



## **List XDM Specification**

Candidate Version 2.1 – 02 Dec 2010

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**Open Mobile Alliance**  
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## 1. Scope

This specification describes the data formats and Application Usages for the Access Permissions Lists, Alias Principals List, Forwarding Notification List, Group Usage List and URI List Documents.

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### 2.1 Normative References

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## 2.2 Informative References

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## 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

<b>Access Permissions</b>	Use definition from [XDM_RD].
<b>Access Permissions Document</b>	Use definition from [XDM_Core].
<b>Access Permissions List</b>	Use definition from [XDM_AD].
<b>Access Permissions List Document</b>	Use definition from [XDM_AD].
<b>Admin Principal</b>	Use definition from [XDM_RD].
<b>Alias Principal</b>	Use definition from [XDM_RD].
<b>Alias Principals List Document</b>	Use definition from [XDM_AD].
<b>Application Unique ID</b>	Use definition from [XDM_Core].
<b>Application Usage</b>	Use definition from [XDM_Core].
<b>Document Reference</b>	Use definition from [XDM_AD].
<b>Document Selector</b>	Use definition from [XDM_Core].
<b>Enabler</b>	Use definition from [Dict].
<b>Entity Tag</b>	Use definition from [XDM_Core].
<b>Forwarding Notification List</b>	Use definition from [XDM_AD].
<b>Forwarding Notification List Document</b>	Use definition from [XDM_AD].
<b>Global Document</b>	Use definition from [XDM_Core].
<b>Global Tree</b>	Use definition from [XDM_Core].
<b>Group Usage List</b>	Use definition from [XDM_RD].
<b>Group Usage List Document</b>	Use definition from [XDM_RD].
<b>History Information</b>	Use definition from [XDM_AD].
<b>Modification History Information Document</b>	Use definition from [XDM_Core].
<b>Node Selector</b>	Use definition from [XDM_Core].
<b>Node Selector Separator</b>	Use definition from [XDM_Core].
<b>Node URI</b>	Use definition from [XDM_Core].
<b>Primary Principal</b>	Use definition from [XDM_RD].
<b>Principal</b>	Use definition from [Dict].

<b>Request History Document</b>	Use definition from [XDM_Core].
<b>URI List</b>	Use definition from [XDM_RD].
<b>URI List Document</b>	Use definition from [XDM_RD].
<b>XCAP Root</b>	Use definition from [XDM_Core].
<b>XCAP Server</b>	Use definition from [XDM_Core].
<b>XDCP Request</b>	Use definition from [XDM_Core].
<b>XDM Agent</b>	Use definition from [XDM_AD].
<b>XDM Document</b>	Use definition from [XDM_RD].
<b>XDM Document Part</b>	Use definition from [XDM_RD].
<b>XDM Preferences Document</b>	Use definition from [XDM_Core].
<b>XDM Resource</b>	Use definition from [XDM_RD].
<b>XDMC</b>	Use definition from [XDM_AD].
<b>XDMS</b>	Use definition from [XDM_AD].

### 3.3 Abbreviations

<b>ABNF</b>	Augmented Backus-Naur Form
<b>AUID</b>	Application Unique ID
<b>E-Tag</b>	Entity Tag
<b>HTTP</b>	Hypertext Transfer Protocol
<b>IETF</b>	Internet Engineering Task Force
<b>MIME</b>	Multipurpose Internet Mail Extensions
<b>OMA</b>	Open Mobile Alliance
<b>OMNA</b>	Open Mobile Naming Authority
<b>PoC</b>	Push-to-talk over Cellular
<b>SCR</b>	Static Conformance Requirements
<b>SIP</b>	Session Initiation Protocol
<b>URI</b>	Uniform Resource Identifier
<b>URL</b>	Uniform Resource Locator
<b>XCAP</b>	XML Configuration Access Protocol
<b>XDM</b>	XML Document Management
<b>XDMC</b>	XDM Client
<b>XDMS</b>	XDM Server
<b>XML</b>	Extensible Markup Language

## 4. Introduction

This specification, which is a part of the XML Document Management enabler, describes two types of lists:

- The URI List is a list of URIs.
- The Group Usage List is a list of group names or service URIs that are known by the XDMC or the XDM Agent.

This specification provides the Application Usages for the Access Permissions List, Alias Principals List, Forwarding Notification List, Group Usage List and URI List Documents.

### 4.1 Version 1.1

The version 1.1 is called “Shared XDMS” and specifies:

- Application Usages for URI Lists and Group Usages Lists;
- naming conventions, data semantics, schema and validation constraints.

### 4.2 Version 2.0

The version 2.0 is renamed to “Shared List XDMS”. It includes the functionality of version 1.1 and in addition specifies:

- subscription to changes in XDM Documents.

### 4.3 Version 2.1

The version 2.1 is renamed to “List XDMS”. It includes the functionality of version 2.0 and in addition specifies:

- authorization policies;
- Application Usages for Access Permissions List, Alias Principals List and Forward Notification List.
- Applies new features as described in [XDM\_Core] section “*Version 2.1*” for its Application Usages.

## 5. List XDM Application Usages

### 5.1 URI List

This section specifies a mandatory Application Usage for the List XDMS, the XDMC and the XDM Agent called URI List, which is a list of URIs. The Application Usage reuses the Application Usage “resource-lists” as described in [RFC4826].

