification Group Services and System Aspects; Vocabulary for 3GPP Specifications", 3rd Generation Partnership Project (3GPP), URL: <u>http://www.3gpp.org/ftp/Specs/archive/21_series/21.905/</u>
[3GPP TS 22.011]	"TS 22.011 Technical Specification Group Services and System Aspects; Service accessibility", 3rd Generation Partnership Project (3GPP), URL: <u>http://www.3gpp.org/ftp/Specs/archive/22_series/22.011/</u>
[3GPP TS 22.022]	"TS 22.022 Technical Specification Group Services and System Aspects; Personalisation of Mobile Equipment (ME), Mobile functionality specification", 3rd Generation Partnership Project (3GPP), URL: <u>http://www.3gpp.org/ftp/Specs/archive/22_series/22.022/</u>
[3GPP TS 22.030]	"TS 22.030 Technical Specification Group Services and System Aspects; Man-Machine Interface (MMI) of the User Equipment (UE)", 3rd Generation Partnership Project (3GPP), URL: <u>http://www.3gpp.org/ftp/Specs/archive/22_series/22.030/</u>
[3GPP TS 22.101]	"TS 22.101 Technical Specification Group Services and System Aspects; Service aspects; Service principles", 3rd Generation Partnership Project (3GPP), URL: <u>http://www.3gpp.org/ftp/Specs/archive/22_series/22.101/</u>
[3GPP TS 23.003]	"TS 23.003 Technical Specification Group Services and System Aspects; Numbering, addressing and identification", 3rd Generation Partnership Project (3GPP), URL: <u>http://www.3gpp.org/ftp/Specs/archive/23_series/23.003</u>
[3GPP TS 23.038]	"TS 23.038 Technical Specification Group Services and System Aspects; Alphabets and language-specific information", 3rd Generation Partnership Project (3GPP), URL: <u>http://www.3gpp.org/ftp/Specs/archive/23_series/23.038</u>
[3GPP TS 24.090]	"TS 24.090 Technical Specification Group Core Network and Terminals; Unstructured Supplementary Service Data (USSD)", 3rd Generation Partnership Project (3GPP), URL: <u>http://www.3gpp.org/ftp/Specs/archive/24_series/24.090/</u>
[3GPP TS 31.101]	"TS 31.101 Technical Specification Group Core Network and Terminals; UICC-terminal interface; Physical and logical characteristics, 3rd Generation Partnership Project (3GPP), URL: http://www.3gpp.org/ftp/Specs/archive/31_series/31.101/
[3GPP TS 31.111]	"TS 31.111 Technical Specification Group Core Network and Terminals; Universal Subscriber Identity Module (USIM), Application Toolkit (USAT)", 3rd Generation Partnership Project (3GPP), URL: <u>http://www.3gpp.org/ftp/Specs/archive/31_series/31.111/</u>
[3GPP TS 31.102]	"TS 31.102 Technical Specification Smart Cards; Characteristics of the Universal Subscriber Identity Module (USIM) application", 3rd Generation Partnership Project (3GPP), URL: <u>http://www.3gpp.org/ftp/Specs/archive/31_series/31.102/</u>
[3GPP TS 31.103]	"TS 31.103 Technical Specification Group Core Network and Terminals; Characteristics of the IP Multimedia Services Identity Module (ISIM) application", 3rd Generation Partnership Project (3GPP), URL: <u>http://www.3gpp.org/ftp/Specs/archive/31_series/31.103/</u>
[3GPP TS 31.111]	"TS 31.111 Technical Specification Group Core Network and Terminals; Universal Subscriber Identity Module (USIM), Application Toolkit (USAT)", 3rd Generation Partnership Project (3GPP), URL: <u>http://www.3gpp.org/ftp/Specs/archive/31_series/31.111/</u>
[3GPP TS 33.401]	"TS 33.401 Technical Specification Group Services and System Aspects; 3GPP System Architecture Evolution (SAE); Security architecture", 3rd Generation Partnership Project (3GPP), URL: <u>http://www.3gpp.org/ftp/Specs/archive/33_series/33.401/</u>
[3GPP TS 33.402]	"TS 33.402 Technical Specification Group Services and System Aspects; System Architecture Evolution (SAE); Security aspects of non-3GPP accesses", 3rd Generation Partnership Project (3GPP), URL: <u>http://www.3gpp.org/ftp/Specs/archive/33_series/33.402/</u>
[3GPP TS 51.011]	"TS 51.011 Technical Specification Group Terminals; Specification of the Subscriber Identity Module- Mobile Equipment (SIM - ME) interface", 3rd Generation Partnership Project (3GPP), URL: <u>http://www.3gpp.org/ftp/Specs/archive/51_series/51.011/</u>
[3GPP TS 51.014]	"TS 51.014 Technical Specification Group Terminals; Specification of the SIM Application Toolkit for the Subscriber Identity Module - Mobile Equipment (SIM - ME) interface (Release 4)", 3rd Generation Partnership Project (3GPP), URL: <u>http://www.3gpp.org/ftp/Specs/archive/51_series/51.014/</u>
[3GPP2 C.S0016]	"Over-the-Air Service Provisioning of Mobile Stations in Spread Spectrum Systems", 3rd Generation

