



# **Enabler Validation Plan for SIMPLE IM**

Candidate Version 1.0 – 20 Jan 2009

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**Open Mobile Alliance**  
OMA-EVP-SIMPLE-IM-V1\_0-20090120-C

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# 1. Scope

This document details the Validation Plan for the SIMPLE IM 1.0 Enabler Release. The successful accomplishment of the validation activities will be required for the Enabler to be considered for Approved status.

The Validation Plan for the SIMPLE IM 1.0 Enabler Release specifications is based on testing expectations in the Enabler Test Requirements (ETR). While the specific test activities to be performed are described in the Enabler Test Specification (ETS), the test environment is described in this plan. This test environment details infrastructure, operational and participation requirements identified for the needed testing activities.

## 1.1 Assumptions

None.

## 1.2 Exclusions

None.

## 2. References

### 2.1 Normative References

- [IOPPROC] “OMA Interoperability Policy and Process”, Version 1.7, Open Mobile Alliance™, OMA-ORG-IOP\_Process-V1\_7, [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)
- [ERELED] “Enabler Release Document for IM SIMPLE”, Version 1.0, Open Mobile Alliance™, OMA-ERELED-SIMPLE\_IM-V1\_0, URL:<http://www.openmobilealliance.org/>
- [SIMPLE IM ETR] “Enabler Test Requirements for IM using SIMPLE”, Version 1.0, Open Mobile Alliance™, OMA-ETR-SIMPLE\_IM-V1\_0, URL:<http://www.openmobilealliance.org/>

### 2.2 Informative References

- [OMADICT] “Dictionary for OMA Specifications”, Version 2.7, Open Mobile Alliance™, OMA-ORG-Dictionary-V2\_7, [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”, are normative, unless they are explicitly indicated to be informative.

### 3.2 Definitions

### 3.3 Abbreviations

<b>CSCF</b>	Call Session Control Function
<b>DHCP</b>	Dynamic Host Configuration Protocol
<b>DNS</b>	Domain Name System
<b>ETR</b>	Enabler Test Requirement
<b>ETS</b>	Enabler Test Specification
<b>EVP</b>	Enabler Validation Plan
<b>GPRS</b>	General Packet Radio Service
<b>HSS</b>	Home Subscriber Server
<b>IM</b>	Instant / Immediate Messaging
<b>IMS</b>	IP Multimedia Subsystem
<b>IP</b>	Internet Protocol
<b>MSRP</b>	Message Session Relay Protocol
<b>OMA</b>	Open Mobile Alliance
<b>S-CSCF</b>	Serving CSCF
<b>SBC</b>	Session Border Controller
<b>SIMPLE</b>	SIP Instant Message and Presence Leveraging Extensions
<b>SIP</b>	Session Initiation Protocol
<b>TCP</b>	Transmission Control Protocol
<b>VPN</b>	Virtual Private Network

## 4. Enabler Validation Description

It is intended that Test Fests will be the primary method of validation for OMA SIMPLE IM 1.0.



## 5. TestFest Activities

### 5.1 Enabler Test Guidelines

A full description of SIMPLE IM 1.0 can be found in [\[SIMPLE IM V1.0 ERELD\]](#) and related specifications.

Instant Messaging (IM) is a form of 2-way communications that allows users to exchange information with others in an interactive nature, i.e., users exchange messages in near real time to engage in conversations. This requires low latency in the delivery of messages. Typically, text messages are exchanged but this enabler supports content types beyond text. Communication can be in one-to-one or one-to-many configurations, meaning that the messaging can be between two individuals or within a group where everyone in the group can see what everyone else is sending. There is no need to maintain any type of floor control since messages are posted to the individual (or group) in the order they are received, and can be read as needed

#### 5.1.1 Minimal Test Configuration

The minimal (hardware and software) configuration for testing SIMPLE IM 1.0 is:

- Two or more Clients from at least two different Vendors and one Server from yet a different Vendor.

