

Presence XDM Specification

Candidate Version 1.1 – 28 Jan 2008

Open Mobile Alliance

OMA-TS-Presence_SIMPLE_XDM-V1_1-20080128-C

Use of this document is subject to all of the terms and conditions of the Use Agreement located at http://www.openmobilealliance.org/UseAgreement.html.

Unless this document is clearly designated as an approved specification, this document is a work in process, is not an approved Open Mobile AllianceTM specification, and is subject to revision or removal without notice.

You may use this document or any part of the document for internal or educational purposes only, provided you do not modify, edit or take out of context the information in this document in any manner. Information contained in this document may be used, at your sole risk, for any purposes. You may not use this document in any other manner without the prior written permission of the Open Mobile Alliance. The Open Mobile Alliance authorizes you to copy this document, provided that you retain all copyright and other proprietary notices contained in the original materials on any copies of the materials and that you comply strictly with these terms. This copyright permission does not constitute an endorsement of the products or services. The Open Mobile Alliance assumes no responsibility for errors or omissions in this document.

Each Open Mobile Alliance member has agreed to use reasonable endeavors to inform the Open Mobile Alliance in a timely manner of Essential IPR as it becomes aware that the Essential IPR is related to the prepared or published specification. However, the members do not have an obligation to conduct IPR searches. The declared Essential IPR is publicly available to members and non-members of the Open Mobile Alliance and may be found on the "OMA IPR Declarations" list at http://www.openmobilealliance.org/ipr.html. The Open Mobile Alliance has not conducted an independent IPR review of this document and the information contained herein, and makes no representations or warranties regarding third party IPR, including without limitation patents, copyrights or trade secret rights. This document may contain inventions for which you must obtain licenses from third parties before making, using or selling the inventions. Defined terms above are set forth in the schedule to the Open Mobile Alliance Application Form.

NO REPRESENTATIONS OR WARRANTIES (WHETHER EXPRESS OR IMPLIED) ARE MADE BY THE OPEN MOBILE ALLIANCE OR ANY OPEN MOBILE ALLIANCE MEMBER OR ITS AFFILIATES REGARDING ANY OF THE IPR'S REPRESENTED ON THE "OMA IPR DECLARATIONS" LIST, INCLUDING, BUT NOT LIMITED TO THE ACCURACY, COMPLETENESS, VALIDITY OR RELEVANCE OF THE INFORMATION OR WHETHER OR NOT SUCH RIGHTS ARE ESSENTIAL OR NON-ESSENTIAL.

THE OPEN MOBILE ALLIANCE IS NOT LIABLE FOR AND HEREBY DISCLAIMS ANY DIRECT, INDIRECT, PUNITIVE, SPECIAL, INCIDENTAL, CONSEQUENTIAL, OR EXEMPLARY DAMAGES ARISING OUT OF OR IN CONNECTION WITH THE USE OF DOCUMENTS AND THE INFORMATION CONTAINED IN THE DOCUMENTS.

© 2008 Open Mobile Alliance Ltd. All Rights Reserved. Used with the permission of the Open Mobile Alliance Ltd. under the terms set forth above.

Contents

1. S	SCOPE	.4
2. R	REFERENCES	5
2.1	NORMATIVE REFERENCES	5
2.2	Informative References	
3. T	TERMINOLOGY AND CONVENTIONS	6
3.1	CONVENTIONS	
3.2	DEFINITIONS	
3.3	ABBREVIATIONS	
4. II	NTRODUCTION	
5. P	PRESENCE XDM APPLICATION USAGES	8
5.1	PRESENCE AUTHORISATION RULES	8
5.	5.1.1 Subscription Authorisation Rules	
	5.1.1.1 Structure	
	5.1.1.2 Application Unique ID	
	5.1.1.3 Default Namespace	
	5.1.1.4 XML Schema	
	5.1.1.6 Validation constraints	
	5.1.1.7 Data Semantics	
	5.1.1.8 Naming conventions	. 9
	5.1.1.9 Global documents	
	5.1.1.10 Resource interdependencies	
_	5.1.1.11 Authorisation policies	
3.	5.1.2 Presence Content Rules	
	5.1.2.1 Structure	
	5.1.2.3 Default Namespace	
	5.1.2.4 XML Schema	
	5.1.2.5 MIME Type	
	5.1.2.6 Validation constraints	
	5.1.2.7 Data Semantics	
	5.1.2.8 Naming conventions	
	5.1.2.9 Global documents	
	5.1.2.11 Authorisation policies	
APPE	ENDIX A. STATIC CONFORMANCE REQUIREMENTS (NORMATIVE)	
A.1		
A.2		
APPE	ENDIX B. EXAMPLES (INFORMATIVE)	16
B.1		
В	3.1.1 Obtaining Presence Authorisation Rules	
APPE	ENDIX C. CHANGE HISTORY (INFORMATIVE)	18
C.1	APPROVED VERSION HISTORY	18
C.2		
Fig	jures	

