

Enabler Test Specification for Instant Messaging using SIMPLE Interoperability

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1. Scope

This document describes in detail available test cases for Instant Messaging using SIMPLE V1.0 (http://www.openmobilealliance.org).

The test cases are split in two categories, conformance and interoperability test cases.

The conformance test cases are aimed to verify the adherence to normative requirements described in the technical specifications.

The interoperability test cases are aimed to verify that implementations of the specifications work satisfactory.

If either conformance or interoperability tests do not exists at the creation of the test specification this part should be marked not available.

2. References

2.1 Normative References

[RFC2119] "Key words for use in RFCs to Indicate Requirement Levels", S. Bradner, March 1997,

URL:http://www.ietf.org/rfc/rfc2119.txt

[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/

[ERELD] "Enabler Release Document for IM SIMPLE", Version 1.0, Open Mobile AllianceTM,

OMA-ERELD-SIMPLE IM-V1 0, URL: http://www.openmobilealliance.org/

[IOPPROC] "OMA Interoperability Policy and Process", Version 1.7, Open Mobile AllianceTM, OMA-IOP-Process-

V1_7, www.openmobilealliance.org

[OMA_IM_AD] "Instant Messaging using SIMPLE Architecture", Version 1.0, Open Mobile AllianceTM,

OMA-AD-SIMPLE IM-V1 0, URL: http://www.openmobilealliance.org/

[OMA_IM_RD] "Instant Messaging Requirements", Version 1.0, Open Mobile Alliance™, OMA-RD-IM-V1_0, URL:

http://www.openmobilealliance.org/

[OMA IM TS] "Instant Messaging using SIMPLE", Version 1.0, Open Mobile AllianceTM,

OMA-TS-SIMPLE IM-V1 0, URL: 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/

2.2 Informative References

[OMADICT] "Dictionary for OMA Specifications", Version 2.7, Open Mobile Alliance™,

OMA-ORG-Dictionary-V2_7, <u>URL:http://www.openmobilealliance.org/</u>

[OMA_DM] "OMA Device Management", Version 1.2, Open Mobile Alliance™, OMA-ERP-DM-V1_2,

URL: http://www.openmobilealliance.org/

[OMA Pres] "OMA Presence Simple", Version 1.0, Open Mobile AllianceTM, OMA-ERP-Presence SIMPLE-V1 0,

URL: 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/

[OMA_X2] "OMA XML Document Management", Version 2.0, Open Mobile AllianceTM,

URL: http://www.openmobilealliance.org/

Work in progress.

[RFC3261] "SIP: Session Initiation Protocol", J. Rosenberg et al, June 2002, URL: 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", are normative, unless they are explicitly indicated to be informative.

The following numbering scheme is used:

xxx-y.z-con-number where:

xxx Name of enabler, e.g. MMS or Browsing y.z Version of enabler release, e.g. 1.2 or 1.2.1 'con' Indicating this test is a conformance test case

number Leap number for the test case

Or

xxx-y.z-int-number where:

xxx Name of enabler, e.g. MMS or Browsing
 y.z Version of enabler release, e.g. 1.2 or 1.2.1
 'int' Indicating this test is a interoperability test case

number Leap number for the test case

3.2 Definitions

Ad-hoc Group Session An IM session for multiple users that does not involve the use of predefined groups. The list of users for

the Ad hoc Group Session is created dynamically and is disbanded after the Ad hoc Group session ends.

Controlling IM Server A SIP application server responsible for IM Service functionality in the network side. Function of the

Controlling IM Server relates to group communication, e.g., acting as a focus in an IM Session.

Conversation An ordered exchange of immediate messages in the context of a session between users.

Deferred Message If an intended recipient of an IM pager-mode or large mode message communication is not available,

either due to the recipient's Inbox settings or the recipient being IM offline, the message is stored in the

IM server for later delivery. I.e. the IM becomes deferred message.

Event Package A specification for a set of events to be used with subscription and notification. The event package defines

the semantics of the notification message body and of subscriptions to that event. Event packages are

defined in [RFC3265].

File Transfer A one-way transfer of data between entities in real-time fashion. The Session ends when the data has been

transferred.

Group A group is a nested collection of addresses or identifiers such as an address or record called as Group

Members, and other information related to the group. A group is identified by a single address called

Group Identity.

Group Advertisement A message advertising a Group to Users. A Group Advertisement typically informs Users about a new

Group and contains information about how to get access to the Group.

Group Session A session at which two or more users participate.

History Stored conversation, which may also be called conversation history. There are two types of data related to

the history: metadata and the actual conversation.

IM Address

An IM Address identifies an IM User. The IM Address can be used by one IM User to request

communication with other IM Users.

IM Client An IM Service endpoint; The device used by an IM User.

IM Server A network entity that provides messaging service.

IM Service The instant message offering presented by a service provider that utilizes the IM Enabler and potentially

other enablers.

IM Session Identity SIP URI received by the IM Client during the IM Session establishment in the Contact header.

Instant Message (IM) A message delivered to a user in an instant, interactive manner. Generally short, even brief. Instant

Messages are often called IMs. IMs are often exchanged back-and-forth between users in a conversational

fashion. Defined in [RFC2778].

In other words, a type of messaging service by which the sender expects immediate message delivery in

(near) real time fashion.

Invited IM User An IM User receiving invitation or has been invited to an IM Session.

Inviting IM Client An IM Client either initiating or triggering initiation of the IM Session.

Joining IM Client An IM Client joining in a Group Session.

Large Message Mode This mode is used to send a single large instant message using MSRP. Since MSRP is used, a SIP session

must be established, but it is torn down after the single message is transmitted.

Notification A message, delivered in response to a subscription, which delivers information about an associated event

in the format defined by the relevant event package. Defined in [RFC3265].