#### 5.1.2 Minimal Participation Guidelines

Minimum Client Participants: TBD

Minimum Server Participants: TBD

#### 5.1.3 Optimal TestFest Achievement Guidelines

The ETS Test Cases listed below represent a subset of all the Test Cases for the Enabler that could be executed in a test session at an OMA TestFest. This list is intended to facilitate maximum test coverage of the functionality of the enabler within a test session. It is not intended to be the only tests executed at a TestFest, and teams are encouraged to execute more tests if they are able to do in the time allowed.

The list includes:

Test Case ID	Test Case Title
IM-1.0-int-0101	Establishing One to One IM Session
IM-1.0-int-0102	IM Ad-hoc Conference
IM-1.0-int-0103	Pre-Defined IM Conference
IM-1.0-int-0104	Joining a chat room
IM-1.0-int-0105	Sending Private message
IM-1.0-int-0106	Adding Users to an IM Conference session
IM-1.0-int-0107	Extending One-to-One to One-to-Many
IM-1.0-int-0108	Expelling a User from a Session
IM-1.0-int-0201	Sending a Page Mode Message to a User
IM-1.0-int-0202	Sending a Page Mode Message to a Group
IM-1.0-int-0203	Sending a Page Mode Message to Multiple Users
IM-1.0-int-0204	IM Server Sending a System Message
IM-1.0-int-0301	Sending Large Message to One User

Test Case ID	Test Case Title
IM-1.0-int-0302	Sending a Large Message to a Group
IM-1.0-int-0303	Sending a Large Message to an Ad-hoc Group
IM-1.0-int-0304	IM Client Large Message Release
IM-1.0-int-0401	Retrieving Deferred Message Metadata
IM-1.0-int-0402	Deferred Messages Pushed to an IM Client
IM-1.0-int-0403	IM Client Retrieves Deferred Messages
IM-1.0-int-0404	Deleting Deferred Messages
IM-1.0-int-0405	Storing Deferred Messages
IM-1.0-int-0501	Invoking IM History function
IM-1.0-int-0502	Terminate recording
IM-1.0-int-0503	Retrieving an IM history
IM-1.0-int-0504	Retrieving History Metadata
IM-1.0-int-0505	Deleting IM Conversation
IM-1.0-int-0601	File Transfer of One File
IM-1.0-int-0602	File Transfer of Multiple Files
IM-1.0-int-0603	File transfer to multiple users
IM-1.0-int-0604	Transferring multiple files to multiple users
IM-1.0-int-0605	File Transfer during an IM Session

## 5.2 Enabler Test Requirements

Testing requirements for SIMPLE IM are specified in [SIMPLE IM V1.0 ETR].

The testing assertions shall reflect all possible high-level functionality of the mentioned areas, both in a normal and error flow.

### 5.2.1 Test Infrastructure Requirements

To prove interoperability of implementations it is essential to conduct the testing in an end-to-end environment. The environment has to be configured to allow clients under test easy access to the servers under test. The requirements on the testing environment are itemized as follows:

