



# RESTful Network API for Anonymous Customer Reference Management Requirements

Approved Version 1.0 – 24 Dec 2013

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**Open Mobile Alliance**  
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# Contents

- 1. SCOPE (INFORMATIVE) .....4**
- 2. REFERENCES .....5**
  - 2.1 NORMATIVE REFERENCES.....5**
  - 2.2 INFORMATIVE REFERENCES.....5**
- 3. TERMINOLOGY AND CONVENTIONS .....6**
  - 3.1 CONVENTIONS .....6**
  - 3.2 DEFINITIONS.....6**
  - 3.3 ABBREVIATIONS.....6**
- 4. INTRODUCTION (INFORMATIVE).....7**
  - 4.1 VERSION 1.0 .....7**
- 5. RESTFUL NETWORK API FOR ANONYMOUS CUSTOMER REFERENCE MANAGEMENT RELEASE DESCRIPTION (INFORMATIVE).....8**
  - 5.1 END-TO-END SERVICE DESCRIPTION .....8**
- 6. REQUIREMENTS (NORMATIVE).....9**
  - 6.1 HIGH-LEVEL FUNCTIONAL REQUIREMENTS .....9**
    - 6.1.1 Security .....9
    - 6.1.2 Charging Events.....10
    - 6.1.3 Administration and Configuration .....10
    - 6.1.4 Usability.....10
    - 6.1.5 Interoperability.....10
    - 6.1.6 Privacy .....10
  - 6.2 OVERALL SYSTEM REQUIREMENTS .....10**
  - 6.3 DATA EXCHANGE FORMAT REQUIREMENTS .....10**
- APPENDIX A. CHANGE HISTORY (INFORMATIVE).....11**
  - A.1 APPROVED VERSION HISTORY .....11**

# Tables

- Table 1: High-Level Functional Requirements .....9**
- Table 2: High-Level Functional Requirements – Authorization Items.....10**
- Table 3: Data Exchange Format Requirements.....10**

# 1. Scope

**(Informative)**

This document defines the requirements for OMA RESTful Network API for Anonymous Customer Reference Management in order to expose ACR management feature to 3<sup>rd</sup> party developers. The purpose is to provide RESTful Network API for Anonymous Customer Reference Management, meeting GSMA: “Rich Communication Ecosystem RCS-e Network API Detailed Requirements 1.0” [REQ\_RCSe] and added improvements as per GSMA Access and OMA requirements.

## 2. References

### 2.1 Normative References

- [Autho4API\_10] “Authorization Framework for Network APIs”, Open Mobile Alliance™, OMA-ER-Autho4API-V1\_0, [URL: http://www.openmobilealliance.org/](http://www.openmobilealliance.org/)
- [JSON] JavaScript Programming Language, Standard ECMA-262 3rd Edition - December 1999.
- [REQ\_RCSe] “Rich Communication Ecosystem RCS-e Network API Detailed Requirements 1.0” approved on October 17th, 2011, [URL: http://www.gsm.org/documents/RCS-e\\_Network\\_API\\_v1-0.pdf](http://www.gsm.org/documents/RCS-e_Network_API_v1-0.pdf)
- [RFC2119] “Key words for use in RFCs to Indicate Requirement Levels”, S. Bradner, March 1997, [URL:http://www.ietf.org/rfc/rfc2119.txt](http://www.ietf.org/rfc/rfc2119.txt)

### 2.2 Informative References

- [OMADICT] “Dictionary for OMA Specifications”, Version 2.9, Open Mobile Alliance™, OMA-ORG-Dictionary-V2\_9, [URL:http://www.openmobilealliance.org/](http://www.openmobilealliance.org/)
- [REST\_WP] “Guidelines for RESTful Network APIs”, Open Mobile Alliance™, OMA-WP-Guidelines\_for\_RESTful\_Network\_APIs, [URL:http://www.openmobilealliance.org/](http://www.openmobilealliance.org/)

## 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

For the purpose of this RD, all definitions from OMA Dictionary [OMADICT] as well as definitions from individual RESTful Network APIs apply.

### 3.3 Abbreviations

<b>ACR</b>	Anonymous Customer Reference
<b>API</b>	Application Programming Interface
<b>GSMA</b>	GSM Association
<b>HTTP</b>	HyperText Transfer Protocol
<b>JSON</b>	JavaScript Object Notation
<b>MSISDN</b>	Mobile Subscriber ISDN Number
<b>OMA</b>	Open Mobile Alliance
<b>RCE</b>	Rich Communication Ecosystem
<b>RCS</b>	Rich Communication Suite
<b>REST</b>	REpresentational State Transfer
<b>URL</b>	Uniform Resource Locator
<b>XML</b>	Extensible Markup Language

## 4. Introduction

**(Informative)**

In general, the Anonymous Customer Reference Management interface enables Service Providers to provide the means by which 3<sup>rd</sup> party applications obtain an anonymous user identity once appropriate authorization by the user is granted. Subsequently, the obtained ACR can be used by the 3<sup>rd</sup>-party application as user's identity as required for any given API.

Anonymous Customer Reference Management interface enables the creation, retrieval and activation of ACRs over a RESTful API. Such an API, fulfills the anonymous user identity requirements identified by GSMA RCS-e and GSMA Access project.