One-to-One IM Session One user communicates with a single user. It includes Peer-to-Peer, and Ad hoc Group Session with only

two participants.

Pager Mode Message A small size, one-shot message from an IM User to other IM User(s). SIP MESSAGE is used for carrying

the message.

Participating IM Server A SIP application server responsible for IM Service functionality in the network side. Function of the

Participating IM Server relates to either originating or terminating user. The Participating IM Server is

responsible for e.g. access control for a user.

Pre-defined Group A Group whose members are permanently stored in XDMS before the actual group communication starts.

The IM Server creates the IM Group Session according to the definition in the group, e.g., when the creator of the group definition joins in, the IM Server may invite other users to the IM Group Session.

Public Conference A Pre-defined Group that is uniquely identified by a URI. A Public conference is usually hosted by a

Service Provider which creates, maintains and manipulates the conferencing features.

Session A stateful association of presence and other user preference, capability and identity data through which it

is possible to communicate immediate messages. A session may be established between IM users or

between an IM user and an IM Server.

Session based messaging A type of IMS Messaging service by which the sender expects immediate message delivery in (near) real

time fashion. In addition the sender(s) and the receiver(s) have to join to a messaging session e.g. chat

room, before message exchange can take place [3GPP TS 22.340].

SIMPLE A methodology and set of extensions to SIP supporting the Instant Messaging requirements defined by

IETF.

A SIP Session is a SIP dialog. From [RFC 3261], a SIP dialog is defined as follows: A dialog is a peer-to-

peer SIP relationship between two UAs that persists for some time. A dialog is established by SIP

messages, such as a 2xx response to an INVITE request.

Subscription A persistent relation between a subscriber and an event source (often a presence server for a presentity) by

which the subscriber requests notifications of a specific even for a set duration. Defined in [RFC3265].

System Assembly of entities comprising a whole with each and every element interacting or related to one

another.

System Message A special type of message sent by the IM Server for different purposes (e.g. advice of charge, service

notifications, advertisements, instructions, etc). System Messages MAY contain a list of possible options

and require actions or response from the user.

TestFest Multi-lateral interoperability testing event

URI-list A list of URIs issued by an IM Client to IM Server for exploding a SIP request to URIs contained in the

list. The IM Client uses a URI-list for either creating an Ad-hoc Group Session or exploding a one-shot message to multiple recipients. The IM Server takes care of sending individual requests to URIs.

User A human using the described features through a terminal device.

3.3 Abbreviations

AD Architecture Document
CDR Charging Data Record

IETF Internet Engineering Task Force

IM Instant Messaging

MSRP Message Session Relay Protocol

OMA Open Mobile Alliance

RD Requirements Document

SIMPLE SIP Instant Message and Presence Leveraging Extensions

SIP Session Initiation Protocol
URI Universal Resource Identifier
URL Uniform Resource Locator

XCAP XML Configuration Access Protocol

XDM XML Document Management

XDMC XML Document Management Client
XDMS XML Document Management Server

XML Extensible Mark-up Language

4. Introduction

The purpose of this document is to provide test cases for Instant Messaging using SIMPLE Enabler Release V1.0.

The implementation of some features is optional for the Clients and/or the Servers in the Instant Messaging using SIMPLE Enabler. The tests associated with these optional features are marked as "(Includes Optional Features)" in the test specification.

5. IM Interoperability Test Cases

5.1 IM-1.0-int-101

Test Case Id	IM-1.0-int-101
Test Object	IM Client, IM Server
Test Case Description	Verify that the inviting IM client is able to establish a One to One IM session with the Invited IM Client. Including exchanges of messages.
Specification Reference	[OMA_IM_TS] 7.1.1.2, 7.2
SCR Reference	IMSpec-SMM-C-001-M, IMSpec-SMM-S-001-M
ETR Reference	SMM-001
Tool	Not Available
Test code	Not Available
Preconditions	• Equipment:
	o 2 clients (A, B) / 1 server
	• State:
	 Both clients are logged in
	 Each client has the other as a contact
	 Each client appears online to the other
	 Each client is not blocking the other
Test Procedure	1. Client A invites Client B to a 1-to-1 IM Session
	2. Client B accepts the invitation to the 1-to-1 IM Session
	3. Client A sends the message "Hello B" to Client B
	4. Client 2 replies with "Hello A".
Pass-Criteria	1. The invitation sent by client A was successfully accepted by client B
	2. A 1-1 session begins between client A and B
	3. Client B receives "Hello B" from client A
	4. Client A receives "Hello A" from client B

Table 1: Test Information for Establishing One to One IM Session Interoperability Test

5.2 IM-1.0-int-102

Test Case Id	IM-1.0-int-102
Test Object	IM Client, IM Server
Test Case Description	Verify that the IM client is able to establish an Ad-Hoc IM Conference and invited participants are able to join the conference and exchange messages.
Specification Reference	[OMA_IM_TS] 7.1.1.3, 7.2.1.2
SCR Reference	IMSpec-SMM-C-002-M, IMSpec-SMM-S-004-M, IMSpec-SMM-S-007-M
ETR Reference	SMM-002
Tool	Not Available
Test code	Not Available

Preconditions	Equipment:
	o 3 clients (A, B,C) / 1 server
	• State:
	 All 3 clients are logged in
	 Each client has the other clients as contacts (eg. Client A has client B and C as contacts)
	 Each client appears online to the other clients
	 Clients are non blocking
Test Procedure	1. Client A invites client B and C to an Adhoc IM Conference
	2. Client B and C accept the invitation to the Adhoc IM Conference
	3. Client A sends the message "Hello B C" to the Adhoc Conference
	4. Client B sends the message "Hello A C" to the Adhoc Conference
	5. Client C sends the message "Hello A B" to the Adhoc Conference
Pass-Criteria	Client B and C accept the invitation to the Adhoc Conference
	2. An Adhoc Conference begins between client A, B and C
	3. Client B and C receive "Hello B C" from client A
	4. Client A and C receive "Hello A C" from client B
	5. Client A and B receive "Hello A B" from client C