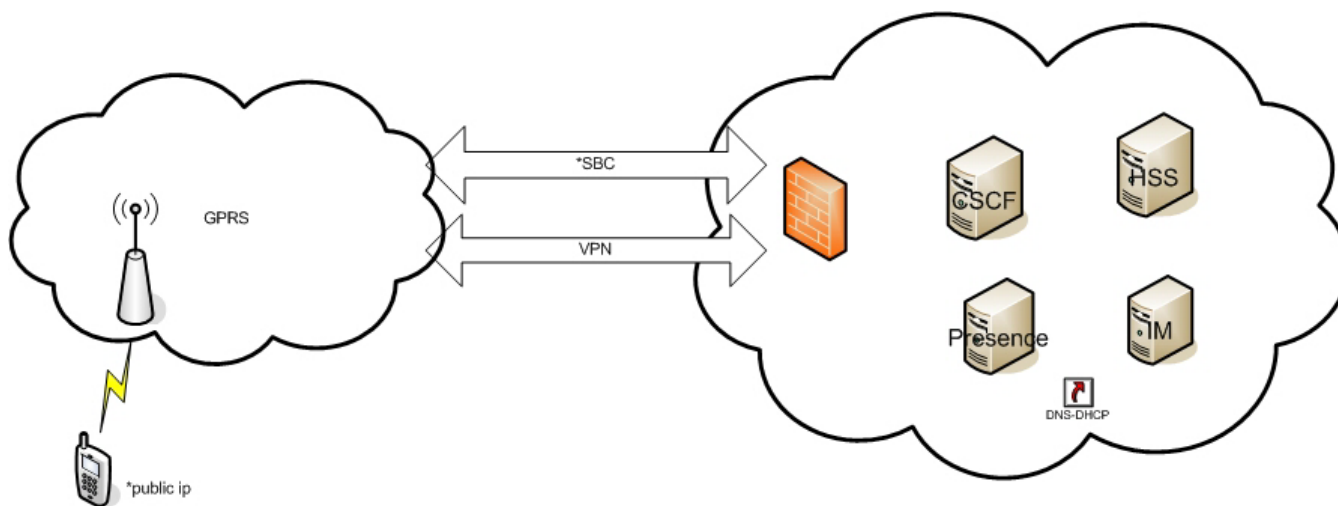


Figure 1 - SIMPLE IM Testing Infrastructure

## 5.2.2 Enabler Execution Flow

SIMPLE IM interoperability testing is limited to high-level functionality testing of SIMPLE IM client and SIMPLE IM server implementations. The testing shall cover:

- Client and server protocols

The following figure details the principle execution flows covered by the interoperability tests of OMA SIMPLE IM 1.0. These flows demonstrate the interactions between a client and a server.

