Enabler Release Definition for Charging Enabler

Approved Version 1.1 – 09 Oct 2012

Open Mobile Alliance

OMA-ERELD-Charging-V1_1-20121009-A

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1. Scope

The scope of this document is limited to the Enabler Release Definition of the Charging Enabler V1.1 according to OMA Release process and the Enabler Release specification baseline listed in section 5.

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2. References

2.1 Normative References

[CHRG_3GPP_3GPP2] "3GPP/3GPP2 Charging in OMA", Version 1.0, OMA-TS-Charging_3GPP_3GPP2-V1_0, Open Mobile Alliance™. URL: http://www.openmobilealliance.org/

[CHRG_AD] "Charging Architecture", Version 1.1, OMA-AD-Charging-V1_1, Open Mobile Alliance™. URL: http://www.openmobilealliance.org/

[CHRG_DDS] "Charging Data", Open Mobile Alliance™. OMA-DDS-Charging_Data-V1_0, URL: http://www.openmobilealliance.org/

[CHRG_OFFLINE] "OMA Offline Charging Interface", Version 1.1, OMA-TS-Charging_Offline-V1_1, Open Mobile Alliance™. URL: http://www.openmobilealliance.org/

[CHRG_ONLINE] "OMA Online Charging Interface", Version 1.1, OMA-TS-Charging_Online-V1_1, Open Mobile Alliance™. URL: http://www.openmobilealliance.org/

[CHRG_RD] "Charging Requirements", Version 1.0, OMA-RD-Charging-V1_0, Open Mobile Alliance™. URL: http://www.openmobilealliance.org/

[IOPPROC] "OMA Interoperability Policy and Process", Version 1.11, Open Mobile Alliance™, OMA-IOP-Process-V1_11, URL: http://www.openmobilealliance.org/

[REST_NetAPI_Payment] "RESTful Network API for Payment", Version 1.0, Open Mobile Alliance™, OMA-TS-REST_ NetAPI_Payment-V1_0, URL: http://www.openmobilealliance.org/

[RFC2119] "Key words for use in RFCs to Indicate Requirement Levels", S. Bradner, March 1997, URL: http://www.ietf.org/rfc/rfc2119.txt

[RFC3588] "Diameter Base Protocol", P. Calhoun, J. Loughney, E. Guttman, G. Zorn, J. Arkko. September 2003, URL: http://www.ietf.org/rfc/rfc3588.txt

[RFC4006] "Diameter Credit-Control Application", H. Hakala, L. Mattila, J-P. Koskinen, M. Stura, J. Loughney. August 2005, URL: http://www.ietf.org/rfc/rfc4006.txt

[TS29.199-6] "Open Service Access (OSA); Parlay X Web Services; Part 6: Payment" , 3GPP TS29.199-6, URL: http://www.3gpp.org

[TS32.299] "Telecommunication management; Charging management; Diameter Charging Applications", 3GPP TS32.299, URL: http://www.3gpp.org

2.2 Informative References

[CHRG_DEPLOYMENT_WP] "White Paper on Charging Deployment Scenarios", OMA-WP-Charging_Deployment_Scenarios, Open Mobile Alliance™. URL: http://www.openmobilealliance.org/

[OMADICT] "Dictionary for OMA Specifications", Version 2.9, Open Mobile Alliance™, OMA-ORG-Dictionary_V2_9, URL: http://www.openmobilealliance.org/

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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.

The formal notation convention used in sections 8 and 9 to formally express the structure and internal dependencies between specifications in the Enabler Release specification baseline is detailed in [IOPPROC].

3.2 Definitions

Enabler Release	Collection of specifications that combined together form an enabler for a service area, e.g. a download enabler, a browsing enabler, a messaging enabler, a location enabler, etc. The specifications that are forming an enabler should combined fulfil a number of related market requirements.
Minimum Functionality Description	Description of the guaranteed features and functionality that will be enabled by implementing the minimum mandatory part of the Enabler Release.

For definitions of terms not found here, please refer to [OMADICT].

3.3 Abbreviations

AD	Architecture Document
API	Application Programming Interface
ERDEF	Enabler Requirement Definition
ERELD	Enabler Release Definition
HTTP	HyperText Transfer Protocol
OMA	Open Mobile Alliance™
RD	Requirements Document
REST	REpresentational State Transfer

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4. Release Version Overview

This document outlines the Enabler Release Definition for the Charging Enabler and the respective conformance requirements for clients and servers claiming compliance to it as defined by Open Mobile Alliance across the specification baseline.

The motivation for the creation of a Charing Enabler was established in the Work Item outlining the effort. The ability to charge for service usage is fundamental when creating services using OMA enablers.

