Enabler Test Specification for Presence SIMPLE

Candidate Version 2.0 – 27 Jul 2010

Open Mobile Alliance

OMA-ETS-Presence_SIMPLE_CON-V2_0-20100727-C

Contents

1. Scope

This document describes in detail available test cases for Presence SIMPLE V 2.0 enabler (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.

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

[PRS_ERELD] "Enabler Release Document for Presence", Open Mobile Alliance™, OMA-ERELD-SIMPLE-V2_0, URL:http://www.openmobilealliance.org/

[IOPPROC] "OMA Interoperability Policy and Process", Version 1.6, Open Mobile Alliance™, OMA—ORG-IOP-Process-V1_6, URL:http://www.openmobilealliance.org/

[PRS_PresXDM] "Presence SIMPLE XDM Specification", Version 2.0, Open Mobile Alliance™ , OMA-TS-Presence_SIMPLE_XDM-V2_0, URL: http://www.openmobilealliance.org/

[PRS_RD] "Presence SIMPLE Requirements Document", Version 2.0, Open Mobile Alliance™ , OMA-RD-Presence_SIMPLE-V2_0, URL: http://www.openmobilealliance.org/

[PRS_RLSXDM] "Resource List Server (RLS) XDM Specification", Version 2.0, Open Mobile Alliance™ , OMA-TS-Presence_SIMPLE_RLS_XDM-V2_0, URL: http://www.openmobilealliance.org/

[PRS_Spec] "Presence SIMPLE Specification", Version 2.0, Open Mobile Alliance™ , OMA-TS-Presence_SIMPLE-V2_0, URL: http://www.openmobilealliance.org/

[PRS_ETR] "Enabler Test Requirements for Presence SIMPLE", Version 2.0, Open Mobile Alliance OMA-ETR-Presence_SIMPLE-V2_0, URL:http://www.openmobilealliance.org/

[PRS_ETSCON-V1_1] "Enabler Test Specification for Presence SIMPLE. Conformance Test Cases", Open Mobile Alliance™ , OMA-ETS-Presence_SIMPLE_CON-V1_1, Version 1.1, http://www.openmobilealliance.org/

[PRS_AD] "Presence SIMPLE Architecture Document", Version 2.0, Open Mobile Alliance™ , OMA-AD-Presence_SIMPLE-V2_0, URL: http://www.openmobilealliance.org/

[PDE_DDS] "Presence SIMPLE Data Specification", Version 2.0, Open Mobile Alliance™, OMA-DDS-Presence_Data_Ext-V2_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/

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

3.2 Definitions

User Equipment (UE)	A device allowing a user access to network services..
user	A person using UE.
User[N]	A publisher/subscriber assigned to UE, where N is an integer number (i.e. User1, User2, etc.)
Presence Information	Use definition from [PRS_RD].
Presence Publication Rules	Use definition from [PRS_AD].
Presence Source	Use definition from [PRS_RD].
Presence Subscription Rules	Use definition from [PRS_AD].
Presentity	Use definition from [PRS_RD].
Publication Content Rules	Use definition from [PRS_AD].
TestFest	Multi-lateral interoperability testing event.
Watcher	Use definition from [PRS_RD].
Watcher Information Subscriber	Use definition from [PRS_RD].
Content Server	Use definition from [PRS_AD].
Presence Content XDMS	Use definition from [PRS_AD].
Permanent Presence State	Use definition from [PRS_AD].
Presence Information Element	Use definition from [PRS_RD].
Presence List	Use definition from [PRS_AD].
Request-contained Watcher Information List	Use definition from [PRS_AD].
Publication Authorization Rules	Use definition from [PRS_AD].
Request-contained Presence List	Use definition from [PRS_AD].
Resource List Server (RLS)	Use definition from [PRS_AD].
Subscription Authorization Rules	Use definition from [PRS_AD].

Subscription Content Rules Use definition from [PRS_AD].

Watcher Information Use definition from [PRS_RD].

3.3 Abbreviations

OMA	Open Mobile Alliance
PS	Presence Server
RD	Requirements Document
RLS	Resource List Server
SIP	Session Initiation Protocol
URI	Universal Resource Identifier
XCAP	XML Configuration Access Protocol
XDMC	XML Document Management Client
XDMS	XML Document Management Server
XML	Extensible Mark-up Language
UDP	User Datagram Protocol
TCP	Transmission Control Protocol
TLS	Transport Layer Security
MIME	Multipurpose Internet Mail Extensions

4. Introduction

The purpose of this document is to provide conformance test cases for Presence SIMPLE V 2.0 enabler.

