



# **Enabler Release Definition for SIMPLE IM**

Approved Version 2.0 – 10 Mar 2015

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**Open Mobile Alliance**  
OMA-ERELED-SIMPLE\_IM-V2\_0-20150310-A

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# 1. Scope

The scope of this document is limited to the Enabler Release Definition of SIMPLE IM v2.0 according to OMA Release process and the Enabler Release specification baseline listed in section 5.

## 2. References

### 2.1 Normative References

- [3GPP\_TS26141] “IP Multimedia System (IMS) Messaging and Presence; Media formats and codecs”, TS 26.141 V6.1.0 (2005-03), [URL: http://www.3gpp.org/](http://www.3gpp.org/)
- [OMA\_IM\_AD] “Instant Messaging using SIMPLE Architecture”, Version 2.0, Open Mobile Alliance™, OMA-AD-SIMPLE\_IM-V2\_0, [URL: http://www.openmobilealliance.org/](http://www.openmobilealliance.org/)
- [OMA\_IM\_Charging] “OMA SIMPLE IM Charging Specification”, Version 1.0, Open Mobile Alliance™, OMA-TS-SIMPLE\_IM\_Charging-V1\_0-20070716-D, [URL: http://www.openmobilealliance.org/](http://www.openmobilealliance.org/)
- [OMA\_IM\_RD] “Instant Messaging Requirements”, Version 2.0, Open Mobile Alliance™, OMA-RD-IM-V2\_0, [URL: http://www.openmobilealliance.org/](http://www.openmobilealliance.org/)
- [OMA\_IM\_SUP\_AC] “OMA SUP AC SIMPLE IM”, Version 1.0, Open Mobile Alliance™, OMA-SUP-AC\_ap0008\_SIMPLE\_IM-V1\_0\_0-20070614-A, [URL: http://www.openmobilealliance.org/](http://www.openmobilealliance.org/)
- [OMA\_IM\_TS] “Instant Messaging using SIMPLE”, Version 2.0, Open Mobile Alliance™, OMA-TS-SIMPLE\_IM-V2\_0, [URL: http://www.openmobilealliance.org/](http://www.openmobilealliance.org/)
- [OMA\_IM\_XDM] “IM XDM Specification”, Version 1.0, Open Mobile Alliance™, OMA-TS-IM\_XDM-V1\_0, [URL: http://www.openmobilealliance.org/](http://www.openmobilealliance.org/)
- [OMA\_IM\_XDM\_Schema] “OMA-SUP-XSD\_im\_service\_settings-V1\_0-20070816-C”, Version 1.0, Open Mobile Alliance™, [URL: http://www.openmobilealliance.org/](http://www.openmobilealliance.org/)
- [OMA-SUP-XSD\_im\_hist\_def\_metadata] “XDM - IM Conversation History and Deferred Message Metadata”, Version 1.0, Open Mobile Alliance™, OMA-SUP-XSD\_xdm\_hist\_and\_def\_metadata-V1\_0, [URL: http://www.openmobilealliance.org/](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](http://www.ietf.org/rfc/rfc2119.txt)
- [RFC2234] “Augmented BNF for Syntax Specifications: ABNF”. D. Crocker, Ed., P. Overell. November 1997, [URL: http://www.ietf.org/rfc/rfc2234.txt](http://www.ietf.org/rfc/rfc2234.txt)
- [SCRRULES] “SCR Rules and Procedures”, Open Mobile Alliance™, OMA-ORG-SCR\_Rules\_and\_Procedures, [URL: http://www.openmobilealliance.org/](http://www.openmobilealliance.org/)

### 2.2 Informative References

- [OMA\_DM] “OMA Device Management”, Version 1.2, Open Mobile Alliance™, OMA-ERP-DM-V1\_2, [URL: http://www.openmobilealliance.org/](http://www.openmobilealliance.org/)
- [OMA\_Pres] “OMA Presence Simple”, Version 1.0, Open Mobile Alliance™, OMA-ERP-Presence\_SIMPLE-V1\_0, [URL: http://www.openmobilealliance.org/](http://www.openmobilealliance.org/)
- [OMA\_X1] “OMA XML Document Management”, Version 1.0, Open Mobile Alliance™, OMA-ERP-XDM-V1\_0, [URL: http://www.openmobilealliance.org/](http://www.openmobilealliance.org/)
- [OMA\_X2] “OMA XML Document Management”, Version 2.0, Open Mobile Alliance™, work in progress.
- [RFC3261] “SIP: Session Initiation Protocol”, J. Rosenberg et al, June 2002, [URL: http://www.ietf.org/rfc/rfc3261.txt](http://www.ietf.org/rfc/rfc3261.txt)