Table 2: Test Information for IM Adhoc Conference Interoperability Test

5.3 IM-1.0-int-103

Test Case Id	IM-1.0-int-103
Test Object	IM Client, IM Server
Test Case Description	Verify that the IM client is able to join a Pre-Defined IM conference and is able to exchange messages.
Specification Reference	[OMA_IM_TS] 7.1.1.4, 7.2.1.3
SCR Reference	IMSpec-SMM-C-003-M, IMSpec-SMM-S-005-M
ETR Reference	SMM-003
Tool	Not Available
Test code	Not Available

Preconditions	Equipment:
	o 3 clients (A, B,C) / 1 server
	• State:
	 Server has IM Group 1
	 Clients A, B and C are members of IM Group 1
	 All 3 clients are logged in
	 Each client has IM Group 1 as a contact
	 Each client appears online to the other clients
	 IM Group 1 is non blocking
Test Procedure	1. A Pre-Defined IM Conference is created by client A
	2. Client A invites IM Group 1 to a Pre-Defined IM Conference
	 Client B and C accept the invitation to the Pre-Defined IM Conference
	4. Client A sends the message "Hello B C" to the Pre-Defined Conference
	Client B sends the message "Hello A C" to the Pre-Defined Conference
	6. Client C sends the message "Hello A B" to the Pre-Defined Conference
Pass-Criteria	2. Client B and C accept the invitation to the Pre-Defined Conference
	3. A Pre-Defined IM Conference begins between client A, B and C
	4. Client B and C receive "Hello B C" from client A
	5. Client A and C receive "Hello A C" from client B
	6. Client A and B receive "Hello A B" from client C

Table 3: Test Information for IM Pre-Defined Conference Interoperability Test

5.4 IM-1.0-int-104

Test Case Id	IM-1.0-int-104
Test Object	IM Client, IM Server
Test Case Description	Verify joining a chat room with a chat alias and the chat room ensures that the chat Alias is unique. The joining Client should later leave the chat room.
Specification Reference	[OMA_IM_TS] 7.1.1.10, 7.1.1.15, 7.2.3.2
SCR Reference	IMSpec-SMM-C-004-M, IMSpec-MSRP-S-001-M
ETR Reference	SMM-004
Tool	Not Available
Test code	Not Available

Preconditions	• Equipment:
	o 3 clients (A, B,C) / 1 server
	• State:
	 Server contains an open IM Chat Group called 'ChatRoom1'
	 All 3 clients are logged in
Test Procedure	Client A joins the ChatRoom1 conference using 'ChatAliasX' as an alias
	2. Client B joins Chat Group 'ChatRoom1'
	3. Client C joins Chatroom1 using the alias 'ChatAliasX'
	4. Client C joins Chatroom1 using the alias 'ChatAliasY'
	5. Client A sends "Hello from A" to the chat room
	6. Client B sends the message "Hello from B" to the chat room
	7. Client C sends the message "Hello from C" to the char room
	8. Client A leaves Chat Group A
Pass-Criteria	3. The alias 'ChatAliasX' is already in use by client A
	5. Client B and C receive "Hello from A" from ChatAliasX
	6. Client A and C receive "Hello from B" from client B
	7. Client A and B receive "Hello from C" from client ChatAliaxY
	8. Client B and C can no longer send /receive messages from Chat X

Table 4: Test Information for Joining a Chat Room Interoperability Test

5.5 IM-1.0-int-105

Test Case Id	IM-1.0-int-105
Test Object	IM Client, IM Server
Test Case Description	Verify that Private Message(s) can be sent and received in a conference session.
Specification Reference	[OMA_IM_TS] 7.2.3.4, 7.1.1.1
SCR Reference	IMSpec-SMM-C-021-M, IMSpec-MSRP-S-002-M
ETR Reference	SMM-006
Tool	Not Available
Test code	Not Available

Preconditions	Equipment:
	o 3 clients (A, B,C) / 1 server
	• State:
	 All 3 clients are logged in
	 Each client has the other clients as contacts (eg. Client A has client B and C as contacts)
	 Clients appears online to the other clients
	 Clients are non blocking
	 Clients A, B and C have an ongoing IM Conference (type does not matter)
Test Procedure	1. Client A sends a private message, "Private 1" to B
	2. Client B sends a private message, "Private 2" to A
Pass-Criteria	1. Client B receives "Private 1" from A
	2. Client A receives "Private 2" from B
	3. Client C never sees the private messaegs

Table 5: Test Information for Sending Private Message Interoperability Test

5.6 IM-1.0-int-106

Test Case Id	IM-1.0-int-106
Test Object	IM Client, IM Server
Test Case Description	Verify that the client is able to add users to the existing IM conference session.
Specification Reference	[OMA_IM_TS] 7.1.1.7, 7.2.2.7, 7.2.1.7
SCR Reference	IMSpec-SMM-C-007-M, IMSpec-SMM-S-011-M
ETR Reference	SMM-007
Tool	Not Available
Test code	Not Available
Preconditions	Equipment:
	o 4 clients (A, B, C, D) / 1 server
	• State:
	 All 4 clients are logged in
	 Each client has the other clients as contacts (eg. Client A has client B, C and D as contacts)
	 Each client appears online to the other clients
	 Client A, B and C have an ongoing IM Conference
	 Clients are non blocking
Test Procedure	1. Client A invites client D to the ongoing conference
	2. Client D sends the message, "New Member" to the conference

Pass-Criteria	Client D receives and accepts the invitation to the conference. (OPTIONAL) Client B and C are notified client D has joined the conference
	2. Client A, B and C receive, "New Member" from client D

