



RESTful Network API for Anonymous Customer Reference Management Requirements

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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 3rd 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/>
- [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
- [RFC2119] “Key words for use in RFCs to Indicate Requirement Levels”, S. Bradner, March 1997, URL:<http://www.ietf.org/rfc/rfc2119.txt>
- [JSON] JavaScript Programming Language, Standard ECMA-262 3rd Edition - December 1999.

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/>
- [REST_WP] “Guidelines for RESTful Network APIs”, Open Mobile Alliance™, OMA-WP-Guidelines_for_RESTful_Network_APIs, URL:<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

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

4. Introduction

(Informative)

In general, the Anonymous Customer Reference Management interface enables Service Providers to provide the means by which 3rd party applications obtain an anonymous user identity once appropriate authorization by the user is granted. Subsequently, the obtained ACR can be used by the 3rd-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
n/a	n/a	No previous version within OMA

A.2 Draft/Candidate Version 1.0 History

Document Identifier	Date	Sections	Description
Draft Versions OMA-RD-REST_NetAPI_ACR-V1_0	13 Marc 2012	all	Initial baseline. Incorporates input to committee: OMA-ARC-2012-0059-INP_BaselineREST_NetAPI_ACR_RD
	7 July 2012	all	Incorporates input to committee: OMA-ARC-REST-ACR-2012-0003-CR_ACR_Requirement_update
	31 Jan 2013	Many as identified by CONRR	Incorporated : OMA-ARC-REST-ACR-2013-0002-CR_fixing_RD_based_on_CONRR
Candidate Versions OMA-RD-REST_NetAPI_ACR-V1_0	05 Mar 2013	n/a	Status changed to Candidate by TP TP Ref # OMA-TP-2013-0072- INP_REST_NetAPI_ACR_V1.0_ERP_and_ETR_for_Candidate_approval