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	Partnership Project 2 (3GPP2), Technical Specification 3GPP2 C.S0016, URL: http://www.3gpp2.org/
[3GPP2 C.S0023]	"Removable User Identity Module for Spread Spectrum Systems", 3rd Generation Partnership Project 2 (3GPP2), Technical Specification 3GPP2 C.S0023, URL: <u>http://www.3gpp2.org/</u>
[3GPP2 C.S0035]	"CDMA Card Application Toolkit (CCAT)", 3rd Generation Partnership Project 2 (3GPP2), Technical Specification 3GPP2 C.S0035, URL: <u>http://www.3gpp2.org/</u>
[3GPP2 C.S0065]	"Cdma2000 Application on UICC for Spread Spectrum Systems", 3rd Generation Partnership Project 2 (3GPP2), Technical Specification 3GPP2 C.S0065, URL: <u>http://www.3gpp2.org/</u>
[3GPP2 C.S0068]	"ME Personalization for CDMA2000 Spread Spectrum Systems", 3rd Generation Partnership Project 2 (3GPP2), Technical Specification 3GPP2 C.S0068, URL: <u>http://www.3gpp2.org/</u>
[DMClientAPIFw v1.0]	"Enabler Release for OMA Device Management Client API framework", OMA-ER-DMClientAPIfw- V1_0, Open Mobile Alliance <sup>TM</sup> , URL: <u>http://www.openmobilealliance.org/</u>
[ETSI TR 102 216]	"TR 102 216 Technical Report Smart Cards; Vocabulary for Smart Card Platform specifications", v3.0.0, European Telecommunications Standards Institute (ETSI), URL: <u>http://www.etsi.org/</u>
[ETSI TS 102 221]	"TS 102 221 Technical Specification, Smart Cards; UICC-Terminal interface; Physical and logical characteristics", European Telecommunications Standards Institute (ETSI), URL: <u>http://www.etsi.org/</u>
[ETSI TS 102 223]	"TS 102 223 Technical Specification, Smart Cards; Card Application Toolkit (CAT)", European Telecommunications Standards Institute (ETSI), URL: <u>http://www.etsi.org/</u>
[IOPPROC]	"OMA Interoperability Policy and Process", Version 1.11, Open Mobile Alliance <sup>TM</sup> , OMA-ORG-IOP_Process-V1_11, <u>URL:http://www.openmobilealliance.org/</u>
[OpenCMAPI-AD]	"Open Connection Manager API Architecture", Open Mobile Alliance™, OMA-AD-OpenCMAPI-V1_0- 20111101-C.doc, URL: <u>http://www.openmobilealliance.org/</u>
[OpenCMAPI-RD]	"Open CM API Requirements", Open Mobile Alliance™, OMA-RD-OpenCMAPI-V1_0-20111101- C.doc, URL: <u>http://www.openmobilealliance.org/</u>
[OpenCMAPI-TS]	"Open CM API Specification", Open Mobile Alliance™, OMA-TS-OpenCMAPI-V1_0-20120522-D.doc. URL: <u>http://www.openmobilealliance.org/</u>
[RFC2119]	"Key words for use in RFCs to Indicate Requirement Levels", S. Bradner, March 1997, URL:http://www.ietf.org/rfc/rfc2119.txt
[RFC4234]	"Augmented BNF for Syntax Specifications: ABNF". D. Crocker, Ed., P. Overell. October 2005, URL: http://www.ietf.org/rfc/rfc4234.txt
[SCRRULES]	"SCR Rules and Procedures", Open Mobile Alliance <sup>™</sup> , OMA-ORG-SCR_Rules_and_Procedures, URL: http://www.openmobilealliance.org/

### 2.2 Informative References

[OMADICT]

"Dictionary for OMA Specifications", Version 2.8, Open Mobile Alliance<sup>TM</sup>, OMA-ORG-Dictionary-V2\_8, <u>URL:http://www.openmobilealliance.org/</u>

# 3. Terminology and Conventions

### 3.1 Conventions

The key words "MUST", "MUST NOT", "REQUIRED", "SHALL", "SHALL NOT", "SHOULD", "SHOULD NOT", "RECOMMENDED", "MAY", and "OPTIONAL" in this document are to be interpreted as described in [RFC2119].