Table 6: Test Information for Adding Users to an IM Conference Session Interoperability Test

5.7 IM-1.0-int-107

Test Case Id	IM-1.0-int-107
Test Object	IM Client, IM Server
Test Case Description	Verify that the client is able to add additional users to start or join a one to many session and that the initial one to one session is dismantled.
Specification Reference	[OMA_IM_TS] 7.1.1.6, Appendix L
SCR Reference	IMSpec-SMM-C-008-M
ETR Reference	SMM-008
Tool	Not Available
Test code	Not Available
Preconditions	 Equipment: 3 clients (A, B, C) / 1 server State: All 3 clients are logged in Each client has the other clients as contacts (eg. Client A has client B and C as contacts) Each client appears online to the other clients Clients are non blocking Client A and B have an ongoing 1-1 IM Session
Test Procedure	 Client A invites client C to the 1-1 IM Session Client C sends, "Now we are 3" to the Adhoc conference
Pass-Criteria	Client C receives and accepts the invitation to the 1-1 IM Session (OPTIONAL) Client B is notified client C joined the 1-1 IM Session
	2. Client A and B receive the message "Now we are 3" from client C

Table 7: Test Information for Extending 1-1 to 1-Many Interoperability Test

5.8 IM-1.0-int-108

Test Case Id	IM-1.0-int-108
Test Object	IM Client, IM Server
Test Case Description	Verify that the server is able to remove a user from an IM session.

Specification Reference	[OMA_IM_TS] 7.1.1.14, 7.2.2.12
SCR Reference	IMSpec-SMM-C-009-M
ETR Reference	SMM-009
Tool	Not Available
Test code	Not Available
Preconditions	Equipment:
	o 3 clients (A, B, C) / 1 server
	• State:
	 All 3 clients are logged in
	 Each client has the other clients as contacts (eg. Client A has client B and C as contacts)
	 Each client appears online to the other clients
	 Clients are non blocking
	 Client A, B and C have an ongoing IM Conference (type does not matter)
Test Procedure	Server expels client C from the conference
	2. Client C attempts to send the message "Expelled" to the conference
Pass-Criteria	1. Client C is no longer in the conference. (OPTIONAL) Client A and B are notified that client C is no longer in the conference
	2. Client C is unable to send messages to the conference

Table 8: Test Information for Expelling a User from a Session Interoperability Test

5.9 IM-1.0-int-201

Test Case Id	IM-1.0-int-201
Test Object	IM Client
Test Case Description	Verify that the IM Client is able to send a page mode message to a user
Specification Reference	[OMA_IM_TS] 8.1.1
SCR Reference	IMSpec-PMM-C-001-M
ETR Reference	PMM-001
Tool	Not Available
Test code	Not Available
Preconditions	• Equipment:
	o 2 clients (A, B) / 1 server
	• State:
	o Clients are logged in
	 Each client has the other as a contact
	 Each client appears online to the other
	Clients are non blocking
Test Procedure	1. Client A sends "Hello 1" to Client B
Pass-Criteria	1. Client B receives "Hello 1" from Client A

Table 9: Test Information for Sending a Page Mode Message to a User Interoperability Test

5.10 IM-1.0-int-202

Test Case Id	IM-1.0-int-202
Test Object	IM Client
Test Case Description	Verify that the IM client is able to send a message to a pre-defined group.
Specification Reference	[OMA_IM_TS] 8.1.1
SCR Reference	IMSpec-PMM-C-003-M
ETR Reference	PMM-002
Tool	Not Available
Test code	Not Available
Preconditions	• Equipment:
	o 3 clients (A, B,C) / 1 server
	• State:
	 Server has IM Group 1
	o Clients A, B and C are members of IM Group 1
	 Clients are logged in
	 Each client has IM Group 1 as a contact
	 Each client appears online to the other clients
	 IM Group 1 is non blocking
Test Procedure	1. Client A sends, "Hello Group 1" to IM Group 1
Pass-Criteria	1. Client B and C receive "Hello Group 1" from Client 1

Table 10: Test Information for Sending a Page Mode Message to a Group Interoperability Test

5.11 IM-1.0-int-203

Test Case Id	IM-1.0-int-203
Test Object	IM Client
Test Case Description	Test that the IM Client is able to send a Message to multiple users using a URI-List (Ad-Hoc-Group) and the receiving clients are able to receive the message
Specification Reference	[OMA_IM_TS] 8.1.1
SCR Reference	IMSpec-PMM-C-002-M
ETR Reference	PMM-003
Tool	Not Available
Test code	Not Available

Preconditions	• Equipment:
	o 3 clients (A, B, C) / 1 server
	• State:
	 Clients are logged in
	 Each client has the other clients as contacts (eg. Client A has client B and C as contacts)
	 Each client appears online to the other clients
	 Clients are non blocking
Test Procedure	1. Client A sends, "Hello Adhoc Group" to the Adhoc Group
Pass-Criteria	1. Client B and C receive, "Hello Adhoc Group" from Client A

Table 11: Test Information for Sending a Page Mode Message to Multiple Users Interoperability Test

5.12 IM-1.0-int-204 (Includes Optional Features)

Test Case Id	IM-1.0-int-204
Test Object	IM Server
Test Case Description	Test that the IM server is able to send system messages destined to its users.
Specification Reference	[OMA_IM_TS] 5.4
SCR Reference	IMSpec-SM-S-001-O
ETR Reference	PMM-004
Tool	Not Available
Test code	Not Available
Preconditions	Equipment:
	o 1 client (A) / 1 server
	• State:
	 Client is logged in
	 Client is online
Test Procedure	1. A system message is sent
Pass-Criteria	Client A receives the system message

Table 12: Test Information for IM Server Sending System Message Interoperability Test