#### 5.1.1 Structure

The URI List Document SHALL conform to the structure of the “resource-lists” document described in [RFC4826] section 3 with the following extension:

- The <appusages> child element of the <list> element defines the applications which use this list. The <appusages> element contains the Node URI and the AUID value of those Application Usages referring to the <list> element.

NOTE: It is recommended that the <entry-ref> element defined in [RFC4826] not be used as it may create extra roundtrips between an XDMC or an XDM Agent and an XDMS when resolving a URI List.

#### 5.1.2 Application Unique ID

The URI List Document SHALL conform to the AUID for the “resource-lists” document defined in [RFC4826] section 3.4.1.

#### 5.1.3 XML Schema

The URI List Document SHALL conform to the XML schema for the “resource-lists” document described in [RFC4826] section 3.4.3 with the extension described in [XSD\_appusage].

#### 5.1.4 Default Namespace

The default namespace used in expanding URIs SHALL be “urn:ietf:params:xml:ns:resource-lists” defined in [RFC4826].

#### 5.1.5 MIME Type

The MIME type for the URI List Document SHALL be “application/resource-lists+xml” defined in [RFC4826] section 3.4.2.

#### 5.1.6 Validation Constraints

In addition to the XML schema, the validation constraints on a URI List Document SHALL conform to those described in [RFC4826] section 3.4.5, with the following clarifications:

The “name” attribute of the <list> element SHALL be present. If this constraint is violated, an HTTP “409 Conflict” response SHALL be returned with the error condition identified by the <constraint-failure> element. If included, the “phrase” attribute of this element SHOULD be set to “Name attribute is required.”

NOTE 1: The value of the “name” attribute of the <list> element must conform to the uniqueness constraints as specified in [RFC4826] section 3.4.5.

The value of the “name” attribute of a <list> element SHALL NOT be changed during the existence of the corresponding <list> element. If this constraint is violated, an HTTP “409 Conflict” response SHALL be returned with the error condition identified by the <constraint-failure> element. If included, the “phrase” attribute of this element SHOULD be set to “Name attribute cannot be changed.”

NOTE 2: This is to avoid broken references where the “name” attribute is used in an <external> element.

The <appusages> element MAY be present as a child element to the <list> element. If present, the element SHALL be inserted after the child elements as defined by the resource-lists namespace as the place for its extension.

### 5.1.7 Data Semantics

The data semantics for a URI List Document SHALL conform to those described in [RFC4826] section 3.4.6 with the additional extensions and clarifications given in this subclause:

An XDMC or an XDM Agent may have a need to store a URI List that has one well defined usage. A user can only have one list of this type. The “name” attribute of the <list> element is used to indicate the usage. The syntax used SHALL be a string of the format “oma\_xyz” where xyz is a string containing letters a to z. The naming convention SHALL only be used in a <list> element that is a child element to the root element <resource-lists>. This specification defines the following values for the “name” attribute:

- oma\_allcontacts: This name SHALL be used by an XDMC or an XDM Agent that has a need to store all users URIs that it knows about, in one list independent of how the URIs are used.
- oma\_buddylist: This name SHALL be used by an XDMC or an XDM Agent that has a need to store all users URIs that it wants to use for all types of communication, in one list.
- oma\_pocbuddylist: This name SHALL be used by an XDMC or an XDM Agent that has a need to store users URIs that it wants to use for PoC communication, in one list.
- oma\_blockedcontacts: This name SHALL be used by an XDMC or an XDM Agent that has a need to store users URIs that it wants to block/reject in a number of Application Usages, in one list.
- oma\_grantedcontacts: This name SHALL be used by an XDMC or an XDM Agent that has a need to store all users URIs that it wants to grant requests in a number of application usages, in one list.

Enablers that need to define other types of usage can do so in the enabler specification as long as the above syntax is followed and the value is unique.

A listing of all URI List usage names are maintained on the OMNA URI List Usage Name Registry [OMNA\_ListUsageNames].

The <appusages> element SHALL be used to store Application Usages that have a reference to this URI List Document. The <nodeuri> child element SHALL be used to store a reference to such an Application Usage. The “uri” attribute of this element SHALL contain the Node URI of the XDM Document Part containing the reference. The “auid” attribute SHALL contain the AUID defined for the Application Usage that has the reference. An XDMC or an XDM Agent MAY insert a <nodeuri> element when inserting a reference to a URI List Document in any other Application Usage XDM Document.

**NOTE:** An XDMC or an XDM Agent that uses an Application Usage that has a reference to a URI List is recommended to check that the <appusages> element contains a <nodeuri> element with information about the used Application Usage. If the XDMC or the XDM Agent finds that such an element is not included, the XDMC or the XDM Agent is recommended to insert a <nodeuri> element with information about the Application Usage in order to keep the information up to date.

### 5.1.8 Naming Conventions

The naming conventions for a URI List Document SHALL conform to those described in [RFC4826] section 3.4.7.

The XDMC or the XDM Agent SHALL use a single XDM Document for all URI Lists for a particular user. The filename SHALL be “index”.

### 5.1.9 Global Documents

Not applicable.

### 5.1.10 Resource Interdependencies

The resource interdependencies SHALL conform to those described in [RFC4826] section 3.4.8, with the following clarifications:

The value of the “name” attribute of the `<list>` element is referred by other XDM Resources using the `<external>` element.

### 5.1.11 Authorization Policies

The authorization policies for a URI List Document SHALL conform to the default authorization policy as described in [XDM\_Core] section “*Authorization*”.