All sections and appendixes, except "Scope" and "Introduction", are normative, unless they are explicitly indicated to be informative.

### 3.2 Definitions

AID	Application IDentifier as defined in [ETSI TR 102 216] and specified in [ETSI TS 102 221].
Cloud Device	Device that needs to be connected and using online services to be fully functional.
Connection Manager Application	An entity or application that manages different network connections based on user profiles associated with these connections.
CSIM	A CDMA2000 Subscriber Identity Module is an application defined in [3GPP2 C.S0065] residing on the UICC to register services provided by 3GPP2 mobile networks with the appropriate security.
Device	A device in the context of OpenCMAPI is defined as a hardware unit which is exposed through a proprietary driver and containing at least one radio for the purpose of two way communication. A device could contain more than one radio and in this case is referred to as a multi-function device. Example: 3GPP2 and also Wi-Fi/WLAN
Dormant	Connection still active but no traffic on tx and rx. In 3GPP context, PDP context is established but no traffic.
ISIM	An IP Multimedia Services Identity Module is an application defined in [3GPP TS 31.103] residing in the memory of the UICC, providing IP service identification, authentication and ability to set up Multimedia IP Services.
Mobile Broadband Device	A datacard or USB modem or dongle that can be plugged in a laptop to assume data connectivity to cellular networks
M2M	Any other device with an embedded modem module using wireless network(s) to communicate with other devices or networks.
	It could be for example a module for an automotive system or an alarm system or even a consumer device such as a camera or a portable game device with embedded module.
NAA	Network Access Application as defined in [ETSI TR 102 216]. Examples of NAA on UICC: CSIM, ISIM, USIM.
Network Identifier	Network Identifier as specified in [3GPP TS 23.003].
<b>Operator Identifier</b>	Operator Identifier as specified in [3GPP TS 23.003].
Profile/User Profile/Connection Profile	The term Profile or User Profile or Connection Profile will be used to identify the information needed to establish a connection. There are two types of Connection Profiles: cellular profiles for connection to cellular and WLAN profiles for connection to WLAN
Push Service	A service utilizing PUSH delivery mechanism that enables the mobile device to receive data traffic initiated by a dedicated server.
QNC	Quick Net Connect is a 2G data technology for circuit-switched 2G wireless networks
R-UIM	A Removable User Identity Module is a standalone module defined in [3GPP2 C.S0023] to register services provided by 3GPP2 mobile networks with the appropriate security.
SIM	A Subscriber Identity Module is a standalone module defined in [3GPP TS 51.011] to register services provided by 2G mobile networks with the appropriate security.
UICC	As defined in [OMA-DICT] and whose interface is specified in [3GPP TS 31.101].
UIM	A User Identity Module is a module defined in [3GPP2 C.S0023] to register services provided by 3GPP2 mobile networks with the appropriate security. The UIM can either be a removable UIM (R-UIM) or a non-removable UIM.

USIM	A Universal Subscriber Identity Module is an application defined in [3GPP TS 31.102] residing in the memory of the UICC to register services provided by 3GPP mobile networks with the appropriate security.
Wireless Router	A cellular network device that combines a router, switch and Wi-Fi access point (Wi-Fi base station) in one box. In the case of OpenCMAPI, the network to provide connectivity will be a cellular network. There could be two sorts of Wireless router: portable for nomadic usage or fixed for home usage in the case of Digital Dividend for example however in the document they will be considered as the same.

# 3.3 Abbreviations

3GPP	3rd Generation Partnership Project		
3GPP2	3rd Generation Partnership Project 2		
ACCOLC	Access Overload Class		
AD	Architecture Document		
API	Application Programming Interface		
APN	Access Point Name		
CDMA	Code Division Multiple Access		
СМ	Connection Manager		
GNSS	Global Navigation Satellite System		
LTE	Long Term Evolution		
MEID	Mobile station Equipment Identifier		
MIN	Mobile Identification Number		
MSISDN	Mobile Station International Subscriber Directory Number		
NAA	Network Access Application		
ODM	Original Device Manufacturer		
OEM	Original Equipment Manufacturer		
OMA	Open Mobile Alliance		
OpenCMAPI	Open Connection Manager (CM) Application Programming Interface (API)		
PIN	Personal Identification Number		
PLMN	Public Land Mobile Network		
PUK	Personal Unlocking Key also called UNBLOCK PIN.		
QoS	Quality of Service		
RAT	Radio Access Technologies		
RFC	Request For Comments		
RD	Requirements Document		
R-UIM	Removable User Identity Module		
SCP	Session Configuration Protocol		
SID	System Identifier		
SIM	Subscriber Identity Module		
SMS	Short Message Service		
SMS-C	Short Message Service Center		
SPC	Service Programming Code		