5.13 IM-1.0-int-301

Test Case Id	IM-1.0-int-301
Test Object	IM Client
Test Case Description	Test if the IM Client is able to send a Large message to one user
Specification Reference	[OMA_IM_TS] 9.1.1.2

SCR Reference	IMSpec-LMM-C-001-M
ETR Reference	LMM-001
Tool	Not Available
Test code	Not Available
Preconditions	Equipment:
	o 2 clients (A, B) / 1 server
	• State:
	Clients are logged in
	 Each client appears online to the other clients
	 Clients are non blocking
Test Procedure	Client A sends a Multimedia message to client B
Pass-Criteria	Client B receives the Multimedia message from Client A

Table 13: Test Information for Sending Large Message to One User Interoperability Test

5.14 IM-1.0-int-302

Test Case Id	IM-1.0-int-302
Test Object	IM Client
Test Case Description	Test if the IM Client is able to send a Large message a predefined group
Specification Reference	[OMA_IM_TS] 9.1.1.2
SCR Reference	IMSpec-LMM-C-003-M
ETR Reference	LMM-002
Tool	Not Available
Test code	Not Available
Preconditions	Equipment:
	o 3 clients (A, B, C) / 1 server
	• State:
	 Server has IM Group 1
	o Clients A, B and C are members of IM Group 1
	 Clients are logged in
	 Each client has IM Group 1 as a contact
	 Clients appear online to the other clients
	○ IM Group 1 is non blocking
Test Procedure	1. Client A sends a Multimedia message to IM Group 1
Pass-Criteria	1. Clients B and C receive the Multimedia message from Client A

Table 14: Test Information for Sending a Large Message to a Group Interoperability Test

5.15 IM-1.0-int-303

Test Case Id	IM-1.0-int-303
Test Object	IM Client
Test Case Description	Test if the IM Client is able to send a Large Message to an adhoc group.
Specification Reference	[OMA_IM_TS] 9.1.1.2
SCR Reference	IMSpec-LMM-C-002-M
ETR Reference	LMM-003
Tool	Not Available
Test code	Not Available
Preconditions	• Equipment:
	o 3 clients (A, B, C) / 1 server
	• State:
	 All 3 clients are logged in
	 Each client has the other clients as contacts (eg. Client A has client B and C as contacts)
	 Each client appears online to the other clients
	 Each client is not blocking the other clients
Test Procedure	1. Client A sends a Multimedia message to Client B and C
Pass-Criteria	1. Client B and C receive the Multimedia message from Client A

Table 15: Test Information for Sending a Large Message to an Adhoc group Interoperability Test

5.16 IM-1.0-int-304

Test Case Id	IM-1.0-int-304
Test Object	IM Client
Test Case Description	The IM Client MUST be able to release from a Large Message session.
Specification Reference	[OMA_IM_TS] 9.2.2
SCR Reference	IMSpec-LMM-C-007-M
ETR Reference	LMM-005
Tool	Not Available
Test code	Not Available

Preconditions	Equipment:
	o 3 clients (A, B, C) / 1 server
	• State:
	 All 3 clients are logged in
	 Each client has the other clients as contacts (eg. Client A has client B and C as contacts)
	 Each client appears online to the other clients
	 Each client is not blocking the other clients
Test Procedure	1. Client A invites Client B and C to an Adhoc IM Conference
	2. Client B and C accept the invitation to the Adhoc conference
	3. Client A sends, "Hello 1" to the conference
	4. Client B sends, "Hello 2" to the conference
	5. Client C sends, "Hello 3" to the conference
	6. The Adhoc IM Conference is terminated
	7. Client C attempts to send a message to the conference
Pass-Criteria	Client B and C receive and invitation to an Adhoc IM Conference from Client A
	2. An Adhoc IM Conference begins between Clients A, B and C
	3. Client B and C receiver "Hello 1" from Client A
	4. Client A and C receiver "Hello 2" from Client B
	5. Client A and B receiver "Hello 3" from Client C
	7. Client C is not able to access the Adhoc IM Conference

Table 16: Test Information for IM Client Large Message Release Interoperability Test

5.17 IM-1.0-int-401

Test Case Id	IM-1.0-int-401
Test Object	IM Client
Test Case Description	Test that the IM Client is able to retrieve deferred Message metadata
Specification Reference	[OMA_IM_TS] 12.1.2
SCR Reference	IMSpec-DM-C-001-M, IMSpec-DM-C-004-M
ETR Reference	DM-001
Tool	Not Available
Test code	Not Available

Preconditions	• Equipment:
	o 2 clients (A, B) / 1 server
	• State:
	Clients are logged in
	 Each client appears online to the other clients
	Clients are non blocking
Test Procedure	Client B disables offline delivery
	2. Client B goes offline
	3. Client A sends and IM to client B
	4. Client B goes online
Pass-Criteria	1. Client B will not get stored messages pushed when online
	3. A message is stored for Client B
	4. Client B retrieves the deferred message medata

Table 17: Test Information for Retrieving Deferred Message Metadata Interoperability Test

5.18 IM-1.0-int-402

Test Case Id	IM-1.0-int-402
Test Object	IM Server
Test Case Description	Verify that deferred messages are automatically pushed to the IM client when the client comes back online. Also, verify that the client has its settings for deferred messages to be pushed to it.
Specification Reference	[OMA_IM_TS] 12.2.2.5
SCR Reference	IMSpec-DM-S-003-M
ETR Reference	DM-002
Tool	Not Available
Test code	Not Available
Preconditions	Equipment:
	o 2 clients (A, B) / 1 server
	• State:
	 Clients are logged in
	 Each client appears online to the other clients
	 Clients are non blocking
Test Procedure	Client B enables offline delivery
	2. Client B goes offline
	3. Client A sends more than 1 message to Client B
	4. Client B goes online

Pass-Criteria	Client B will have stored messages pushed when online
	3. Messages are stored for Client B
	4. Client B receives stored messages