1. Scope

The Presence XDMS specific data formats and XCAP application usages are described in this specification.

2. References

2.1 Normative References

[PRESAUTH] "Presence Authorization Rules", J. Rosenberg, July 9, 2007,

URL: http://www.ietf.org/internet-drafts/draft-ietf-simple-presence-rules-10.txt

NOTE: IETF Draft work in progress

[PRESSPEC] "Presence SIMPLE Specification", Version 1 1, Open Mobile AllianceTM, OMA-TS-

Presence SIMPLE-V1 1, URL: http://www.openmobilealliance.org/

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

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

[RFC4234] "Augmented BNF for Syntax Specifications: ABNF". D. Crocker, Ed., P. Overell. October

2005, URL: http://www.ietf.org/rfc/rfc4234.txt

[RFC4825] "The Extensible Markup Language (XML) Configuration Access protocol (XCAP)", J.

Rosenberg, May, 2007, URL: http://www.ietf.org/rfc/rfc4825.txt

[RFC4745] IETF RFC 4745 "Common Policy: A Document Format for Expressing Privacy Preferences",

H. Schulzrinne, J. Morris, H. Tschofenig, J. Cuellar, J. Polk, J. Rosenberg, February 2007,

URL: http://www.ietf.org/rfc/rfc4745.txt

[XDMSPEC] "XML Document Management (XDM) Specification", Version 1_1, Open Mobile AllianceTM,

OMA-TS-XDM_Core-V1_1, URL: http://www.openmobilealliance.org/

[XSD-PRESRULES] "Presence SIMPLE – Presrules", Version 1.0, Open Mobile Alliance™, OMA-SUP-

XSD prs presrules-V1 0, URL: http://www.openmobilealliance.org/tech/profiles/

2.2 Informative References

[PRESAD] "Stage 2 - Presence using SIMPLE", Version 1 1, Open Mobile AllianceTM, OMA-AD-

Presence_SIMPLE-V1_1, URL: http://www.openmobilealliance.org/

[RFC4119] "Presence-based GEOPRIV Location Object Format", J. Peterson, December 2005, URL:

http://www.ietf.org/rfc/rfc4119.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.

3.2 Definitions

Application Unique ID A unique identifier within the namespace of application unique IDs created by this specification that

differentiates XCAP resources accessed by one application from XCAP resources accessed by another.

(Source: [RFC4825])

Global Document A document placed under the XCAP global tree that applies to all users of that application usage.

Global Tree A URI that represents the parent for all global documents for a particular application usage within a

particular XCAP root. (Source: [RFC4825])

XCAP Application

Usage

Detailed information on the interaction of an application with an XCAP server. (Source: [RFC4825])

XCAP Client An HTTP client that understands how to follow the naming and validation constraints defined in

[RFC4825]. (Source: [RFC4825])

XCAP Server An HTTP server that understands how to follow the naming and validation constraints defined in

[RFC4825]. (Source: [RFC4825])

3.3 Abbreviations

AUID Application Unique ID

HTTP Hyper Text Transfer Protocol

IETF Internet Engineering Task Force

OMA Open Mobile Alliance
SIP Session Initiation Protocol
URI Uniform Resource Identifier

XCAP XML Configuration Access Protocol

XDM XML Document Management

XDMS XML Document Management Server

XML Extensible Markup Language

4. Introduction

This specification describes the structure of a particular type of XML document used for watcher authorisation in the Presence service. As stated in [PRESAD] there are two different "levels" of a watcher authorisation: subscription authorisation and presence content authorisation. The former defines if a watcher is allowed to subscribe to a presentity's presence information, and the latter the limitations in presence information that the watcher can get.