4.1 Version 1.0 Functionality

The first version of the Enabler Release specifies the OMA Charging interfaces and a protocol binding to 3GPP Diameter Applications [TS32.299] based on IETF Diameter Accounting application [RFC3588] and IETF Diameter Credit-Control application [RFC4006].

4.2 Version 1.1 Functionality

The new version of the Enabler Release specifies how the OMA Charging interfaces MAY be exposed as a Payment API compliant with either the SOAP protocol binding of Parlay X Web Services Payment API as specified in [TS29.199-6] or with the HTTP protocol binding of RESTful Network API for Payment [REST NetAPI Payment].

The current version also includes technical refinements and changes to the maintenance of OMA Charging Data Elements [CHRG_DDS].

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5. Document Listing for Charging V 1.1 Enabler

This section is normative.

Doc Ref	Permanent Document Reference	Description
Requirement Document		
[CHRG_RD]	OMA-RD-Charging-V1_0-20070904-A	Requirement Document for Charging Enabler
Architecture Document		
[CHRG_AD]	OMA-AD-Charging-V1_1-20121009-A	Architecture Document for Charging Enabler
Technical Specifications		
[CHRG_OFFLINE]	OMA-TS-Charging_Offline-V1_1-20121009-A	Specification that defines the protocol for Charging that provides control interface between the Charging Enabler User and Charging Infrastructure in Offline scenarios
[CHRG_ONLINE]	OMA-TS-Charging_Online-V1_1-20121009-A	Specification that defines the protocol for Charging that provides control interface between the Charging Enabler User and Charging Infrastructure in Online scenarios
[CHRG_3GPP_3GPP2]	OMA-TS-Charging_3GPP_3GPP2-V1_0-20070904-A	Specification that describes how the OMA Charging enabler specifications shall be used when interfacing to a 3GPP/2 type Charging infrastructure
White Paper		
[CHRG_DEPLOYMENT_WP]	OMA-WP-Charging_Deployment_Scenarios-20070904-A	Whitepaper on Deployment Scenarios for Charging

Table 1: Listing of Documents in Charging Enabler

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6. OMNA Considerations

No OMNA items included in the release.

The OMA Charging Data Elements are defined in a specific data definition specification [CHRG_DDS].

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7. Conformance Requirements Notation Details

This section is informative

The tables in following chapters use the following notation:

Item: Entry in this column MUST be a valid ScrItem according to [SCRRULES].

Feature/Application: Entry in this column SHOULD be a short descriptive label to the **Item** in question.

Status: Entry in this column MUST accurately reflect the architectural status of the **Item** in question.

- M means the **Item** is mandatory for the class
- O means the **Item** is optional for the class
- NA means the **Item** is not applicable for the class

Requirement: Expression in the column MUST be a valid TerminalExpression according to [IOPPROC] and it MUST accurately reflect the architectural requirement of the **Item** in question.

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8. ERDEF for Charging Enabler - Client Requirements

This section is normative.

Item	Feature / Application	Requirement
OMA-ERDEF-Charging-C-001-O	Online Charging Client	[CHRG_ONLINE]*
OMA-ERDEF-Charging-C-002-O	Offline Charging Client	[CHRG_OFFLINE]*

Table 2: ERDEF for Charging V1.1 Client-side Requirements

* At least one of these is required for the Diameter based Charging Clients

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9. ERDEF for Charging Enabler - Server Requirements

This section is normative.

Item	Feature / Application	Requirement
OMA-ERDEF-Charging-S-001-M	Online Charging Server Diameter Binding	[CHRG_ONLINE]
OMA-ERDEF-Charging-S-002-O	Offline Charging Server Diameter Binding	[CHRG_OFFLINE]
OMA-ERDEF-Charging-S-003-O	Online Charging Web Services / SOAP Binding	[CHRG_ONLINE]
OMA-ERDEF-Charging-S-004-O	Online Charging REST / HTTP Binding	[CHRG_ONLINE]
OMA-ERDEF-Charging-S-005-O	Offline Charging Web Services / SOAP Binding	[CHRG_OFFLINE]
OMA-ERDEF-Charging-S-006-O	Offline Charging REST / HTTP Binding	[CHRG_OFFLINE]

Table 3: ERDEF for Charging V1.1 Server-side Requirements

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Appendix A. Change History (Informative)

A.1 Approved Version History

Reference	Date	Description
OMA-ERELD-Charging-V1_0-20070904-A	04 Sep 2007	Status changed to Approved by TP: Ref #: OMA-TP-2007-0303-INP_Charging_V1_0_ERP_for_final_approval
OMA-ERELD-Charging-V1_1-20121009-A	09 Oct 2012	Status changed to Approved by TP: Ref #: OMA-TP-2012-0363R01-INP_Charging_V1.1_for_Final_Approval

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