SSID	Service Set Identifier
TS	Technical Specification
UI	User Interface
UICC	Universal Integrated Circuit card
USIM	Universal Subscriber Identity Module
USSD	Unstructured Supplementary Service Data
Wi-Fi	Wireless Fidelity
WLAN	Wireless Local Area Network
WPS	Wireless Protected Setup
WWAN	Wireless Wide Area Network

## 4. Introduction

The purpose of this Enabler Test Requirements document is to help guide the testing effort for the Enabler OpenCMAPI V1.0, documenting those areas where testing is most important to ensure interoperability of implementations.

The Enabler under consideration comprises the following specifications:

• OMA-TS-OpenCMAPI-V1\_0: Specifying the OMA Open Connection Management API

Generally, the testing activity should aim at validating the normal working behaviour of the client/server interactions, as well as testing the error conditions whenever it is possible to set up the appropriate scenarios. The following sections provide a more detailed description of the testing requirements for OpenCMAPI-V1.0.

This document also intends to provide some guidance on the prioritization of the specifications and features to be tested within OpenCMAPI-V1.0.

# 5. Test Requirements

#### 5.1 Enabler Test Requirements

The test requirements collected in this section are related to the Enabler OpenCMAPI-V1.0

In this section, it should be defined what specific functionalities of this Enabler shall or should be tested to ensure adequate operational of the implementations, including any security requirements and constraints on usage if specified (e.g. user can forward a media object but can not visualize it). That means that devices (clients/serves) shall do what they have to do and they shall not do what they are not allowed to do. Both types of test requirements (positive and negative testing) should be included here if so required.

Besides this information, OMA Architecture specifies a "Framework Architecture", consisting of a set of common functions that need to be invoked in most use cases involving the different Service Enablers. The functionality requirements defined in the OMA Framework Architecture, i.e. authentication, authorization, charging, billing, common directory, etc. should also be listed in this table. Use cases are the main input to identify test requirements.

The following test requirements should cover both Conformance test requirements (i.e. functionality to be tested to verify whether it is implemented either in the client side or in the server side) and Interoperability test requirements (i.e. client/server interactions one with another)

The following sections (Mandatory and Optional test requirements) could also be separated for client and server test requirements.

The tables for the mandatory and optional test requirements include the following columns:

FEATURE KEY:	A set of characters uniquely identifying the enabler test requirement to be tested. It is suggested that the Feature Key is no longer than 4 to 5 characters. The purpose of the Feature Key is that when used, it distinctly refers to only one feature to be tested.
FEATURE DESCRIPTION:	A description of a technical specification feature to be tested.
FEATURE TEST REQUIREMENTS:	A description of what shall be tested for the feature,

The following are the Feature Keys of OpenCMAPI 1.0 that should be tested.

Feature Key	Description	
APIMgmt	API Management	
DevDiscovery	Device Discovery APIs	
CellNetMgmt	Cellular Network Management APIs	
ConnMgmt	Connection Management APIs	
NetMgmt	Network Management APIs	
CDMA2000	CDMA2000 APIs	
DevServ	Device Service APIs	
PIN/PUK	PINs/PUKs Management APIs	
UICCMgmt	UICC Management APIs	
WLAN	WLAN APIs	
Statistics	Statistics APIs	

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InfoStatus	Information Status APIs	
SMSMgmt	SMS Management APIs	
USSDMgmt	USSD Management APIs	
GNSS	GNSS APIs	
PUSHMgmt	Data Push Service Management APIs	
Callback	Callback APIs	

#### Table 1: Feature Keys of OpenCMAPI 1.0

#### 5.1.1 Mandatory Test Requirements

Mandatory test requirements should cover those features and use cases that require validation in order to approve the enabler. These include areas with complex interactions between the different functional components of the enabler architecture or where the complexity of the specification(s) is such that there is some uncertainty that they have been correctly specified.

These features and use cases SHOULD cover mandatory and MAY recommend prioritisation of optional implementation features. If testing of some of the mandatory features is not required, then the ETR SHALL contains an explanation for their exclusion.

NOTE: This table needs to be filled out at a level where ambiguity is not present but details are not overwhelming.