Table 18: Test Information for Deferred Messages Pushed to an IM Client Interoperability Test

5.19 IM-1.0-int-403 (Includes Optional Features)

Test Case Id	IM-1.0-int-403
Test Object	IM Client
Test Case Description	Test the IM Client is able to retrieve one deferred message, some selected deferred messages and all deferred message
Specification Reference	[OMA_IM_TS] 12.1.1
SCR Reference	IMSpec-DM-C-002-O, IMSpec-DM-C-003-M
ETR Reference	DM-003
Tool	Not Available
Test code	Not Available
Preconditions	Equipment:
	o 2 clients (A, B) / 1 server
	• State:
	 Clients are logged in
	 Each client appears online to the other clients
	 Clients are non blocking
	Client B disables offline delivery
Test Procedure	1. Client B goes offline
	2. Client A sends one message to Client B
	3. Client B goes online
	4. Client B retrieves the stored message
	5. Client B goes offline
	6. Client A sends 5 messages to Client B
	7. Client B goes online
	8. Client B selects 2 of 5 deferred messages
	9. Client B retrieves the 2 selected deferred messages
	10. Client B goes offline
	11. Client A sends 3 messages to Client B
	12. Client B goes online
	13. Client B retrieves all deferred messages

Pass-Criteria	Client B retrieves the contents of the message (when 1 message is deferred)
	9. Client B retrieves the contents of 2 messages (when 5 messages are deferred)
	13. Client B retrieves the remaining deferred messages

Table 19: Test Information for IM Client Retrieves Deferred Messages Interoperability Test

5.20 IM-1.0-int-404

Test Case Id	IM-1.0-int-404
Test Object	IM Client
Test Case Description	Verify that the IM Client is able to delete one deferred message, some deferred messages and all deferred messages. Deferred message metadata is updated when each deferred message function procedure occurs.
Specification Reference	[OMA_IM_TS] 12.1.3.2, 12.1.3.3, 12.1.3.4
SCR Reference	IMSpec-DM-C-005-M
ETR Reference	DM-004
Tool	Not Available
Test code	Not Available
Preconditions	Equipment:
	o 2 clients (A, B) / 1 server
	• State:
	 Clients are logged in
	 Each client appears online to each other
	 Clients are non blocking
	Client B disables offline delivery
Test Procedure	1. Client B goes offline
	2. Client A sends 10 messages to Client B
	3. Client B goes online
	4. Client B selects 1 message and deletes it
	5. Client B selects 4 messages and deletes them
	6. Client B chooses to delete all remaining messages
Pass-Criteria	2. Client B has 10 deferred messages
	3. Client is notified of the awaiting messages
	4. Client B has 1 less deferred message
	5. Client B has 4 less deferred messages
	6. Client B has 0 deferred messages

Table 20: Test Information for Deleting Deferred Messages Interoperability Test

5.21 IM-1.0-int-405

Test Case Id	IM-1.0-int-405
Test Object	IM Server
Test Case Description	Verify that a message is deferred when a recipient is unavailable, and that deferred messages are stored and their corresponding metadata are updated in IM XDMS.
Specification Reference	[OMA_IM_TS] 12.2.2.3
SCR Reference	IMSpec-DM-S-001-M
ETR Reference	DM-005
Tool	Not Available
Test code	Not Available
Preconditions	• Equipment:
	o 2 clients (A, B) / 1 server
	• State:
	 Clients are logged in
	 Each client appears online to each other
	Clients are non blocking
Test Procedure	1. Client B disables offline delivery
	2. Client B goes offline
	3. Client A sends and IM to Client B
	4. Client B goes online
	5. Client B retrieves the deferred message
Pass-Criteria	1. Client B will not get stored messages pushed when online
	3. A message is stored for client B
	4. Client B retrieves the deferred message metadata
	5. Client B has the entire contents of the deferred message

Table 21: Test Information for Storing Deferred Messages Interoperability Test

5.22 IM-1.0-int-501 (Includes Optional Features)

Test Case Id	IM-1.0-int-501
Test Object	IM Client
Test Case Description	Test if the IM Client can invoke IM History
Specification Reference	[OMA_IM_TS] 13.1.1
SCR Reference	IMSpec-HIST-C-001-O
ETR Reference	HIST-001
Tool	Not Available

Test code	Not Available
Preconditions	Equipment:
	o 2 clients (A, B) / 1 server
	• State:
	 Clients supports the conversation history feature
	 IM SP has a reliable system for conversation history management
	 IM SP must have enough storage space for all conversations of all
	users
	Clients are logged in
	Each client appears online to each other
	 Clients are non blocking
Test Procedure	1. Client A invites Client B to a 1-1 IM Session
	2. Client B accepts the invitation to the 1-1 IM Session
	3. Client A sends, "Message 1"
	4. Client B replies with, "Message 2"
	5. Client A invokes the Conversation History Function
	6. Client A is prompted to enter a conversation file name
	7. Client A enters filename, "conversationX"
	8. Client A sends, "Message 3"
	9. Client B sends, "Message 4"
	10. Client 1 terminates the recording of the ongoing IM Session
	11. Client A sends, "Message 5"
	12. Client B sends, "Message 6"
	13. Client A terminates the IM Session
	14. Client A retrieves the stored conversation
Pass-Criteria	8. The text, "Message 3" is stored
	9. The text, "Message 4" is stored
	10. No more messages are being stored
	14. The stored conversation is located in file, conversationX, and contains the text, "Message 3" and "Message 4" from step 8 and 9

Table 22: Test Information for Invoking IM History function Interoperability Test

5.23 IM-1.0-int-502 (Includes Optional Features)

Test Case Id	IM-1.0-int-502
Test Object	IM Client
Test Case Description	Test if the IM Client is able to terminate an ongoing recording of an IM Session
Specification Reference	[OMA_IM_TS] 13.1.2
SCR Reference	IMSpec-HIST-C-002-O
ETR Reference	HIST-002