The URI List Application Usage SHALL support an Access Permissions Document as described in [XDM\_Core] sections “*Authorization*” and “*Access Permissions Document*” with the following clarifications:

- 1) An `<external-list>` element SHALL indicate the list of identities defined by the child elements to a particular `<list>` element; and,
- 2) An `<allow-operation-own-data>` element SHALL only allow operations on an `<entry>` element with the requesting Principal’s identity included in the “uri” attribute.

### 5.1.12 Subscription to Changes

The URI List Application Usage SHALL support subscription to changes as specified in [XDM\_Core] section “*Subscriptions to changes in the XDM Resources*”.

### 5.1.13 Search Capabilities

Not applicable for searching URI List Document.

The URI List Application Usage MAY support search capability for searching:

- The Modification History Information Document as described in [XDM\_Core] section “*Modification History Information Document*”; and
- The Request History Information Document as described in [XDM\_Core] section “*Request History Information Document*”.

### 5.1.14 XDM Preferences Document

The URI List Application Usage SHALL support an XDM Preferences Document as described in [XDM\_Core] section “*XDM Preference Document*” if it supports History Information XDM Documents as described in section 5.1.15 or Forwarding as described in section 5.1.16.

### 5.1.15 History Information Documents

The URI List Application Usage MAY support a Modification History Information Document as described in [XDM\_Core] section “*Modification History Information Document*” for a URI List Document.

The URI List Application Usage MAY support a Request History Information Document as described in [XDM\_Core] section “*Request History Information Document*”.

### 5.1.16 Forwarding

The URI List Application Usage MAY support forwarding of a URI List Document as described in [XDM\_Core] section “*XDM Resource Forwarding Operations*”. If supported, the URI List Application Usage SHALL support forwarding of a complete stored URI List Document or forwarding of a URI List Document with one or more `<list>` elements included selected from a stored URI List Document.

### 5.1.17 Restore

The URI List Application Usage MAY support restore of a URI List Document as described in [XDM\_Core] section “*XDM Restore*”.

### 5.1.18 Document Reference

The URI List Application Usage MAY support Document Reference of a URI List Document as described in [XDM\_Core] section “*Document Reference*”.

### 5.1.19 Differential Read and Write

The URI List Application Usage MAY support Differential Read as described in [XDM\_Core] section “*Differential Read*”.

The URI List Application Usage MAY support Differential Write as described in [XDM\_Core] section “*Differential Write*”.

## 5.2 Group Usage List

This section specifies an optional Application Usage for the List XDMS, the XDMC and the XDM Agent called Group Usage List, which is a list of group names or service URIs that are known by the XDMC or the XDM Agent.

The XDMC or the XDM Agent is responsible for creating and maintaining the Group Usage List Documents.

### 5.2.1 Structure

The Group Usage List Document SHALL conform to the structure of the “resource-lists” document described in [RFC4826] section 3 with the following clarifications:

- 1) The <entry> element MAY include a <uriusages> element;
- 2) The <uriusages> element:
  - a) MAY include one or more <common-usage> elements. Each such element:
    - i. SHALL include an “id” attribute;
    - ii. MAY include any other elements from any other namespaces for the purpose of extensibility; and
    - iii. MAY include attributes from any other namespaces for the purpose of extensibility;
  - b) MAY include one or more elements from any other namespace defining an enabler defined uri usage;
- 3) The <list> element SHALL NOT include the <external> and <entry-ref> elements.

### 5.2.2 Application Unique ID

The AUID SHALL be org.openmobilealliance.group-usage-list.

### 5.2.3 XML Schema

The Group Usage List Document SHALL conform to the XML schema for the “resource-lists” document described in [RFC4826] section 3.4.3 with the extension described in [XSD\_uriusage], in [XSD\_ext] and in any enabler unique specification defining a substitution element of the abstract <uriusage> element.

### 5.2.4 Default Namespace

The default namespace used in expanding URIs SHALL be “urn:ietf:params:xml:ns:resource-lists” defined in [RFC4826].

### 5.2.5 MIME Type

The MIME type SHALL be “application/vnd.oma.group-usage-list+xml”.

## 5.2.6 Validation Constraints

In addition to the XML schema, the validation constraints on a Group Usage List Document SHALL conform to those described in [RFC4826] section 3.4.5, with the following clarifications.

The “name” attribute of the <list> element SHALL be present. If this constraint is violated, an HTTP “409 Conflict” response SHALL be returned with the error condition identified by the <constraint-failure> element. If included, the “phrase” attribute of this element SHOULD be set to “Name attribute is required”.

If the XDMC or the XDM Agent uses or adds an <entry-ref> or an <external> child element (specified in [RFC4826]) to the <list> element, the List XDMS SHALL return a “409 Conflict” response which includes the XCAP error element <constraint-failure>. If included, the “phrase” attribute SHOULD be set to “Not allowed”.

If the “id” attribute of a <common-usage> element has a value that is not unique amongst *all* <common-usage> elements within a <uriusages> element, the List XDMS respond with an HTTP “409 Conflict” response as described in [RFC4825]. The error condition SHALL be described by the <uniqueness-failure> error element. The List XDMS SHALL include one <alt-value> element containing a proposed “id” attribute value in the <uniqueness-failure> error element.

## 5.2.7 Data Semantics

The data semantics for a Group Usage List Document SHALL conform to those described in [RFC4826] section 3.4.6 with the following extensions:

The child elements of <uriusages> element SHALL be used to indicate what the “uri” attribute of the <entry> element is used for. Each application can define its specific URI usage(s) by defining its own child element (s) in its specification.