Ambiguity means that the details do not have several meanings nor have more than one possible implementation path following.

	Feature Key	Feature Description	Feature Test Requirements
	APIMgmt-001	API Open	To verify the function to open the API.
	APIMgmt-002	API Close	To verify the function to close the API.
Normal	APIMgmt-003	Get OpenCMAPIVersion	To verify the function to get the OpenCMAPI version.
Flows	DevDiscovery-001	Discovery DetectDevices	To verify the function to detect devices present and if the addition/removal of a device can be detected through the relevant callback.
	DevDiscovery-002	Discovery GetDevice	To verify the function to get the information of a detected device.
	DevDiscovery-003	Discovery OpenDevice	To verify the function to open a detected device.
	DevDiscovery-004	Discovery CloseDevice	To verify the function to close a device.
	CellNetMgmt-001	Network Get RFInfo	To verify the function to retrieve the RF information.
	CellNetMgmt-002	Network Get HomeInformation	To verify the function to retrieve the Home Network information.
	CellNetMgmt-003	Network Get ServingInformation	To verify the function to retrieve the Serving Network information.
	ConnMgmt-001	NetConnectSrv MgrCellularProfile	To verify the function to add/delete/update a Cellular Profile.

ConnMgmt-002	NetConnectSrv GetCellularProfile	To verify the function to retrieve the profile information.
ConnMgmt-003	NetConnectSrv GetCellularProfileList	To verify the function to retrieve the profile list.
ConnMgmt-004	NetConnectSrv SelectNetwork	To verify the function to select network mode and PLMN.
ConnMgmt-005	NetConnectSrv GetNetworkList Sync	To verify the function to retrieve the list of the network available in synchronous mode.
ConnMgmt-006	NetConnectSrv GetNetworkList Async	To verify the function to retrieve the list of the networks available in asynchronous mode through the relevant callback.
ConnMgmt-007	NetConnectSrv GetCurrentConnType	To verify the function to get the current connection type.
ConnMgmt-008	NetConnectSrv Connect Async	To verify the function to connect to a network asynchronously and the relevant callback.
ConnMgmt-009	NetConnectSrv Disconnect Async	To verify the function to disconnect from a network asynchronously and the relevant callback.
ConnMgmt-010	NetConnectSrv CancelConnect Async	To verify the function to cancel the connection to a network asynchronously and the relevant callback.
ConnMgmt-011	NetConnectSrv Secondary PDP Context Connect Async	To verify the function to establish a secondary PDP context asynchronously and the relevant callback.
ConnMgmt-012	NetConnectSrv Secondary PDP Context Disconnect Async	To verify the function to disconnect from a secondary PDP context asynchronously and the relevant callback.
ConnMgmt-013	NetConnectSrv Secondary PDP Context Cancel Connect Async	To verify the function to cancel the connection to a secondary PDP context asynchronously and the relevant callback.
NetMgmt-001	NetCon GetConnectionStatus	To verify the function to get the network connection status.
NetMgmt-002	NetCon SetAutoConnectMode	To verify the function to set the Auto mode for network connection.
NetMgmt-003	NetCon GetAutoConnectMode	To verify the function to get the Auto mode for network connection.
NetMgmt-004	NetCon SetDefaultProfile	To verify the function to set a default profile.
NetMgmt-005	NetCon SetPermittedBearers	To verify the function to set the permitted bearers.
NetMgmt-006	NetCon GetPermittedBearers	To verify the function to get the permitted bearers.
NetMgmt-007	NetConSetNoDataProfile	To verify the function to set the NoDataProfile.