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

The following items on an overall level are needed to adequately test the Presence SIMPLE Enabler:

- Clients that contains Watcher, Watcher Information Suscriber, Presence Source and XDMC logical components
- Presence Server
- Resource List Server
- Watcher Agent
- Presence Content XDMS, Presence XDMS and RLS XDMS
- SIP/IP Core
- Aggregation Proxy, Subscription Proxy and Shared List XDMS

Detailed information will be included in the specific test case descriptions.

The Presence SIMPLE Enabler tests are carried out using XCAP and SIP protocols. The transport protocols used are UDP, TCP and TLS.

The Presence SIMPLE Enabler tests are carried out using Presence Information Elements defined in [PDE_DDS].

5. Conformance Test Cases from Presence SIMPLE 1.1

This section lists the test cases defined for conformance testing of the Presence SIMPLE enabler in its version 1.1 and that are still applicable to version 2.0 due to the fact that those functionalities remain unchanged in Presence 2.0 but they still should be tested. However, some of these functionalities have changed from an optional status to a mandatory status in order to fullfill the new requirements of the Presence SIMPLE Enabler on its version 2.0. The test cases that correspond to these functionalities have been marked as "(Changed to mandatory)" in the test specification.

The following tables show references to the test cases that have already been tested for Presence SIMPLE V1.1 according to [PRS_ETSCON-V1_1].

5.1 Publication of Presence Information

Test Case Presence V1.1 ID	Test Case name	Test Case Description
Presence-1.1-con-M-001	Two consecutive publications for the same Presentity are not assigned the same timestamp	Verify that two consecutive publications for the same Presentity are not assigned the same timestamp
Presence-1.1-con-M-002	Initial Publication and Storage of presence information for a particular Presentity	Verify that the Presence Server is able to support publication and storage of multiple presence information elements per user.
Presence-1.1-con-M-003	Modifying presence information per user published by the same Presence source	Verify that a presence server supports modification of presence information by the same Presence source
Presence-1.1-con-M-005	Combining presence elements from different presence sources (I)	Verify that a presence server supports the combination of different presence information elements of a particular Presentity from different presence sources, when the information from the two Presence sources is conflicting ONLY in the <device> element.
Presence-1.1-con-M-006	Combining presence elements from different presence sources (II)	Verify that a presence server supports the combination of different presence information elements of a particular Presentity from different presence sources, when the information from the two Presence sources is conflicting in the <person>, <device> and <tuple> elements
Presence-1.1-con-M-016	Publications from non-authorized presence source handled correctly by Presence Server	Verify that presence server can handle correctly when receives presence information from non-authorized presence source.
Presence-1.1-con-O-011	Partial Publication without previous Stateful Publication (Changed to mandatory)	Verify that whenever a presence source publishes partial presence information without sending a previous stateful publication, the presence server rejects this publication and handles the error appropriately.

Presence-1.1-con-O-012	Partial Publication processing error (Changed to mandatory)	Verify that whenever a presence source publishes partial presence information that has not been published by this presence source in a stateful publication, the presence server rejects this publication and handles the error appropriately.

5.2 Subscription to Presence Information

Test Case Presence V1.1 ID	Test Case name	Test Case Description
Presence-1.1-con-M-051	Fetch and one-time subscription	Verify that the Presence Server is able to notify the Presentity A presence information and send it to the watcher when the watcher has requested this information but is not subscribed to the Presentity A presence information
Presence-1.1-con-M-052	Initial subscription: Notification of presence information	Verify that the requested presence information is sent to the watcher, when the watcher subscribes to Presentity A presence information
Presence-1.1-con-M-053	Notification of presence information to several Watchers when presence information is updated	Verify that the requested presence information is sent to the appropriate watchers, when the watchers are already subscribed to Presentity A presence information
Presence-1.1-con-M-054	Subscription expiration notification	Verify that a watcher is notified when his subscription expires.
Presence-1.1-con-M-055	Subscription renewal	Verify that the presence information is sent to the watcher during the expanded subscription.
Presence-1.1-con-M-056	Subscription Cancellation	Verify that the watcher is notified of his subscription cancellation, when this is cancelled by the watcher, and does no longer receive the presence information after the cancellation.
Presence-1.1-con-O-058	Partial Publication and Regular Notification of Presence Information (Changed to mandatory)	Verify that a presence source can publish partial presence information and the presence server can manage it properly.
Presence-1.1-con-O-059	Partial Publication and Partial Notification of Presence Information (Changed to mandatory)	Verify that the presence server can notify partial presence information and watchers can manage it properly.

5.3 Subscription to Watcher Information

Test Case Presence V1.1 ID	Test Case name	Test Case Description
Presence-1.1-con-O-057	Notification to a Presentity of the request for his/her presence information (Changed to mandatory)	Verify that a Presentity is notified whenever his/her presence information is requested.

6. Conformance test cases for Presence SIMPLE 2.0

This section includes the conformance test cases intended to be used to test Presence SIMPLE 2.0 specific features.