The <common-usage> element MAY be used store any information received about the Group. A typical example of an element containg such information is the <group-advertisement> element received via Extended Group Advertisement as defined by [XDM\_Group]. The “id” attribute SHALL be used to unique identifying a particular <common-usage> element in the list of <uriusages> child element.

## 5.2.8 Naming Conventions

The XDMC or the XDM Agent MAY store all their service URIs in a single XDM document. If so, the filename SHALL be “index”.

## 5.2.9 Global Documents

Not applicable.

## 5.2.10 Resource Interdependencies

The resource interdependencies SHALL conform to those described in [RFC4826] section 3.4.8.

## 5.2.11 Authorization Policies

The authorization policies for a Group Usage List Document SHALL conform to the default authorization policy as described in [XDM\_Core] section “Authorization”.

The Group Usage List Application Usage MAY support an Access Permissions Document as described in [XDM\_Core] sections “Authorization” and “Access Permissions Document” with the following clarifications:

- 1) An <external-list>> element SHALL indicate the list of identities defined by the child elements to a particular <list> element in a URI List Document; and,
- 2) An <allow-operation-own-data> element SHALL only allow operations on an <entry> element with the requesting Principal’s identity included in the “uri” attribute.

## 5.2.12 Subscription to Changes

The Group Usage List Application Usage SHALL support subscription to changes as specified in [XDM\_Core] section “*Subscriptions to changes in the XDM Resources*”.

## 5.2.13 Search Capabilities

Not applicable for searching Group Usage List Document.

The Group Usage List Application Usage MAY support search capability for searching:

- The Modification History Information Document as described in [XDM\_Core] section “*Modification History Information Document*”; and
- The Request History Information Document as described in [XDM\_Core] section “*Request History Information Document*”.

## 5.2.14 XDM Preferences Document

The Group Usage List Application Usage SHALL support an XDM Preferences Document as described in [XDM\_Core] section “*XDM Preference Document*” if it supports History Information XDM Documents as described in section 5.2.15 or Forwarding as described in section 5.2.16.

## 5.2.15 History Information Documents

The Group Usage List Application Usage MAY support a Modification History Information Document as described in [XDM\_Core] section “*Modification History Information Document*” for a Group Usage List Document.

The Group Usage List Application Usage MAY support a Request History Information Document as described in [XDM\_Core] section “*Request History Information Document*”.

## 5.2.16 Forwarding

The Group Usage List Application Usage MAY support forwarding of a Group Usage List Document as described in [XDM\_Core] section “*XDM Resource Forwarding Operations*”. If supported, the Group Usage Application Usage SHALL support forwarding of a complete stored Group Usage List Document or forwarding of a Group Usage List Document with one or more <list> elements included selected from a stored Group Usage List Document.

## 5.2.17 Restore

The Group Usage List Application Usage MAY support restore of a Group Usage List Document as described in [XDM\_Core] section “*XDM Restore*”.

## 5.2.18 Document Reference

The Group Usage List Application Usage MAY support Document Reference of a Group Usage List Document as described in [XDM\_Core] section “*Document Reference*”.

## 5.2.19 Differential Read and Write

The Group Usage List Application Usage MAY support Differential Read as described in [XDM\_Core] section “*Differential Read*”.

The Group Usage List Application Usage MAY support Differential Write as described in [XDM\_Core] section “*Differential Write*”.

## 5.3 Forwarding Notification List

This section specifies the Application Usage called Forwarding Notification List, which is used to contain the details of Forward request received from other Principals and also the status about the Forward request sent by the XDMC or the XDM Agent.

### 5.3.1 Structure

The structure of a Forwarding Notification List Document SHALL be as follows:

The document SHALL include one root element <forward-notification-list>.

The <forward-notification-list> element:

- 1) MAY include zero or more <request-notification-list> elements as described in section 5.3.7;
- 2) MAY include zero or more <delivery-notification-list> elements as described in section 5.3.7; and
- 3) MAY include any other elements from any other namespace for the purpose of extensibility.

The <request-notification-list> element

- 1) MAY include zero or more <request> elements as described in section 5.3.7; and
- 2) SHALL include an attribute “auid” as described in section 5.3.7.

The <request> element:

- 1) SHALL include an attribute “document\_uri” as described in section 5.3.7;
- 2) SHALL include a <sender-identity> element as described in section 5.3.7;
- 3) SHALL include a <expiration-time> element as described in section 5.3.7;
- 4) SHALL include a <status> element as described in section 5.3.7;
- 5) MAY include a <size> element as described in section 5.3.7;
- 6) MAY include a <time-stamp> element as described in section 5.3.7;
- 7) MAY include a <content-type> element as described in section 5.3.7;
- 8) MAY include a <note> element as described in section 5.3.7; and
- 9) MAY include any other elements from any other namespace for the purpose of extensibility.

The <sender-identity> element MAY include a <display-name> as described in section 5.3.7.

The <delivery-notification-list> element:

- 1) MAY include zero or more <delivery-notification> elements as described in section 5.3.7.

The <delivery-notification> element:

- 1) SHALL include a <document-uri> element as described in section 5.3.7;
- 2) SHALL include a <recipients-list> element as described in section 5.3.7;
- 3) SHALL include an attribute “request\_id” as described in section 5.3.7.

The <recipients-list> element SHALL include one or more <entry> element as described in section 5.3.7.