This specification provides the XCAP application usage of the Presence Authorisation Rules. It reuses the document structure described in [PRESAUTH].

The Presence XDMS (see [PRESAD]) is the logical repository for Presence Authorisation Rules documents. The common protocol specified in [XDMSPEC] is used for access and manipulation of such Presence Authorisation Rules by authorized principals.

5. Presence XDM Application Usages

5.1 Presence Authorisation Rules

The Presence Authorisation Rules document contains a set of rules which determine:

- who is authorised to subscribe to a presentity's presence information (subscription authorisation rules), and
- the content of notifications sent to each watcher (presence content rules)

These rules SHALL be described in one single XML document.

The application usage of the Presence Authorisation Rules document is described in the subsections below.

5.1.1 Subscription Authorisation Rules

5.1.1.1 Structure

The Subscription Authorization Rules SHALL conform to the structure of the "pres-rules" document described in [PRESAUTH] and extended in [XDMSPEC] section 6.6.2, with the extensions and constraints given in this sub-clause.

As described in [PRESAUTH] section 1, the Presence Authorisation Rules document contains a sequence of <rule> elements, each composed of up to three parts:

- a. "conditions"
- b. "actions"
- c. "transformations"

The Subscription Authorisation Rules are described from the <conditions> and <actions> elements.

The <conditions> child element of any <rule> element MAY include the following child elements:

- a. the <identity> element as defined in [RFC4745];
- b. the <external-list> element as defined in [XDMSPEC] Section 6.6.2;
- c. the <other-identity> element as defined in [XDMSPEC] Section 6.6.2;
- d. the <anonymous-request> element as defined in [XDMSPEC] Section 6.6.2.

The <actions> child element of any <rule> element MAY include the <sub-handling> element as described in [PRESAUTH] section 3.2.1.

5.1.1.2 Application Unique ID

The AUID SHALL be "org.openmobilealliance.pres-rules".

5.1.1.3 Default Namespace

The default namespace used in expanding URIs SHALL be "urn:ietf:params:xml:ns:common-policy" defined in [RFC4745].

5.1.1.4 XML Schema

The Subscription Authorisation Rules SHALL be composed according to the XML Schema detailed in [PRESAUTH] section 6 and extended in [XDMSPEC] section 6.6.2.

5.1.1.5 MIME Type

The MIME type for this application usage SHALL be "application/auth-policy+xml" defined in [RFC4745].

5.1.1.6 Validation constraints

The validation constraints SHALL conform to those imposed by the XML schema.

The <conditions> element SHALL contain no more than one child element of <identity>, <external-list>, <other-identity> or <anonymous-request>.

5.1.1.7 Data Semantics

The data semantics SHALL conform to the semantics defined in [PRESAUTH] and extended in [XDMSPEC] section 6.6.2.

5.1.1.8 Naming conventions

The name of the Presence Authorisation Rules document containing the Subscription Authorisation Rules SHALL be "pres-rules".

5.1.1.9 Global documents

This application usage defines no global documents.

5.1.1.10 Resource interdependencies

This application usage defines no additional resource interdependencies.

5.1.1.11 Authorisation policies

The authorisation policies SHALL be defined according to [XDMSPEC] section 6.4.3.

5.1.2 Presence Content Rules

5.1.2.1 Structure

The Presence Content Rules SHALL conform to the structure of the "pres-rules" document described in [PRESAUTH] and extended in [XDMSPEC] section 6.6.2, with the clarifications given below.

The Presence Content Rules are described from the <transformations> element of the Presence Authorisation Rules document.

The <transformations> element SHALL be used to define the visibility a watcher is granted to a particular component of the Presence documents as described in [PRESAUTH] section 3.3.