## 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 [SCRRULES].

### 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.

### 3.3 Abbreviations

<b>ERDEF</b>	Enabler Requirement Definition
<b>ERELED</b>	Enabler Release Definition
<b>IETF</b>	Internet Engineering Task Force
<b>IM</b>	Instant Messaging
<b>MSRP</b>	Message Session Relay Protocol
<b>OMA</b>	Open Mobile Alliance
<b>SIP</b>	Session Initiation Protocol
<b>XDM</b>	XML Document Management

## 4. Release Version Overview

### 4.1 Version 1.0 Functionality

This document outlines the Enabler Release Definition for SIMPLE IM version 1.0 and the respective conformance requirements for SIMPLE IM clients and servers implementations claiming compliance to it as defined by Open Mobile Alliance across the specification baseline.

Instant Messaging (IM) is a set of capabilities allowing exchange of Instant Messaging messages between users in near real-time, whether using mobile networks or fixed Internet connections. The SIMPLE IM enabler uses the IETF SIP protocol [RFC3261] with SIMPLE extensions. SIMPLE IM features are described in terms of actions taken by IM Clients and Servers. The SIMPLE IM enabler relies on common OMA enablers such as Presence [OMA\_Pres], XDM [OMA\_X1, OMA\_X2], Device Management Services [OMA\_DM] to provide complementary features and capabilities.

The SIMPLE IM enabler includes the following capabilities:

- Session based IM capabilities:
  - Requires a SIP session to be established before exchanging instant messages. Uses SIP to setup a session and MSRP to exchange instant messages between clients.
- Pager mode messaging:
  - Independent Instant messages can be sent and received without requiring a session between the users. Uses SIP MESSAGE to exchange instant messages.
- Large message mode: Allows the exchange of arbitrarily large and independent instant messages. Uses MSRP and SIP to setup the MSRP session. Once the (large) instant message has been transferred from the sender to the receiver, the session is closed. Large message mode is a form of pager mode but makes use of a session oriented protocol.
- Various content types, including:
  - Text
  - Audio clips/files
  - Video clips/files
- One-to-one and group conversations
- Group conversation includes both:
  - Predefined group: Created either by a service provider or a user
  - Ad hoc group:
    - Does not require prior creation of the group before sending messages
    - Group created dynamically just prior to sending a message
- File transfer to transfer files during an IM session
- Deferred messaging to allow a user to retrieve his/her messages received when he/she was not online
- Conversation history: To record a conversation on the server
- Charging
- Interaction with XML Document Management (XDM) for accessing:
  - User's profile to create communities
  - Group repository
  - Contact lists, black and white lists
- Interaction with the presence server for:
  - Retrieving and update user/client online status
- Other functionalities include:
  - Operator-specific system messages
  - Lawful Interception

### 4.2 Version 2.0 Functionality

The SIMPLE IM 2.0 version extends the 1.0 version in order to provide following functionality:

- Support of [RFC5438] to provide delivery and display notifications for IM's sent within a 1-to-1 IM Session.

- Delivery of notifications for IM Session related Instant Messages, to be sent outside a 1-to-1 IM Session
- User alias (modifications to the existing support) (also called Display Name)
- Support of store and forward (deferred) functionality for messages and notifications sent within a 1-to-1 IM Session
  - Message and notifications delivery outside a session
  - Device identification with new mechanisms
  - Message identification for all messages
  - Auto-acceptance of store and forward IM Server PUSH of stored notifications
  - Store and forward IM Server PUSH of stored messages



## 5. Document Listing for SIMPLE IM

This section is normative.