### 5.3.2 Application Unique ID

The AUID SHALL be “org.openmobilealliance.forwarding-notification-list”.

### 5.3.3 Default Namespace

The default namespace SHALL be “urn:oma:xml:xdm:forwarding-notification-list”.

### 5.3.4 XML Schema

The Forwarding Notification List Document SHALL conform to the XML schema defined in [ XSD\_fnl].

### 5.3.5 MIME Type

The MIME type for the Forwarding Notification List Document is “application/vnd.oma.fnl+xml”.

### 5.3.6 Validation Constraints

Not applicable.

### 5.3.7 Data Semantics

The <request-notification-list> element SHALL be created per AUID which contains the details of the Forward or ForwardRemote XDCP Request as described in [XDM\_Core] targeted to a particular Application Usage and the Primary Principal of Forwarding Notification List Document. The value of the “auid” attribute in the <request-notification-list> element SHALL represent the AUID of the Application Usage.

The <request> child element of <request-notification-list> element SHALL be created per Forward or ForwardRemote XDCP Request and it SHALL store the details of the received request. The value of the “document-uri” attribute in the <request> element SHALL contain the URI of the location where the forwarded XDM Resource is residing.

The <sender-identity> element SHALL be used to indicate the identity of the User who forwarded the XDM Resource and its value SHALL be set to a valid User Address, i.e. a SIP URI (as defined in [RFC3261]) or a TEL URI (as defined in [RFC3966]).

The <expiration-time> element SHALL be used to indicate the time up to which the forwarded XDM Resource can be accessed.

The <status> element SHALL be used to indicate to the User, the action taken by the XDMS on receiving the Forward or ForwardRemote XDCP Request. The possible values are:

- “accepted”: indicates that the forwarded XDM Resource is accepted and stored into the corresponding User XDM Document.
- “rejected”: indicates that the forwarded XDM Resource is rejected by the XDMS based on the preferences set by the User.
- “pending”: indicates that the XDMS is awaiting for the User intervention to take further action.

The <content-type> element SHALL represent the MIME type of the forwarded XDM Resource.

The <time-stamp> element SHALL represent the time when a particular Forward or ForwardRemote XDCP Request was received.

The <note> element SHALL contain the same information as present in the <note> element in the received Forward or ForwardRemote XDCP Request.

The <delivery-notification> element SHALL be created for each of the Forward XDCP Request for which the User wants to receive the delivery report. The “request\_id” attribute of the <delivery-notification> element SHALL contain the unique identifier received in the <request-id> element of Forward XDCP Request.

The <document-uri> SHALL contain the URI of the forwarded XDM Document which is of the form “[AUID]/users/[XUI]/[User Directory Document Selector]”.

The <recipients-list> element SHALL contain the list of recipients contained in the Forward XDCP Request. It SHALL contain same number of <entry> elements received in the Forward XDCP Request. The structure of the <entry> element conforms to the structure defined in [RFC4826] with the following clarifications:

- the “uri” attribute set to a valid User Address, e.g. a SIP URI (as defined in [RFC3261]) or a TEL URI (as defined in [RFC3966]);
- SHALL include “status” attribute which contains the delivery status of the Forward XDCP Request.

The “status” attribute SHALL contain any of the following values:

- “pending”: indicates that the XDM Resource is yet to be delivered. This is the initial value of the “status” attribute when XDMS creates the <delivery-notification> entry.
- “delivered”: indicates that the XDM Resource is delivered to the recipient.
- “rejected”: indicates that the XDM Resource is rejected by the recipient
- “expired”: indicates that the recipient has not taken any action within the expiry time specified in the Forward XDCP Request.

### 5.3.8 Naming Conventions

The name of XDM Forward Notification List Document SHALL be “forwarding-notification”.

### 5.3.9 Global Documents

Not applicable.

### 5.3.10 Resource Interdependencies

Not applicable.

### 5.3.11 Authorization Policies

The authorization policies for a Forwarding Notifications List Document SHALL conform to the default authorization policy as described in [XDM\_Core] section “Authorization”.

The Forwarding Notifications List Application Usage MAY support an Access Permissions Document as described in [XDM\_Core] sections “Authorization” and “Access Permissions Document” with the following clarifications:

- 1) An <external-list> element MAY contain a Node URI that selects a URI List in List XDMS;
- 2) An <allow-any-operation-own-data> element in a <document-rule> element has no defined usage for a Forwarding Notifications List Document; and
- 3) An <allow-retrieve-own-data> element in a <document-rule> element has no defined usage for a Forwarding Notifications List Document.

### 5.3.12 Subscription to Changes

Forwarding Notification List Application Usage SHALL support subscription to changes as specified in [XDM\_Core] section “Subscriptions to changes in the XDM Resources”.

### 5.3.13 Search Capabilities

Not applicable for searching Forwarding Notification List Document.

The Forwarding Notification List Application Usage MAY support search capability for searching:

- The Modification History Information Document as described in [XDM\_Core] section “*Modification History Information Document*”; and
- The Request History Information Document as described in [XDM\_Core] section “*Request History Information Document*”.

### 5.3.14 XDM Preferences Document

The Forwarding Notification List Application Usage SHALL support an XDM Preferences Document as described in [XDM\_Core] section “*XDM Preferences Document*” if it supports History Information XDM Documents as described in section 5.3.15.

### 5.3.15 History Information Documents

The Forwarding Notification List Application Usage MAY support a Modification History Document as described in [XDM\_Core] section “*Modification History Information Document*” for a Forwarding Notification List Document.