NetMgmt-008	NetCon GetNoDataProfile	To verify the function to get the NoDataProfile status.
DevServ-001	DevSrv GetManufacturerName	To verify the function to get the manufacturer name.
DevServ-002	DevSrv GetManufacturerModel	To verify the function to get the manufacturer model.
DevServ-003	DevSrv GetDeviceName	To verify the function to get the device name.
DevServ-004	DevSrv GetHardwareVersion	To verify the function to get the hardware version.
DevServ-005	DevSrv GetProductType	To verify the function to get the product type.
DevServ-006	DevSrv GetIMSI	To verify the function to get the IMSI.
DevServ-007	DevSrv GetMDN	To verify the function to get the MDN.
DevServ-008	DevSrv GetIMEI	To verify the function to get the IMEI.
DevServ-009	DevSrv GetESN	To verify the function to get the ESN.
DevServ-010	DevSrv GetMEID	To verify the function to get the MEID.
DevServ-011	DevSrv GetMSISDN	To verify the function to get the MSISDN.
DevServ-012	DevSrv GetDeviceStatus	To verify the function to get the device status.
DevServ-013	DevSrv GetFirmwareVersion	To verify the function to get the firmware version.
DevServ-014	DevSrv GetRFSwitch	To verify the function to get the RF switch status.
DevServ-015	DevSrv SetRadioState	To verify the function to set the radio state in synchronous mode.
DevServ-016	DevSrv SetRadioState Async	To verify the function to set the radio state in asynchronous mode and the relevant callback.
DevServ-017	DevSrv GetControlKeyStatus	To verify the function to get the Control Key status.
DevServ-018	DevSrv DeactivateControlKey	To verify the function to deactivate the Control Key.
PIN/PUK-001	DevSrv GetNAAavailable	To verify the function to get the available NAA.
PIN/PUK-002	DevSrv EnablePIN	To verify the function to enable the PIN.
PIN/PUK-003	DevSrv DisablePIN	To verify the function to disable the PIN
PIN/PUK-004	DevSrv VerifyPIN	To verify the function to verify the PIN.
PIN/PUK-005	DevSrv UnblockPIN	To verify the function to unblock the PIN.
PIN/PUK-006	DevSrv ChangePIN	To verify the function to change the PIN
WLAN-001	WLAN IsSupported	To verify the function to check if WLAN is supported.
WLAN-002	WLAN AddKnownNetwork	To verify the function to add a Known WLAN

		network.
WLAN-003	WLAN UpdateKnownNetwork	To verify the function to update a known WLAN network.
WLAN-004	WLAN DeleteKnownNetwork	To verify the function to delete a known WLAN network.
WLAN-005	WLAN GetKnownNetwork	To verify the function to get the known WLAN networks information.
WLAN-006	WLAN GetScanResults	To verify the function to scan for the WLAN networks available.
WLAN-007	WLAN Scan Async	To verify the function to scan for the WLAN networks available in asynchronous mode through the relevant callback.
WLAN-008	WLAN Connect	To verify the function to connect to a WLAN network.
WLAN-009	WLAN ConnectKnownNetwork	To verify the function to connect to a known WLAN network.
WLAN-010	WLAN Disconnect	To verify the function to disconnect from a WLAN network.
WLAN-011	WLAN GetConnectionMode	To verify the function to get the WLAN connection mode.
WLAN-012	WLAN SetConnectionMode	To verify the function to set the WLAN connection mode.
WLAN-013	WLAN ResetDevice	To verify the function to reset the WLAN.
WLAN-014	WLAN GetConnectedParameters	To verify the function to retrieve the WLAN connection parameters.
WLAN-015	WLAN SetConnectedParameters	To verify the function to set the WLAN connection parameters
WLAN-016	WLAN CancelOperation	To verify the function to cancel a WLAN pending operation
WLAN-017	WLAN ConnectWPS	To verify the function to initiate a connection with the WPS button push method.
WLAN-018	WLAN ConnectPinWPS	To verify the function to initiate a connection with the WPS pin method.
WLAN-019	WLAN ConnectionState	To verify the function to determine if WLAN is connected.
WLAN-020	WLAN Search Network Async	To verify the function to search for a specific WLAN network in asynchronous mode through the relevant callback.
Statistics-001	NetStatistic GetConnectionStatistics	To verify the function to get the connection statistics.
InfoStatus-001	Information GetPINStatus	To verify the function to get the PIN status.

InfoStatus-002	Information GetNetworkSelectionMode	To verify the function to get the network selection mode.
InfoStatus-003	Information GetSignalStrength	To verify the function to get the signal strength.
InfoStatus-004	Information GetCSNetworkRegistration	To verify the function to get the CS network registration information.
InfoStatus-005	Information GetPSNetworkRegistration	To verify the function to get the PS network registration information.
InfoStatus-006	Information GetAPN	To verify the function to get the APN information.
InfoStatus-007	Information GetIPAddress	To verify the function to get the IP address.
InfoStatus-008	Information GetRoamingStatus	To verify the function to get the roaming status.
InfoStatus-009	Information GetDriverVersion	To verify the function to get the driver version.
InfoStatus-010	Information GetRATType	To verify the function to get the RAT type.
InfoStatus-011	Information GetQoS	To verify the function to get the QoS.
InfoStatus-012	Information GetWLANConnection	To verify the function to get the WLAN connection information.
InfoStatus-013	Information GetRadioState	To verify the function to get the Radio power state.
InfoStatus-014	Get ICCID	To verify the function to get the ICCID.
SMSMgmt-001	SMS Send	To verify the function to send an SMS.
SMSMgmt-002	SMS Get	To verify the function to get an SMS.
SMSMgmt-003	SMS Delete	To verify the function to delete an SMS.
SMSMgmt-004	SMS GetIDList	To verify the function to get the SMS ID list.
SMSMgmt-005	SMS Update	To verify the function to update an SMS.
SMSMgmt-006	SMS GetSMSCAddress	To verify the function to get the SMSC address
SMSMgmt-007	SMS SetSMSCAddress	To verify the function to set the SMSC address.
SMSMgmt-008	SMS GetValidityPeriod	To verify the function to get the SMS validity period
SMSMgmt-009	SMS SetValidityPeriod	To verify the function to set the SMS validity period.
SMSMgmt-010	SMS GetDeliveryReport	To verify the function to get the SMS delivery report status.
SMSMgmt-011	SMS SetDeliveryReport	To verify the function to set the SMS delivery report status
SMSMgmt-012	SMS GetRecordCount	To verify the function to get the SMS record count.
SMSMgmt-013	SMS GetUnreadRecordCount	To verify the function to get the unread SMS