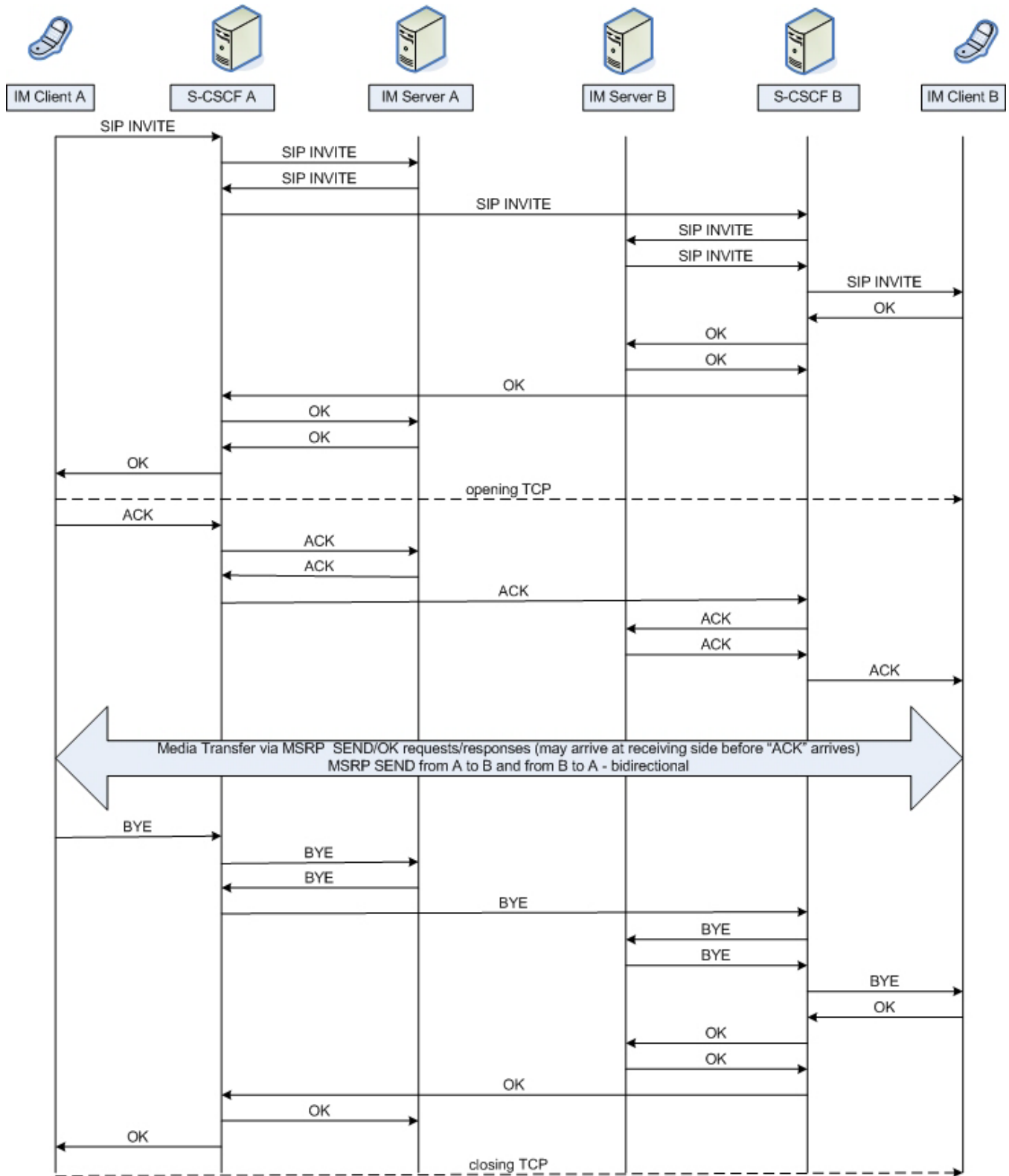


Figure 2 - 1 to 1 IM Session Message Flow

## 5.2.3 Test Content Requirements

It is recommended that Content for the file transfer test cases is available, for example:

- image/gif
- image/jpeg
- image/bmp

## 5.2.4 Test Limitations

### 5.2.4.1 Physical

None.

### 5.2.4.2 Resources

None

## 5.2.5 Test Restrictions

The SIMPLE IM V1.0 IOP testing can be done at the following locations:

- OMA TestFest (<http://www.openmobilealliance.org/tf/index.asp>)
- Bilateral testing by contracted companies: results should be reported back to OMA IOP

## 5.2.6 Test Tools

None.

### 5.2.6.1 Existing Tools to be Used

None.

### 5.2.6.2 Test Tool Requirements

None.

## 5.2.7 Resources Required

It is required that there be at least one dedicated human tester onsite at a Test Fest for each implementation tested.

Server teams may be asked to test multiple client implementations during a single test session preferably if the server test team has a tester assigned to each client implementation.

Typically, one tester per implementation is sufficient for mature implementations. However, be aware that interoperability test cases defined for OMA SIMPLE IM V1.0 are extensive and to complete all test cases in a single test session is only possible if all test cases run without any problems. Therefore, early implementations are recommended to assign at least two engineers for each implementation under test. This allows one engineer to run tests while another is investigating the cause of any problems.

## 5.3 Tests to be Performed

The following sections describe the tests related to the formal TestFest validation activities.

### 5.3.1 Entry Criteria for TestFest

The following tests need to be performed and passed by implementations by members wishing to participate in the TestFest. This ensures minimal requisite capability of the implementations. The tests are defined in the ETS [SIMPLE IM ETS V1.0] and any special comments are noted.

Test Case Id	Special Conditions
IM-1.0-int-0101	
IM-1.0-int-0102	
IM-1.0-int-0103	
IM-1.0-int-0104	
IM-1.0-int-0105	
IM-1.0-int-0106	
IM-1.0-int-0107	
IM-1.0-int-0108	
IM-1.0-int-0201	
IM-1.0-int-0202	
IM-1.0-int-0203	
IM-1.0-int-0204	
IM-1.0-int-0301	
IM-1.0-int-0302	
IM-1.0-int-0303	
IM-1.0-int-0304	
IM-1.0-int-0401	
IM-1.0-int-0402	
IM-1.0-int-0403	
IM-1.0-int-0404	
IM-1.0-int-0405	
IM-1.0-int-0501	
IM-1.0-int-0502	
IM-1.0-int-0503	
IM-1.0-int-0504	
IM-1.0-int-0505	
IM-1.0-int-0601	
IM-1.0-int-0602	
IM-1.0-int-0603	
IM-1.0-int-0604	
IM-1.0-int-0605	