Doc Ref	Permanent Document Reference	Description
<b>Requirement Document</b>		
[OMA_IM_RD]	OMA-RD-IM-V2_0-20150310-A	Requirement Document for the SIMPLE IM Enabler
<b>Architecture Document</b>		
[OMA_IM_AD]	OMA-AD-SIMPLE_IM-V2_0-20150310-A	Architecture Document of the SIMPLE IM Enabler
<b>Technical Specifications</b>		
[OMA_IM_TS]	OMA-TS-SIMPLE_IM-V2_0-20150310-A	Specification that defines the SIMPLE IM control Plane and user plane protocol for the SIMPLE IM client and server.
[OMA_IM_XDM]	OMA-TS-IM_XDM-V1_0-20120807-A	Specification that defines the SIMPLE IM enabler conversation history and deferred messages data formats and XCAP application usages.
[OMA_IM_Charging]	OMA-TS-SIMPLE_IM_Charging-V2_0-20150310-A	Specification that defines charging for SIMPLE IM.
<b>Supporting Files</b>		
[OMA_IM_XDM_Schema]	OMA-SUP-XSD_im_service_settings-V1_0_1-20150310-A	IM XDM Schema for conversation history and deferred messages.  Working file in schema directory: file: im:service-settings.xds path: <a href="http://www.openmobilealliance.org/tech/profiles/">http://www.openmobilealliance.org/tech/profiles/</a>
[OMA_IM_SUP_AC]	OMA-SUP-AC_ap0008_SIMPLE_IM-V1_0-20120807-A	Description of the SIMPLE IM Application Characteristics.  Working file in Application characteristics directory: file: ap0008_SIMPLE_IM-V1_0.txt path: <a href="http://www.openmobilealliance.org/tech/omna/dm-ac/">http://www.openmobilealliance.org/tech/omna/dm-ac/</a>
[OMA-SUP-XSD_im_hist_def_meta]	OMA-SUP-XSD_im_hist_def_metadata-V1_0_1-20150310-A	Description of XDM IM Conversation History and Deferred Message Metadata.  Working file in schema directory: file: im_hist_def_metadata-V1_0.txt path: <a href="http://www.openmobilealliance.org/tech/profiles/">http://www.openmobilealliance.org/tech/profiles/</a>

**Table 1: Listing of Documents in SIMPLE IM v2.0 Enabler**

## 6. OMNA Considerations

The following service-id have been defined for the service description element in OMNA Presence service-description Registry:

- org.openmobilealliance:IM-pager-mode 1.0
- service org.openmobilealliance:IM-session 2.0
- service org.openmobilealliance:File-Transfer

The XML schema for “im\_service\_settings” is available from OMNA OMA Profile Data page.

The APPID value identifying the SIMPLE IM enabler in the Application Characteristics file was reserved in OMNA Device Management (DM) Application Characteristic (AC) Registry.

## 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 [SCRRULES] and it **MUST** accurately reflect the architectural requirement of the **Item** in question.

## 8. ERDEF for SIMPLE IM v2.0 - Client Requirements

This section is normative.

Item	Feature / Application	Status	Requirement
OMA-ERDEF-SIMPLE_IM-C-001	SIMPLE_IM Client	M	OMA_IM_TS:MCF
OMA-ERDEF-SIMPLE_IM-C-002	SIMPLE_IM Client	O	OMA_IM_TS:OCF
OMA-ERDEF-SIMPLE_IM-XDM-C-003	SIMPLE_IM XDM	M	OMA_IM_TS:MCF
OMA-ERDEF-SIMPLE_IM_XDM-C-004	SIMPLE_IM XDM	O	OMA_IM_XDM:OCF

**Table 2: ERDEF for the SIMPLE IM v2.0 Client-side Requirements**

## 9. ERDEF for SIMPLE IM v2.0 - Server Requirements

This section is normative.

Item	Feature / Application	Status	Requirement
OMA-ERDEF-SIMPLE_IM-S-001	SIMPLE_IM server participating function	M	OMA_IM_TS:MSF
OMA-ERDEF-SIMPLE_IM-S-002	SIMPLE_IM server controlling function	M	OMA_IM_TS:MSF
OMA-ERDEF-SIMPLE_IM-S-003	SIMPLE_IM server participating function	O	OMA_IM_TS:OSF
OMA-ERDEF-SIMPLE_IM-S-004	SIMPLE_IM server controlling function	O	OMA_IM_TS:OSF
OMA-ERDEF-SIMPLE_IM-XDM-S-005	SIMPLE_IM XDM	M	OMA_IM_TS:MSF
OMA-ERDEF-SIMPLE_IM_XDM-S-006	SIMPLE_IM XDM	O	OMA_IM_XDM:OSF
OMA-ERDEF-SIMPLE_IM_CRG-S-007	SIMPLE IM Charging	O	OMA_IM_CRG:OSF

**Table 3: ERDEF for SIMPLE IM v2.0 Server-side Requirements**

## Appendix A. Change History

(Informative)

### A.1 Approved Version History

Reference	Date	Description
OMA-EREELD-SIMPLE_IM-V2_0-20150310-A	10 Mar 2015	Status changed to Approved by TP TP Ref # OMA-TP-2015-0066- INP_SIMPLE_IM_V2_0_ERP_for_final_Approval