The Forwarding Notification List Application Usage MAY support a Request History Information Document as described in [XDM\_Core] section “*Request History Information Document*”.

### 5.3.16 Forwarding

Not applicable.

### 5.3.17 Restore

Not applicable.

### 5.3.18 Document Reference

Not applicable.

### 5.3.19 Differential Read and Write

Forwarding Notification List Application Usage MAY support Differential Read as described in [XDM\_Core] section “*Differential Read*”.

Differential Write is not applicable.

## 5.4 Access Permissions List

This section specifies the Application Usage used to store XDM Documents containing references to other Principals’ Access Permissions Documents that grant the Primary Principal of the Access Permissions List Document access to other Principals’ XDM Resources. The name for the Application Usage is “Access Permissions List”.

### 5.4.1 Structure

The Access Permissions List Document SHALL conform to the structure described in this section.

The Access Permissions List Document SHALL include one root element <access-permissions-lists>.

The <access-permissions-lists> element:

- 1) SHALL include zero or more <entry> elements;
- 2) MAY include any other elements from different namespaces for the purposes of extensibility: and

- 3) MAY include any other attribute for the purposes of extensibility.

The <entry> element

- 1) SHALL include a “document-selector” attribute;
- 2) MAY include an “etag” attribute;
- 3) MAY include any other attribute for the purposes of extensibility; and
- 4) MAY include any other elements from different namespaces for the purposes of extensibility.

#### 5.4.2 Application Unique ID

The AUID SHALL be org.openmobilealliance.access-permissions-list.

#### 5.4.3 XML Schema

The Access Permissions List Document SHALL conform to the XML schema in [XSD\_apList].

#### 5.4.4 Default Namespace

The default namespace used in expanding URIs SHALL be “urn:oma:xml:xdm:ap-list”.

#### 5.4.5 MIME Type

The MIME type SHALL be “application/vnd.oma.access-permissions-list+xml”.

#### 5.4.6 Validation Constraints

The Access Permissions List Document SHALL conform to the XML Schema described in section 5.4.3 “*XML Schema*”.

#### 5.4.7 Data Semantics

The <access-permissions-lists> element SHALL be used to store Document Selectors to Access Permission Documents that contains Access Permissions granted to the Primary Principal of the Access Permissions List Document.

The “document-selector” attribute of the <entry> child element SHALL contain the Document Selector to the Access Permission Document related to the Application Usage and Principal containing Access Permissions granted to the Primary Principal of Access Permissions List. This Document Selector SHALL be used to retrieve the Access Permissions granted to the Primary Principal.

The “etag” attribute of the <entry> child element SHALL contain the E-Tag value of the selected Access Permission Document.

#### 5.4.8 Naming Conventions

The document name of the Access Permission List Document SHALL be “access-permission-list”.

#### 5.4.9 Global Documents

Not applicable.

#### 5.4.10 Resource Interdependencies

Not applicable.

### 5.4.11 Authorization Policies

The authorization policies for an Access Permissions List Document SHALL conform to the default authorization policy as described in [XDM\_Core] section “*Authorization*”.

The Access Permissions List Application Usage SHALL support an Access Permissions Document as described in [XDM\_Core] sections “*Authorization*” and “*Access Permissions Document*” with the following clarifications:

- 1) An <external-list> element SHALL only reference a URI List in List XDMS; and
- 2) An <allow-operation-own-data> element in a <document-rule> element SHALL allow only operations on an <entry> element with the requesting Principal’s identity included in the “document-selector” attribute.

### 5.4.12 Subscription to Changes

The Access Permissions List Application Usage SHALL support subscription to changes as specified in [XDM\_Core] section “*Subscriptions to changes in the XDM Resources*”.

### 5.4.13 Search Capabilities

Not applicable for searching Access Permissions List Document.

The Access Permissions List Application Usage MAY support search capability for searching:

- The Modification History Information Document as described in [XDM\_Core] section “*Modification History Information Document*”; and
- The Request History Information Document as described in [XDM\_Core] section “*Request History Information Document*”.

### 5.4.14 XDM Preferences Document

The Access Permissions List Application Usage SHALL support an XDM Preference Document as described in [XDM\_Core] section “*XDM Preferences Document*” if it supports History Information XDM Documents as described in section 5.4.15.

### 5.4.15 History Information Documents

The Access Permissions List Application Usage MAY support a Modification History Information Document as described in [XDM\_Core] section “*Modification History Information Document*” for an Access Permissions List Document.

The Access Permissions List Application Usage MAY support a Request History Information Document as described in [XDM\_Core] section “*Request History Information Document*”.

### 5.4.16 Forwarding

Not applicable.

### 5.4.17 Restore

Not applicable.

### 5.4.18 Document Reference

Not applicable.

### 5.4.19 Differential Read and Write

The Access Permission List Application Usage MAY support Differential Read as described in [XDM\_Core] section “*Differential Read*”.

Differential Write is not applicable.

## 5.5 Alias Principals List

This section specifies an Application Usage called Alias Principals List. The Application Usage can be used to retrieve an Alias Principals List Document containing the Alias Principals associated with the Primary Principal of the retrieved Alias Principals List Document.

**NOTE:** How the Alias Principals List Document is created and modified is outside the scope of this specification. One possible scenario is that it is the XDMS itself that keeps the Alias Principals List Document in sync with information kept by the service provider in other storages using legacy procedures.