Tool	Not Available
Test code	Not Available
Preconditions	Equipment:
	o 2 clients (A, B) / 1 server
	• State:
	 Clients supports the conversation history feature
	 IM SP has a reliable system for conversation history management
	 IM SP must have enough storage space for all conversations of all users
	 Clients are logged in
	 Each client appears online to each other
	 Clients are non blocking
Test Procedure	1. Client A invites Client B to a 1-1 IM Session
	2. Client B accepts the invitation to the 1-1 IM Session
	3. Client A sends, "Message 1"
	4. Client B replies with, "Message 2"
	5. Client A invokes the Conversation History Function
	6. Client A is prompted to enter a conversation file name
	7. Client A enters filename, "conversationY"
	8. Client A sends, "Message 3"
	9. Client B sends, "Message 4"
	10. Client A terminates the recording of the ongoing IM Session
	11. Client A sends, "Message 5"
	12. Client B sends, "Message 6"
	13. Client A terminates the IM Session
	14. Client A retrieves the stored conversation
Pass-Criteria	8. The text, "Message 3" is stored
	9. The text, "Message 4" is stored
	10. No more messages are being stored
	14. The stored conversation is located in file, conversationY, and contains the text, "Message 3" and "Message 4" from step 8 and 9

Table 23: Test Information for Terminate Recording Interoperability Test

5.24 IM-1.0-int-503 (Includes Optional Features)

Test Case Id	IM-1.0-int-503
Test Object	IM Client
Test Case Description	Test if the IM Client is able to retrieve an IM history
Specification Reference	[OMA_IM_TS] 13.1.3
SCR Reference	IMSpec-HIST-C-003-O
ETR Reference	HIST-003

Tool	Not Available
Test code	Not Available
Preconditions	Equipment:
	o 1 client (A) / 1 server
	• State:
	 Client supports the conversation history feature
	 IM SP has a reliable system for conversation history management
	 IM SP must have enough storage space for all conversations of all
	users
	Client is logged in
Test Procedure	1. Client A opens the IM History feature
	2. Client A requests the list with all stored conversations
	3. Client A selects "conversationX"
	4. Client A gets "conversationX"
	5. Client A opens the stored conversation
Pass-Criteria	2. A list of stored conversations is shown
	5. Client A can read the contents of the conversation

Table 24: Test Information for Retrieving an IM History Interoperability Test

5.25 IM-1.0-int-504

Test Case Id	IM-1.0-int-504
Test Object	IM Client
Test Case Description	Test if the IM Client is able to retrieve an history metadata
Specification Reference	[OMA_IM_TS] 13.1.4
SCR Reference	Not Available
ETR Reference	HIST-004
Tool	Not Available
Test code	Not Available
Preconditions	Equipment:
	o 1 client (A) / 1 server
	• State:
	 Client supports the conversation history feature
	 Client is logged in
	 Client is online
Test Procedure	Client A opens the IM History feature
	2. Client A requests the History Metadata
Pass-Criteria	1. The History Metadata for stored messages is shown

Table 25: Test Information for Retrieving History Metadata Interoperability Test

5.26 IM-1.0-int-505 (Includes Optional Features)

Test Case Id	IM-1.0-int-505
Test Object	IM Client, IM Server
Test Case Description	Verify that the IM client is able to delete one or more or all IM history conversation messages. IM conversation message metadata is updated when each IM history function procedure occurs
Specification Reference	[OMA_IM_TS] 13.2.5
SCR Reference	IMSpec-HIST-C-004-O , IMSpec-HIST-S-006-O
ETR Reference	HIST-005
Tool	Not Available
Test code	Not Available
Preconditions	Equipment:
	o 2 clients (A, B) / 1 server
	• State:
	 Clients supports the conversation history feature
	 IM SP has a reliable system for conversation history management
	 IM SP must have enough storage space for all conversations of all users
	 Clients are logged in
	 Each client appears online to each other
	 Clients are non blocking
Test Procedure	1. Client A invites Client B to a 1-1 IM Session
	2. Client B accepts the invitation to the 1-1 IM Session
	3. Client A invokes the Conversation History Function
	4. Client A sends, "Message 1"
	5. Client B replies with, "Message 2"
	6. Client A terminates the recording of the ongoing IM Session
	7. Repeat steps 3 to 7 until Client A has at least 5 stored conversations
	8. Client A requests the History Metadata
	9. Client A deletes 1 stored conversation
	10. Client A request the History Metadata
	11. Client A deletes 2 stored conversations
	12. Client A requests the History Metadata
	13. Client A deletes the remaining stored conversations
	14. Client A requests the History Metadata
Pass-Criteria	9. Client A has 1 less stored conversation
	10. Client A has 1 less history element
	11. Client A has 2 less stored conversation
	12. Client A has 2 less history elements
	13. Client A has no stored conversations
	14. Client A has no history elements

Table 26: Test Information for Deleting IM Conversation Interoperability Test

5.27 IM-1.0-int-601 (Includes Optional Features)

Test Case Id	IM-1.0-int-601
Test Object	IM Client
Test Case Description	Verify that a client can send a file transfer request to another user that consists of a file
Specification Reference	[OMA_IM_TS] 10
SCR Reference	IMSpec-FT-C-001-O, IMSpec-FT-C-002-O, IMSpec-FT-C-003-O
ETR Reference	FT-001
Tool	Not Available
Test code	Not Available
Preconditions	Equipment:
	o 2 clients (A, B) / 1 server
	• State:
	 Clients are logged in
	 Each client appears online to each other
	 Clients are non blocking
Test Procedure	Client A selects Client B from the contact list
	2. Client A selects File Transfer
	3. Client A selects a file to send
	4. Client A sends the file
	5. The file transfer goes by unnoticed by client B
	6. Later, client B notices that a file transfer was missed
	7. Client B sends a file transfer request to Client A for the file that was not received earlier
	8. Client B waits for the file transfer to complete
Pass-Criteria	8. Client B opens the file and views the content