Table 1: Listing of Tests for Entry Criteria for TestFest

### 5.3.2 Testing to be Performed at TestFest

The following tests need to be performed to fully cover the range of capabilities of the enabler and defined protocols. These tests are to be covered in the TestFest. The tests are defined in the ETS [SIMPLE IM ETS V1.0] and any special comments are noted.

Test Case Id	Special Conditions
IM-1.0-int-0101	
IM-1.0-int-0102	
IM-1.0-int-0103	
IM-1.0-int-0104	
IM-1.0-int-0105	
IM-1.0-int-0106	
IM-1.0-int-0107	
IM-1.0-int-0108	
IM-1.0-int-0201	
IM-1.0-int-0202	
IM-1.0-int-0203	
IM-1.0-int-0204	
IM-1.0-int-0301	
IM-1.0-int-0302	
IM-1.0-int-0303	
IM-1.0-int-0304	
IM-1.0-int-0401	
IM-1.0-int-0402	
IM-1.0-int-0403	
IM-1.0-int-0404	
IM-1.0-int-0405	
IM-1.0-int-0501	
IM-1.0-int-0502	
IM-1.0-int-0503	
IM-1.0-int-0504	
IM-1.0-int-0505	
IM-1.0-int-0601	
IM-1.0-int-0602	
IM-1.0-int-0603	
IM-1.0-int-0604	
IM-1.0-int-0605	

Table 2: Listing of Tests to be Performed at TestFest

## 5.4 Enabler Test Reporting

### 5.4.1 Problem Reporting Requirements

Normal Reporting, no special reporting required.

## 5.4.2 Enabler Test Requirements

Normal Reporting, no special reporting required.



## 6. Alternative Validation Activities

## 7. Approval Criteria

The SIMPLE IM 1.0 Enabler can be put in the Approved state when:

- The Enabler has been tested successfully at 2 Test Fests or
- There has been at least 2 successful bi-lateral test sessions that have reported results and any issues to OMA.
- No open PRs exist.

### 7.1 Enabler Validation Test Cases

The following table should list the set of tests that are used for enabler validation.

Test Case Id	ETR Requirement Id	ETR Status	Notes
<Test Case Id>	<ETR Id>	<M> or <O>	
<Test Case Id>	<ETR Id>		

Table 3: Enabler Validation Test Cases

### 7.2 Non-Covered ETR Requirements

Any restrictions, limitations and/or infeasibility of testing of the ETR requirements should be stated in this section.

If new information about limitations and/or infeasibility of testing of any of the ETR requirements is discovered, this section should be updated accordingly.

ETR Requirement Id	ETR Status	Notes
<ETR Id>	<M> or <O>	

Table 4: Non-Covered ETR Requirements

## 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 Versions OMA- EVP-SIMPLE IM-V1_0	24 Apr 2008	All	Initial draft
	27 May 2008	5.2.1, 5.2.2	Incorporated CR: OMA-IOP-MEC-2008-0097R01-CR_IM_EVP
	08 July 2008	5.1.3, 5.2.6, Appendix A, Appendix B, Appendix C	Incorporated CR: OMA-IOP-MEC-2008-0116
	13 Oct 2008	Template	Incorporated CR: OMA-IOP-MEC-2008-0176
	15 Dec 2008	5.3.1, 5.3.2	Incorporated CR: OMA-IOP-MEC-2008-0216
Candidate Versions OMA- EVP-SIMPLE IM-V1_0	20 Jan 2009	n/a	Approved TP R&A: Ref# OMA-TP-2008-0508