Flows

			record count.
	USSDMgmt-001	USSD Request	To verify the function USSD Request.
	USSDMgmt-002	USSD Release	To verify the function USSD Release.
	Callback-001	Callback Register	To verify the function to register to the callbacks.
	Callback-002	Callback Unregister	To verify the function to unregister to the callbacks.
Error			

#### Table 2: Applicability Table for Enabler Specific Mandatory Test Requirements

#### 5.1.2 Optional Test Requirements

Optional test requirements should cover those features and use cases that are not mandated to be tested, but it is still felt that their inclusion will enhance the quality of the enabler validation.

Additionally, important conformance test requirements MAY be listed.

These features and use cases SHOULD cover optional and MAY cover mandatory implementation features. In case a mandatory feature is listed here, the Feature Test Requirements column should provide an explanation why testing of this feature is not mandated.

NOTE: This table needs to be filled out at a level where ambiguity is not present but details are not overwhelming.

Ambiguity means that the details do not have several meanings nor have more than one possible implementation path following.

	Feature Key	Feature Description	Feature Test Requirements
	CDMA2000-001	CDMA2000 SetACCOLC	To verify the function to set the Access Overload Class for CDMA2000 devices
Normal	CDMA2000-002	CDMA2000 GetACCOLC	To verify the function to get the Access Overload Class for CDMA2000 devices
Flows	CDMA2000-003	CDMA2000 SetCDMANetworkParameters	To verify the function to set the CDMA network parameters.
	CDMA2000-004 CDMA2000 GetCDMANetworkParameters		To verify the function to get the CDMA2000 network parameters.
	CDMA2000-005	CDMA2000 GetANAAAAAuthenticationStat us	To verify the function to get the value of the most recent ANA AAA authentication attempt status for CDMA2000 devices.
	CDMA2000-006	CDMA2000 GetPRLVersion	To verify the function to get the PRL version.
	CDMA2000-007	CDMA2000 GetERIFile	To verify the function to get the ERIFile.
	CDMA2000-008	CDMA2000 ActivateAutomatic	To verify the function to perform automatic activation using a specified activation code for CDMA2000.
	CDMA2000-009	CDMA2000 ActivateManual	To verify the function to perform a manual activation for CDMA 2000.

CDMA2000-010	CDMA2000 ValidateSPC	To verify the function to get the SPC validation.
CDMA2000-011	OMADM StartSession	To verify the function to start an OMADM session.
CDMA2000-012	OMADM CancelSession	To verify the function to cancel an OMA DM session.
CDMA2000-013	OMADM GetSessionInfo	To verify the function to get an OMA DM session information.
CDMA2000-014	OMADM GetPendingNIA	To verify the function to get the information related to the NIA for a pending OMA DM. session
CDMA2000-015	OMADM SendSelection	To verify the function to check the answer from the device to a OMA DM NIA.
CDMA2000-016	OMADM GetFeatureSettings	To verify the function to get the OMA DM feature settings.
CDMA2000-017	OMADM SetProvisioningFeature	To verify the function to set the OMA DM provision feature.
CDMA2000-018	OMADM SetPRLUpdateFeature	To verify the function to enable and disable the OMA DM PRL update feature
CDMA2000-019	OMADM SetFirmwareUpdateFeature	To verify the function to set the firmware update feature.
CDMA2000-020	OMADM ResetToFactoryDefaults	To verify the function to set the OMA DM feature to factory default status.
CDMA2000-021	OMADM InitiateOTASP	To verify the function to initate an OTA SP.
CDMA2000-022	OMADM SetPRL	To verify the function to set the PRL.
CDMA2000-023	MobileIP SetState	To verify the function to set the current Mobile IP state of the device.
CDMA2000-024	MobileIP GetState	To verify the function to get the current Mobile IP state of the device.
CDMA2000-025	MobileIP SetActiveProfile	To verify the function to set the active Mobile IP profile.
CDMA2000-026	MobileIP GetActiveProfile	To verify the function to get the active Mobile IP profile.
CDMA2000-027	MobileIP SetProfile	To verify the function to set the Mobile IP profile.
CDMA2000-028	MobileIP GetProfile	To verify the function to get the Mobile IP profile.
CDMA2000-029	MobileIP SetParameters	To verify the function to set the Mobile IP parameters.
CDMA2000-030	MobileIP GetParameters	To verify the function to get the Mobile IP parameters.
CDMA2000-031	MobileIP GetLastError	To verify the function to retrieve the details of the