### 5.5.1 Structure

The Alias Principals List Document SHALL conform to the structure described in this section.

The Alias Principals List Document SHALL include one root element <alias-principals-list>.

The <alias-principals-list> element:

- 1) SHALL include one or more <alias-principals-group> elements; and
- 2) MAY include any other elements from any other namespaces for the purposes of extensibility.

The <alias-principals-group> element:

- 1) SHALL include one or more <alias> elements;
- 2) MAY include any other elements from any other namespaces for the purposes of extensibility;
- 3) SHALL include an <id> attribute; and
- 4) MAY include any other attributes.

The <alias> element:

- 1) SHALL include a “uri” attribute; and
- 2) MAY include any other attributes.

### 5.5.2 Application Unique ID

The AUID SHALL be org.openmobilealliance.alias-principals-list.

### 5.5.3 XML Schema

The Alias Principals List Document SHALL conform to the XML schema in [XSD\_aliasList].

### 5.5.4 Default Namespace

The default namespace used in expanding URIs SHALL be “urn:oma:xml:xdm:alias-principals-list”.

### 5.5.5 MIME Type

The MIME type SHALL be “application/vnd.oma.alias-principals-list+xml”.

### 5.5.6 Validation Constraints

The Alias Principals List Document SHALL conform to the XML Schema described in section 5.5.3 “*XML Schema*”.

### 5.5.7 Data Semantics

The <alias-principals-list> element SHALL contain information about all XUIs associated with the XUI used to address the document. The XUIs MAY be grouped into different Alias Principals groups. XUIs that identify Primary Principals which are Alias Principals SHALL be placed in the same Alias Principals group.

If a Primary Principal does not have an Alias Principal, an <alias-principals-group> element SHALL exist with only one <alias> child element with the XUI of this Primary Principal as “uri” attribute.

The “id” attribute SHALL be used to identify the Alias Principals group and SHALL be unique within the whole XDM document.

An <alias> element with a “uri” attribute with a certain XUI value is allowed to be a child element in only one of the <alias-principals-group> elements.

### 5.5.8 Naming Conventions

The document name of the Access Permission List Document SHALL be “alias-principals-list”.

### 5.5.9 Global Documents

Not applicable.

### 5.5.10 Resource Interdependencies

Not applicable.

### 5.5.11 Authorization Policies

The authorization policies SHALL conform to [XDM\_Core] section “*Authorization*” with the following clarification:

- 1) All authenticated Principals which XUIs are included in the Alias Principals List Document SHALL be allowed to retrieve it. Any other XDM operation SHALL NOT be allowed; and
- 2) This Application Usage does not define that usage of an Access Permissions Document.

### 5.5.12 Subscription to Changes

Not applicable.

### 5.5.13 Search Capabilities

Not applicable.

### 5.5.14 XDM Preferences Document

Not applicable.

### 5.5.15 History Information Documents

Not applicable.

### 5.5.16 Forwarding

Not applicable.

### 5.5.17 Restore

Not applicable.

### 5.5.18 Document Reference

Not applicable.

### 5.5.19 Differential Read and Write

Not applicable.

## 6. Subscribing to Changes in the XDM Resources

Refer to section “Subscription to Changes” in each Application Usage.

## Appendix A. Change History

(Informative)

### A.1 Approved Version History

Reference	Date	Description
n/a	n/a	No prior version

### A.2 Draft/Candidate Version 2.1 History

Document Identifier	Date	Sections	Description
Draft Version OMA-TS-XDM-Shared_List_-V2_1	14 Apr 2009	n/a	Initial version based on OMA-TS-XDM_Shared_List-V2_0-20080916-C. Application of the 2009 template (section 4)
Draft Versions OMA-TS-XDM- List-V2_1	24 Apr 2009	All	Incorporated CR: OMA-PAG-2009-0126- CR_XDM2.1_TS_Shared_List_Removal_Of_Shared
	08 Jun 2009	n/a	Changed the baseline to OMA-TS-XDM_Shared_List-V2_0-20090416-D as agreed in OMA-PAG-2009-0134R03-MINUTES_20Apr2009_Helsinki_F2F (merged with OMA-TS-XDM_List-V2_1-20090424-D)
	07 Oct 2009	All	Incorporated CR: OMA-PAG-2009-0303R02- CR_XDM_2.1_ListXDMS Adding_AccessPermissions
	28 Oct 2009	4, 5.3 (new) App B & C	Incorporated CRs: OMA-PAG-2009-0363R01-CR_XDM2_1_TS_List_section_4 OMA-PAG-2009-0374R02-CR_List_XDMForward_Notification
	27 Nov 2009	5.1.11, 5.2.11 App C.2.1	Incorporated CR: OMA-PAG-2009-0370R02- CR_XDM_2.1_ListXDM_is_list_member_element
	14 Dec 2009	2.1, 3.2, 5.3.7, 5.4 (new), 5.5 (new), App B, C.1.3 (new), C.1.4 (new)	Incorporated CRs: OMA-PAG-2009-0372R02- CR_XDM_2.1_ListXDM_Access_Permissions_List OMA-PAG-2009-0419R01- CR_XDM_2.1_ListXDM_AliasPrincipals_List OMA-PAG-2009-0420R01- CR_XDM2.1_List_XDMS_FN_List_Data_Semantics
	05 Jan 2010	All	Incorporated CR: OMA-PAG-2009-0432R01- CR_XDM_2.1_ListXDM Adding_new_sections_to_an_Application_Usage_description
	26 Jan 2010	All	Incorporated CR: OMA-PAG-2010-0011- CR_XDM2_1_LISTXDM_XDM_Document_and_other_fixes
	08 Feb 2010	All	Incorporated CRs: OMA-PAG-2010-0030R02- CR_XDM_2.1_A031_applied_to_List_XDMS_TS OMA-PAG-2010-0055R01- CR_XDM2_1_LIST_XDM_AP_List_structure
	08 Mar 2010	All	Incorporated CR: OMA-MWG-XDM-2010-0080R01- CR_XDM_2.1_Editorial_updates_to_List_TS
	06 Apr 2010	All	Incorporated CR: OMA-COM-XDM-2010-0117- CR_XDM2.1_List_XDMS_TS_Resolving_EN_Application_Usages
	13 Apr 2010	3.2	Incorporated CR: OMA-COM-XDM-2010-0130R01-CR_List_XDMS_Resolving_E010