### 4.1 Version 1.0

The REST\_NetAPI\_ACR RD V1.0 captures the functional requirements scoping the set of APIs exposing the GSMA OneAPI feature and GSMA RCS-e for ACR management.

## **5. RESTful Network API for Anonymous Customer Reference Management release description (Informative)**

### **5.1 End-to-end Service Description**

The REST\_NetAPI\_ACR V1.0 address an important field of open service creation based on ACR management, while triggering service creation into advanced applications in order to decrease significantly the Time-to-Market for new services.



## 6. Requirements (Normative)

### 6.1 High-Level Functional Requirements

Label	Description	Release
HLF-001	The RESTful Network API for Anonymous Customer Reference Management SHALL be HTTP/REST based.	REST_Net API_ACR V1.0
HLF-002	Resource URLs and primitives names SHALL have an intuitive relationship with the functions and resources they are intended to represent.	REST_Net API_ACR V1.0
HLF-003	The RESTful Network API for Anonymous Customer Reference Management SHALL allow including the API version in the resource URLs.	REST_Net API_ACR V1.0
HLF-004	The RESTful Network API for Anonymous Customer Reference Management SHALL allow an Application and a Server to negotiate the version of a particular resource.	REST_Net API_ACR V1.0
HLF-005	The RESTful Network API for Anonymous Customer Reference Management SHALL expose a functional abstraction at the user level rather than at the level of underlying protocols.	REST_Net API_ACR V1.0
HLF-006	The RESTful Network API for Anonymous Customer Reference Management SHALL support "server"-based application clients and "device"-based application clients. Instantiation examples include applications running on a Web server (where the user interacts with the application via a web browser), or running on a mobile or fixed device as a "widget" or as a native application.	REST_Net API_ACR V1.0
HLF-007	The RESTful Network API for Anonymous Customer Reference Management SHOULD support application authorization based on [Autho4API_10].	REST_Net API_ACR V1.0
HLF-008	The RESTful Network API for Anonymous Customer Reference Management SHALL support requesting ACR associated with a particular mobile telephone number (MSISDN).	REST_Net API_ACR V1.0
HLF-009	The RESTful Network API for Anonymous Customer Reference Management SHALL allow to query the ACR status of an user.	REST_Net API_ACR V1.0
HLF-010	The RESTful Network API for Anonymous Customer Reference Management SHALL allow to refresh the user's ACR.	REST_Net API_ACR V1.0
HLF-011	The RESTful Network API for Anonymous Customer Reference Management SHALL support different ACRs associated with the same mobile telephone number (MSISDN) for different applications when applicable.	REST_Net API_ACR V1.0

**Table 1: High-Level Functional Requirements**

#### 6.1.1 Security

It is expected to be possible for a service provider to deploy developer security mechanisms and engagement/registration processes aimed to individual developers. Developer security mechanisms are out of the scope of this document.

##### 6.1.1.1 Authentication

Application authentication and User authentication are out of scope.

### 6.1.1.2 Authorization

Delegated authorization mechanism should be used to secure the explicit permission from the end user. Support for scope values used with authorization framework defined in [Autho4API\_10].

Label	Description	Release
OAU-001	The values of OAuth 2.0 “scope” parameter SHALL have a direct mapping (1-to-1 or 1-to-many or many-to-many) to the available OMA RESTful Network API for Anonymous Customer Reference Management primitives.	REST_NetAPI_ACR V1.0
OAU-002	The following "scope" value targeted granularity SHALL be supported: - acr	REST_NetAPI_ACR V1.0
OAU-003	In addition to the value defined in requirement [OAU-002], it SHOULD be possible to define per-service provider values of “scope” parameter to accommodate different granularity levels.	REST_NetAPI_ACR V1.0

**Table 2: High-Level Functional Requirements – Authorization Items**

### 6.1.1.3 Data Integrity

Data Integrity is out of scope.

### 6.1.1.4 Confidentiality

Not applicable.

## 6.1.2 Charging Events

Charging events are out of scope.

## 6.1.3 Administration and Configuration

Administration and configuration are out of scope.

## 6.1.4 Usability

Usability is out of scope.

## 6.1.5 Interoperability

Not applicable.

## 6.1.6 Privacy

Not applicable.

## 6.2 Overall System Requirements

Overall system requirements are out of scope.

## 6.3 Data Exchange Format Requirements

Label	Description	Release
DEF-001	The RESTful Network API for Anonymous Customer Reference Management SHALL support JSON [JSON] as a resource response format.	REST_NetAPI_ACR V1.0
DEF-002	The RESTful Network API for Anonymous Customer Reference Management SHOULD support XML as resource response format.	REST_NetAPI_ACR V1.0

**Table 3: Data Exchange Format Requirements**

## Appendix A. Change History

(Informative)

### A.1 Approved Version History

Reference	Date	Description
OMA-RD-REST_NetAPI_ACR-V1_0-20131224-A	24 Dec 2013	Status changed to Approved by TP TP Ref # OMA-TP-2013-0394- INP_REST_NetAPI_ACR_V1_0_ERP_for_final_Approval