6.1 Publication of Presence Information

6.1.1 Presence-2.0-con-0301: Optimizing publication of Presence Information for UEs (Includes Optional Features)

Test Case Id	Presence-2.0-con-0301
Test Object	UE with Presence Source and Watcher Information Subscriber with optimizing publication capabilities.
Test Case Description	Verify that a UE, acting as a Presence Source, can optimize publication of Presence Information based on the Watcher Information received by the Watcher Information Subscriber. TEST CASE GOAL: Verify that User1, acting as a Presence Source, only publishes Presence Information when there is at least one Watcher subscribed to its Presence Information.
Specification Reference	[PRS_Spec] 5.1.2.5, 5.3.1, 5.3.1.1, 5.3.1.3, 5.5.4, 5.5.4.4
SCR Reference	PRS-SRC-C-013-O, PRS-WIS-C-002-O, PRS-WIS-C-004-O, PRS-PS-S-034-M, PRS-PS-S-035-M
Tool	N/A
Test Code	N/A
Preconditions	• Equipment: o UE 1 with User1 credentials (device under test) o UE 2 with User 2 credentials (emulated) o Presence Server (emulated) o Presence XDMS (emulated) • Prerequisite for this test: o In the Presence XDMS, the Presence Subscription Rules document contains information that User2 is authorized to see any of the presence information belonging to User1. o UE2 is capable of displaying presence information o User1 and User2 have a set of commonly supported Presence elements. o User1 has no active publications. o UE1 has co-located Presence Source and Watcher Information Subscriber. o UE1 has been configured with a publication rate time. o User2 has an active subscription to User1's Presence Information.
Test Procedure	1. UE1 publishes all commonly supported Presence elements. 2. User1 changes one of his/her Presence Information elements (e.g: change of mood)

	3. User2 finishes his/her subscription to presence information of User1. 4. User1 changes one of his/her Presence Information elements (e.g: change of mood)
Pass-Criteria	1. UE2 displays the Presence Information published by UE1. 2. UE2 displays the updated Presence Information published by UE1. 4. No publication is generated (inspection of log/activity files in the client or a test tool may be needed).

6.1.2 Presence-2.0-con-0302: Publication of Direct MIME Objects (Error Flow) (Includes Optional Features)

Test Case Id	Presence-2.0-con-0302
Test Object	Presence Server with MIME objects handling capabilities.
Test Case Description	Verify that a Presence Server is able to reject publish request which contains MIME objects larger than the maximum allowed TEST CASE GOAL: Verify that when UE1 (Presence Source) requests a publish which contains MIME Presence Information larger than the maximum allowed by Presence Server, Presence Server rejects the request.
Specification Reference	[PRS_Spec] 5.1.2.2.2, 5.5.1.3
SCR Reference	PRS-SRC-C-009-O, PRS-PS-S-006-O
Tool	N/A
Test Code	N/A
Preconditions	• Equipment: o UE with User1 credentials (emulated) o Presence Server (device under test) o Presence XDMS (emulated) • Prerequisite for this test: o The Presence Server has a maximum limit for the size of MIME objects included in publication requests. o User1 has a set of commonly supported Presence elements. These Presence elements include MIME objects. o User1 has no active publication.
Test Procedure	1. User1 publishes presence information for all commonly supported Presence elements including MIME objects with a size larger than the Presence Server maximum limit.
Pass-Criteria	1. Presence Server checks the size of the MIME object and rejects the publication with a 413 (Request Entity too large) response

6.1.3 Presence-2.0-con-0303: Limiting the rate of publications (Includes Optional Features)

Test Case Id	Presence-2.0-con-0303
Test Object	Presence Source with publication rate limiting capabilities

Test Case Description	Verify that if it has been set a rate limit for publication a Presence Source do not generates any publish request until that limit is reached. TEST CASE GOAL: Verify that UE1 (Presence Source) do not generates any publish request if it has been set a rate limit for publications. When the time allowed between two publish requests is reached, UE1 will generate a publish request and UE2, as Watcher, Receives the Presence Information.
Specification Reference	[PRS_Spec] 5.1.2.3
SCR Reference	PRS-SRC-C-011-O
Tool	N/A
Test Code	N/A
Preconditions	• Equipment: o UE1 with User1 credentials (device under test) o UE2 with User2 credentials (emulated) o Presence Server (emulated) o Presence XDMS (emulated) • Prerequisite for this test: o In the Presence XDMS, the Presence Subscription Rules document contains information that User2 is authorized to see any of the presence information belonging to User1. o UE1 has been configured with a publish rate limit value. o UE2 is capable of displaying presence information. o User1 and User2 have a set of commonly supported Presence elements. o User1 has no active publication. o User2 has an active subscription for User1.
Test Procedure	1. User1 publishes presence information for all commonly supported Presence elements 2. User1 modifies the presence information that has already been published before the time between publications is reached. 3. Time between publications is reached so UE1 publishes the modified presence information.
Pass-Criteria	1. UE2 displays all the presence information published by User1 2. UE2 displays no changes in the presence information published by User1 3. UE2 displays the updated presence information published by User1