The <transformations> child element of any <rule> element MAY include the following child elements:

- a. the element as described in [PRESAUTH] section 3.3.1.2;
- b. the provide-devices> element as described in [PRESAUTH] section 3.3.1.1;
- c. the c. th
- d. the provide-willingness> element as described in section 5.1.2.7;
- f. the f. the f. the participation element as described in section 5.1.2.7;
- g. the grovide-activities> element as described in [PRESAUTH] section 3.3.2.1;

- i. the trovide-mood element as described in [PRESAUTH] section 3.3.2.4;
- j. the provide-place-type> element as described in [PRESAUTH] section 3.3.2.6;
- 1. the rovide-time-offset> element as described in [PRESAUTH] section 3.3.2.11;
- m. the rovide-note > element as described in [PRESAUTH] section 3.3.2.13;
- n. the rovide-geopriv> element as described in section 5.1.2.7;
- o. the o. th
- p. the provide-registration-state> element as described in section 5.1.2.7;
- q. the rovide-barring-state> element as described in section 5.1.2.7;
- r. the rovide-unknown-attribute element as described in [PRESAUTH] section 3.3.2.14.

Other types of <transformations> elements described in [PRESAUTH] are not defined by this specification. The provideservices> element MAY include either the <all-services> child element, or a sequence of zero or more elements, each of
 which can be:

- a. the <class>, the <service-uri>, or the <service-uri-scheme> element as described in [PRESAUTH] section 3.3.1.3, or:
- b. the <service-id> as described in section 5.1.2.7.

The rovide-persons > element MAY include either the <all-persons > child element, or a sequence of zero or more <class > element(s) as described in [PRESAUTH] section 3.3.1.2.

5.1.2.2 Application Unique ID

The AUID SHALL be "org.openmobilealliance.pres-rules".

5.1.2.3 Default Namespace

The default namespace used in expanding URIs SHALL be "urn:ietf:params:xml:ns:common-policy" defined in [RFC4745].

5.1.2.4 XML Schema

The Presence Content Rules SHALL be composed according to the XML Schema detailed in [PRESAUTH] section 6 and extended in [XDMSPEC] section 6.6.2, with the extensions given in [XSD_PRESRULES].

5.1.2.5 MIME Type

The MIME type for this application usage SHALL be "application/auth-policy+xml" defined in [RFC4745].

5.1.2.6 Validation constraints

The validation constraints SHALL conform to those imposed by the XML schema.

5.1.2.7 Data Semantics

The data semantics SHALL conform to the semantics defined in [PRESAUTH] and extended in [XDMSPEC] section 6.6.2, together with the clarifications given in this sub-clause.

"false" instructs the Presence Server to remove the <willingness> and <overriding-willingness> elements if present. This is the default value taken in the absence of the element.

"true" instructs the Presence Server to report the <willingness> and <overriding-willingness> elements to the watcher.

"false" instructs the Presence Server to remove the <network-availability> element if present. This is the default value taken in the absence of the element.

"true" instructs the Presence Server to report the <network-availability> element to the watcher.

"false" instructs the Presence Server to remove the <session-participation> element if present. This is the default value taken in the absence of the element.

"true" instructs the Presence Server to report the <session-participation> element to the watcher.

"false" instructs the Presence Server to remove the <registration-state> element if present. This is the default value taken in the absence of the element.

"true" instructs the Presence Server to report the <registration-state> element to the watcher.

The rovide-barring-state> "transformation" controls access to the <barring-state> element defined in [PRESSPEC]. The
 value is of a Boolean type:

"false" instructs the Presence Server to remove the <barring-state> element if present. This is the default value taken in the absence of the element.

"true" instructs the Presence Server to report the barring-state element to the watcher.

<false> instructs the Presence Server to remove (if present) the <geopriv> element and its child elements. It is assigned the numeric value of 0. This is the default value taken in the absence of the element.

<full> instructs the Presence Server to report the <geopriv> element and its child elements to the watcher. It is assigned the numeric value of 1.

The <service-id> identifies service by its service ID defined in [PRESSPEC].

5.1.2.8 Naming conventions

The name of the Presence Authorization Rules document containing the Presence Content Rules SHALL be "pres-rules".

5.1.2.9 Global documents

This application usage defines no global documents.

5.1.2.10 Resource interdependencies

This application usage defines no additional resource interdependencies.