			last error that occurred for Mobile IP.
	UICCMgmt-001	UICC GetTerminalProfile	To verify the function to get the last TERMINAL PROFILE sent by the device to the SIM/R-UIM/UICC
	UICCMgmt-002	UICC SetTerminalProfile	To verify the function to set the last TERMINAL PROFILE sent by the device to the SIM/R-UIM/UICC
	UICCMgmt-003	UICC SendToolKitEnvelopeCommand	To verify the function to set the Tool Kit envelope command.
	UICCMgmt-004	UICC SendTerminalResponse	To verify the function to send a TERMINAL RESPONSE to the SIM/R-UIM/UICC via the device
	GNSS-001	GNSS SetState	To verify the function to set the GNSS state.
	GNSS-002	GNSS GetState	To verify the function to get the GNSS state.
	GNSS-003	GNSS SetTrackingParameters	To verify the function to set the GNSS tracking parameters.
	GNSS-004	GNSS GetTrackingParameters	To verify the function to get the GNSS tracking parameters
	GNSS-005	GNSS SetAGPSConfig	To verify the function to set the AGPS configuration.
	GNSS-006	GNSS GetAGPSConfig	To verify the function to get the AGPS configuration.
	GNSS-007	GNSS SetAutomaticTracking	To verify the function to enable and disable automatic GNSS tracking on the device
	GNSS-008	GNSS GetAutomaticTracking	To verify the function to retrieve the state of automatic GNSS tracking on the device.
	GNSS-009	GNSS GetDevicePosition	To verify the function to get the device position.
	GNSS-010	GNSS SetSystemTime	To verify the function to set the system time.
	PUSHMgmt-001	PUSH Enable	To verify the function to enable PUSH
	PUSHMgmt-002	PUSH Disable	To verify the function to disable PUSH
	PUSHMgmt-003	PUSH GetRadioType	To verify the function to get the current bearer type over which the PUSH session is established for an application
	DevServ-020	DevSrv UnblockControlKey	To verify the function to unblock the specified Mobile Equipment (device) de-personalization control key
Error Flows			

#### Table 3: Applicability Table for Enabler Specific Optional Test Requirements

### 5.2 Backwards Compatibility

As this is the first version of the Enabler OpenCMAPI-V1.0, there is no test requirement to verify the backwards compatibility.

### 5.3 Enabler Dependencies

No dependency on other Enablers has been identified for Enabler OpenCMAPI-V1.0.

# Appendix A. Change History

# (Informative)

# A.1 Approved Version History

Reference	Date	Description
n/a	n/a	No prior version -or- No previous version within OMA

## A.2 Draft/Candidate Version 1.0 History

Document Identifier	Date	Sections	Description
Draft Version:	16 Feb 2012	All	Updated template providing baseline for OpenCMAPI-V1.0
OMA-ETR-OpenCMAPI-V1_0	18 Apr 2012	All	Draft version
			Incorporated:
			OMA-CD-OpenCMAPI-2012-0098R01-CR_ETR_Baseline
	29 May 2012	All	Incorporated:
			OMA-CD-OpenCMAPI-2012-0116R01CR_Update_ETR
	04 June 2012	All	Incorporated:
			OMA-CD-OpenCMAPI-2012-0122-CR_ETR_additions
	06 June 2012	All	Incorporated:
			OMA-CD-OpenCMAPI-2012-0132-CR_ETR_Final_bug_fixes
Candidate Version	19 Jun 2012	All	Status changed to Candidate by TP #:
OMA-ETR-OpenCMAPI-V1_0-20120619			OMA-TP-2012-0228-
			INP_OpenCMAPI_V1_0_ERP_for_Candidate_Approval