Table 27: Test Information for File Transfer Request of One File Interoperability Test

5.28 IM-1.0-int-602 (Includes Optional Features)

Test Case Id	IM-1.0-int-602
Test Object	IM Client
Test Case Description	Verify that a client can send a file transfer request to another user that consists of multiple files
Specification Reference	[OMA_IM_TS] 10
SCR Reference	IMSpec-FT-C-001-O, IMSpec-FT-C-002-O, , IMSpec-FT-C-003-O
ETR Reference	FT-001

Tool	Not Available
Test code	Not Available
Preconditions	Equipment:
	o 2 clients (A, B) / 1 server
	• State:
	 Clients are logged in
	 Each client appears online to each other
	 Clients are non blocking
Test Procedure	Client A selects Client B from the contact list
	2. Client A selects File Transfer
	3. Client A selects more than one file to send
	4. Client A sends the files
	5. The file transfer goes by unnoticed by client B
	6. Later, client B notices that a file transfer was missed
	7. Client B sends a file transfer request to Client A for the files that was not received earlier
	8. Client B waits for the file transfer to complete
Pass-Criteria	8. Client B opens the files and views the contents

Table 28: Test Information for File Transfer Request of Multiple Files Interoperability Test

5.29 IM-1.0-int-603 (Includes Optional Features)

Test Case Id	IM-1.0-int-603
Test Object	IM Client
Test Case Description	Verify that a client can send a file to multiple users
Specification Reference	[OMA_IM_TS] 10
SCR Reference	IMSpec-FT-C-001-O, IMSpec-FT-C-002-O
ETR Reference	FT-002
Tool	Not Available
Test code	Not Available
Preconditions	Equipment:
	o 3 clients (A, B, C) / 1 server
	• State:
	 Clients are logged in
	 Each client appears online to each other
	 Clients are non blocking

Test Procedure	1. Client A selects Client B and Cfrom the contact list
	2. Client A selects File Transfer
	3. Client A selects a file to send
	4. Client A sends the file
	5. Client B and C accept the file transfer
	6. Client B and C wait for the file transfer to complete
Pass-Criteria	6. Client B and C open the file and views the content

Table 29: Test Information for File Transfer to Multiple Users Interoperability Test

5.30 IM-1.0-int-604 (Includes Optional Features)

Test Case Id	IM-1.0-int-604					
Test Object	IM Client					
Test Case Description	Verify that a client can send multiple files to multiple users					
Specification Reference	[OMA_IM_TS] 10					
SCR Reference	IMSpec-FT-C-001-O, IMSpec-FT-C-002-O					
ETR Reference	FT-002, FT-003					
Tool	Not Available					
Test code	Not Available					
Preconditions	• Equipment:					
	o 3 clients (A, B, C) / 1 server					
	• State:					
	o Clients are logged in					
	 Each client appears online to each other 					
	 Clients are non blocking 					
Test Procedure	Client A selects Client B and C from the contact list					
	2. Client A selects File Transfer					
	3. Client A selects more than one file to send					
	4. Client A sends the files					
	5. Client B and C accept the file transfer					
	6. Client B and C wait for the file transfer to complete					
Pass-Criteria	7. Client B and C opent the files and views the content					

Table 30: Test Information for Transferring Multiple Files to Multiple Users Interoperability Test

5.31 IM-1.0-int-605 (Includes Optional Features)

Test Case Id	IM-1.0-int-605
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Test Object	IM Client						
Test Case Description	Verify that a client can send multiple files to multiple users						
Specification Reference	[OMA_IM_TS] 10						
SCR Reference	IMSpec-FT-C-001-O, IMSpec-FT-C-002-O						
ETR Reference	FT-002, FT-003						
Tool	Not Available						
Test code	Not Available						
Preconditions	• Equipment:						
	o 3 clients (A, B, C) / 1 server						
	• State:						
	 Clients are logged in 						
	 Each client appears online to each other 						
	Clients are non blocking						
Test Procedure	Client A selects Client B and C from the contact list						
	2. Client A invites Client B and C to an Adhoc conference						
	3. Client A sends, "Sending a file" to the conference						
	4. Client A selects a file and sends it						
	5. Client B and C accept the file transfer						
	6. Client B and C wait for the file transfer to complete						
Pass-Criteria	6. Client B and C opent the files and views the content						

Table 31: Test Information for File Transfer During and IM Session Interoperability Test

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	05.Jun.2007	All	First draft
OMA-ETS-SIMPLE_IM_INT-V1_0	14.Aug 2007	n/a	IOP-MEC agreed
	22 Aug 2007	All	Incorporated CR:
			OMA-IOP-MEC-2007-0116
	28 Jan 2008	All	Incorporated CR:
			OMA-IOP-MEC-2007-0134
	14 Feb 2008	5.1.2.1.1,	Incorporated CRs:
		5.1.2.1.2,	OMA-IOP-MEC-2007-0135R01-CR_IM_ETS_INT
		5.1.2.1.3, 5.1.2.1.4	OMA-IOP-MEC-2008-0006-CR_IM_ETS_INT
		5.1.3.1.1,	OMA-IOP-MEC-2007-0136R01-CR_IM_ETS_INT
		5.1.3.1.1,	
		5.1.3.1.3,	
		5.1.3.1.4	
	20 Feb 2008	5.1.4.1.1,	Incorporated CRs:
	201002000	5.1.4.1.2,	OMA-IOP-MEC-2008-0018
		5.1.4.1.3,	OMA-IOP-MEC-2008-0019
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