5.1.2.11 Authorisation policies

The authorisation policies SHALL be defined according to [XDMSPEC] section 6.4.3.

Appendix A. Static Conformance Requirements

(Normative)

The SCR's defined in the following tables include SCR for:

- Presence XDM Server Application Usages
- Presence XDM Client Application Usages

Each SCR table identifies a list of supported features as:

Item: Identifier for a feature.

Function: Short description of the feature.

Reference: Section(s) of this specification with more details on the feature.

Status: Whether support for the feature is mandatory or optional. MUST use "M" for mandatory support and "O" for optional support in this column.

Requirement: This column identifies other features required by this feature. If no other features are required, this column is left empty.

This section describes the dependency grammar notation to be used in the Requirement column of the SCR and CCR tables using ABNF [RFC4234].

TerminalExpression = ScrReference / NOT TerminalExpression / TerminalExpression LogicalOperator TerminalExpression / "(" TerminalExpression ")"

ScrReference = ScrItem / ScrGroup

ScrItem = SpecScrName "-" GroupType "-" DeviceType "-" NumericId / SpecScrName "-" DeviceType "-" NumericId

ScrGroup = SpecScrName ":" FeatureType / SpecScrName "- " GroupType "-" DeviceType "-" FeatureType

SpecScrName = 1*Character;

GroupType = 1*Character;

DeviceType = "C" / "S"; C - client, S - server

NumericId = Number Number Number

LogicalOperator = "AND" / "OR"; AND has higher precedence than OR and OR is inclusive

FeatureType = "MCF" / "OCF" / "MSF" / "OSF"; See Section A.1.6

Character = %x41-5A; A-Z Number = %x30-39; 0-9

A.1 Presence XDM Server Application Usages

Item	Function	Reference	Status	Requirement
Presence_XDM-AU-S-001	Single XML document describing who can subscribe to a presentity's presence, and content of notifications	5.1	M	

Item	Function	Reference	Status	Requirement
Presence_XDM-AU-S-002	Structure of Presence Authorisation Rules XML document, and function of Subscription Authorization and Presence Content parts	5.1.1.1 5.1.2.1	M	
Presence_XDM-AU-S-003	Application Unique ID in Presence Authorisation Rules XML document	5.1.1.2 5.1.2.2	М	
Presence_XDM-AU-S-004	XML schema, including validation constraints, of Presence Authorisation Rules	5.1.1.4 5.1.1.6 5.1.2.4 5.1.2.6	M	
Presence_XDM-AU-S-005	XML document conforms to MIME type	5.1.1.5 5.1.2.5	М	
Presence_XDM-AU-S-006	Data semantics of Presence Authorisation Rules	5.1.1.7 5.1.2.7	М	
Presence_XDM-AU-S-007	Naming conventions for Presence Authorisation Rules	5.1.1.8 5.1.2.8	М	
Presence_XDM-AU-S-008	Authorization policies	5.1.1.11 5.1.2.11	М	

A.2 Presence XDM Client Application Usages

Item	Function	Reference	Status	Requirement
Presence_XDM-AU-C-001	Single XML document describing who can subscribe to a presentity's presence, and content of notifications	5.1	M	

Item	Function	Reference	Status	Requirement
Presence_XDM-AU-C-002	Structure of Presence Authorisation Rules XML document, and function of Subscription Authorization and Presence Content parts	5.1.1.1 5.1.2.1	M	
Presence_XDM-AU-C-003	Application Unique ID in Presence Authorisation Rules XML document	5.1.1.2 5.1.2.2	М	
Presence_XDM-AU- C-004	XML schema	5.1.1.4 5.1.2.4	М	
Presence_XDM-AU-C-005	XML document conforms to MIME type	5.1.1.5 5.1.2.5	М	
Presence_XDM-AU-C-006	Data semantics of Presence Authorisation Rules	5.1.1.7 5.1.2.7	М	
Presence_XDM-AU-C-007	Naming conventions for Presence Authorisation Rules	5.1.1.8 5.1.2.8	М	

Appendix B. Examples

(Informative)

B.1 Manipulating Presence Authorisation Rules

B.1.1 Obtaining Presence Authorisation Rules

Both Subscription Authorisation Rules and Presence Content Rules are stored in one XML document. Figure B.1 describes how XDM client obtains Presence Authorisation Rules.