6.2 Subscription to Presence Information

6.2.1 Presence-2.0-con-0401: Limiting the number of simultaneaous subscriptions to a Presentity (Includes Optional Features)

Test Case Id	Presence-2.0-con-0401

Test Object	Presence Server with subscription limiting capabilities.
Test Case Description	Verify that Presence Server is able to reject a new subscription to a Presentity's Presence Information once the limit for maximum number of simultaneous subscriptions has been reached TEST CASE GOAL: Verify that Presence Server can be configure with a limit for maximum number of simultaneous subscriptions and rejects any subscription to User1´s Presence Information which may exceed the limit.
Specification Reference	[PRS_Spec] 5.5.2
SCR Reference	PRS-PS-S-012-O
Tool	N/A
Test Code	N/A
Preconditions	• Equipment: o 4 UEs with User1, User2, User3 and User4 credentials (emulated) o Presence Server (device under test) o Presence XDMS (emulated) • Prerequisite for this test: o In the Presence XDMS, the Presence Subscription Rules document contains information that User2, User3 and User4 are authorized to see any of the presence information belonging to User1. o The Presence Server has been configured with a limit of 2 for maximum number of simultaneous subscriptions to User1´s Presence Information. o UE2, UE3 and UE4 are capable of displaying presence information. o User1, User2, User3 and User4 have a set of commonly supported Presence elements. o User1 have an active publication. o User3 have active subscriptions for User1´s Presence Information.
Test Procedure	1. User4 subscribes to User1´s Presence Information 2. User2 subscribes to User1´s Presence Information
Pass-Criteria	1. UE4 displays all the presence information published by User1. 2. UE2 displays that User1 is not available. It also receives a 503 response (Maximum number of subscriptions exceeded) from the Presence Server.

6.2.2 Presence-2.0-con-0402: Limiting the number of entries in Presence Lists (Includes Optional Features)

Test Case Id	Presence-2.0-con-0402
Test Object	RLS with list entries limitation capabilities.
Test Case Description	Verify that RLS is able to limit the number of back-end subscriptions

	allowed for Presence List TEST CASE GOAL: Verify that when UE1 (Watcher) requests a subscription to a Presence list which number of entries is greater than the maximum allowed by the RLS, the RLS only performs back-end subscriptions for a number of entries up to the maximum limit allowed. UE1 does not receive any notifications for those Presentities that could not be subscribed by the RLS.
Specification Reference	[PRS_Spec] 5.2.1.2.1, 5.2.1.2.2, 5.6.2
SCR Reference	PRS-WTR-C-002-O, PRS-WTR-C-003-O, PRS-RLS-S-006-O
Tool	N/A
Test Code	N/A
Preconditions	• Equipment: o 4 UEs with User1, User2, User3 and User4 credentials (emulated) o Presence Server (emulated) o Presence XDMS (emulated) o RLS (device under test) • Prerequisite for this test: o In the Presence XDMS, the Presence Subscription Rules document contains information that User1 is authorized to see any of the presence information belonging to User2, User3 and User4. o The RLS has been configured with 2 as a maximum number of entries for a Presence List o UE1 is capable of displaying presence information. o User1, User2, User3 and User4 have a set of commonly supported Presence elements. o User2, User3 and User4 have active publications. o User1 has no active subscriptions for User2, User3 or User4 Presence Information.
Test Procedure	1. User1 creates a Presence List containing User2, User3 and User4 URI´s. 2. User1 subscribes to the newly created Presence list
Pass-Criteria	2. UE1 displays all the presence information published by User2 and User3. UE1 displays that User4 is not available.

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 History

Document Identifier	Date	Sections	Description
Draft version OMA-ETS-Presence_SIMPLE_CON-V2_0	09 Jul 2008	All	First draft version
	19 Sep 2008	6	CR incorporated: OMA-IOP-MEC-2008-0152
	01 Oct 2008	6.1	CRs incorporated: OMA-IOP-MEC-2008-0153R01 OMA-IOP-MEC-2008-0154R01 OMA-IOP-MEC-2008-0156R01
	06 Jan 2009	All	CR incorporated: OMA-IOP-MEC-2008-0210
Candidate Version Presence_SIMPL_CON-V2_0	27 Jul 2010	n/a	Status changed to Candidate by TP OMA-TP-2010-0299-INP_PRS_20_CON_ETS_for_Candidate_Approval