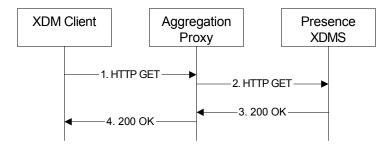


Figure B.1- XDM Client obtains Presence Authorisation Rules

The details of the flows are as follows:

1) The user "sip:ronald.underwood@example.com" wants to obtain the document describing his Presence Authorisation Rules. For this purpose the XDM Client sends an HTTP GET request to the Aggregation Proxy.

```
GET org.openmobilealliance.pres-rules/users/sip:ronald.underwood@example.com/pres-rules HTTP/1.1
Host: xcap.example.com
...
```

- 2) Based on the AUID the Aggregation Proxy forwards the request to the Presence XDMS.
- 3) After the Presence XDMS has performed the necessary authorisation checks on the request originator, the Presence XDMS sends an HTTP "200 OK" response including the requested document in the body.

```
HTTP/1.1 200 OK
Etag: "ett5e"
Content-Type: application/auth-policy+xml
<?xml version="1.0" encoding="UTF-8"?>
<cr:ruleset
  xmlns:op="urn:oma:xml:prs:pres-rules"
   xmlns:pr="urn:ietf:params:xml:ns:pres-rules"
  xmlns:cr="urn:ietf:params:xml:ns:common-policy">
  <cr:rule id="ck81">
    <cr:conditions>
      <cr:identity>
        <cr:one id="tel:+43012345678"/>
        <cr:one id="sip:hermione.blossom@example.com"/>
      </cr:identity>
    </cr:conditions>
    <cr:actions>
      <pr:sub-handling>allow</pr:sub-handling>
    </cr:actions>
    <cr:transformations>
      <pr:provide-services>
        <op:service-id>org.openmobilealliance:PoC-session</op:service-id>
      </pr:provide-services>
      <op:provide-willingness>true</op:provide-willingness>
      <pr:provide-status-icon>true</pr:provide-status-icon>
    </cr:transformations>
  </cr:rule>
</cr:ruleset>
```

4) The Aggregation Proxy routes the response to the XDM Client.

Appendix C. Change History

(Informative)

C.1 Approved Version History

Reference	Date	Description
OMA-TS-Presence_SIMPLE_XDM-V1_0-	25 Jul 2006	TP approved:
20060725-A		OMA-TP-2006-0223R04-INP_Presence_SIMPLE_V1_0_for_final_approval
OMA-TS-Presence_SIMPLE_XDM-V1_0_1-	28 Nov 2006	Incorporated CRs:
20061128-A		OMA-PAG-2006-0404
		OMA-PAG-2006-0503
		OMA-PAG-2006-0666
		OMA-PAG-2006-0746R01

C.2 Draft/Candidate Version 1.1 History

Document Identifier	Date	Sections	Description
Draft Version OMA-TS-Presence_SIMPLE_XDM-V1_1	01 Jul 2007	6, A.3	Baseline based on OMA-TS-Presence_SIMPLE_XDM-V1_0_1-20061128-A, created as per OMA-PAG-2007-0400R01-INP_PRS_1_1_baseline
			Incorporated CR: OMA-PAG-2007-0344
	30 Aug 2007	2.1, 3.2	Incorporated CR: OMA-PAG-2007-0534
	21 Nov 2007	2, 5, Appendix A	Incorporated CRs: OMA-PAG-2007-0786
			OMA-PAG-2007-0713
	29 Nov 2007	2	Incorporated CRs: OMA-PAG-2007-0713
	11 Dec 2007	All	Editorial changes, OMA-PAG-2007-0840R01
	12 Dec 2007	2.1, 5.1.3	Editorial changes
Candidate Versions OMA-TS-Presence_SIMPLE_XDM-V1_1	28 Jan 2008	n/a	Status changed to Candidate by TP TP ref # OMA-TP-2007-0506R02- INP_Presence_Simple_V1_1_for_Candidate_approval