<b>Document Identifier</b>	<b>Date</b>	<b>Sections</b>	<b>Description</b>
	25 May 2010	All	Incorporated CRs: OMA-COM-XDM-2010-0179R01- CR_XDM2.1_List_XDMS_New_Sections_Updates_E07_E73_E74 OMA-COM-XDM-2010-0180R01- CR_XDM2.1_List_XDMS_E31_E32_E33_E34
Draft Versions OMA-TS-XDM- List-V2_1	31 May 2010	All	Incorporated CR: OMA-COM-XDM-2010-0227R01- CR_XDM_2_1_List_E016_E024_E040_E047_E055_E071_E072
	08 Jul 2010	All	Incorporated CRs: OMA-COM-XDM-2010-0283-CR_XDM2_1_List_minor_edit OMA-COM-XDM-2010-0255R02- CR_XDM2.1_List_Fix_Search_History_AI005 OMA-COM-XDM-2010-0261R01-CR_XDM2.1_List_Fix_etag_AI004 OMA-COM-XDM-2010-0311R01- CR_XDM_2.1_List_SCR_Updates_old_part OMA-COM-XDM-2010-0312R02- CR_XDM_2.1_List_SCR_Updates_new_part OMA-COM-XDM-2010-0313- CR_XDM2.1_List_XDMS_Resolving_Editors_Notes
	15 Jul 2010	All	Formatting of bullets
	24 Aug 2010	N/A	Status changed to Candidate by TP TP ref # OMA-TP-2010-0368- INP_XDM_V2.1_ERP_and_ETR_for_Candidate_approval
Draft Version OMA-TS-XDM- List-V2_1	23 Sep 2010	All	Incorporated CRs: OMA-COM-XDM-2010-0334R01- CR_XDM2_1_List_editorial_changes OMA-COM-XDM-2010-0350- CR_XDM2_1_List_SCT_Tables_updates
Candidate Version OMA-TS-XDM- List-V2_1	02 Dec 2010	N/A	Status changed to Candidate by TP TP ref # OMA-TP-2010-0516- INP_XDM_V2.1_ERP_for_notification

## Appendix B. Static Conformance Requirements (Normative)

The notation used in this appendix is specified in [SCRRULES].

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

- List XDM Application Usages

The following tags are used in the Function column to identify the relationship of the requirements in this enabler release [XDM\_ERELD-V2\_0] with the requirements of the previous enabler release [XDM\_ERELD-V1\_1]:

XDMv1.1 – Requirement that is the same in this enabler release [XDM\_ERELD-V2\_0], as in the previous enabler release [XDM\_ERELD-V1\_1].

XDMv2.0 – Requirement that is new in this enabler release [XDM\_ERELD-V2\_0].

### B.1 List XDM Application Usages (XDMS)

Item	Function	Reference	Requirement
XDM_URI-AU-S-001-M	Support URI List Document structure (XDMv1.1)	5.1.1	XDM_Core-XOP-S-001-M
XDM_URI-AU-S-002-M	Support Application Unique ID of URI list Application Usage (XDMv1.1)	5.1.2	
XDM_URI-AU-S-003-M	Support XML schema of URI List Document (XDMv1.1)	5.1.3	
XDM_URI-AU-S-004-M	Support default name space for URI List Application Usage (XDMv1.1)	5.1.4	
XDM_URI-AU-S-005-M	Support MIME type of URI List Document (XDMv1.1)	5.1.5	
XDM_URI-AU-S-006-M	Support Validation constraints of URI List Document (XDMv1.1)	5.1.6	
XDM_URI-AU-S-007-M	Support data semantics of URI List Document (XDMv1.1)	5.1.7	
XDM_URI-AU-S-008-M	Support naming conventions of URI List Documents (XDMv1.1)	5.1.8	
XDM_URI-SEC-S-001-M	Support default Authorization Policy for accessing a URI List Document (XDMv1.1)	5.1.11	XDM_Core-SEC-S-001-M
XDM_URI-SEC-S-002-O	Support Authorization Policies defined in an Access Permissions Document governing access to a URI List Document (XDMv2.1)	5.1.11	XDM_Core-SEC-S-002-O
XDM_URI-SUB-S-001-M	Support subscribing to changes of URI List Documents (XDMv2.0)	5.1.12	XDM_Core-SUB-S-001-O AND XDM_Core-SUB-S-002-O
XDM_URI-PRF-S-001-O	Support XDM Preferences Document (XDMv2.1)	5.1.14	XDM_Core-PRF-S-001-O AND (XDM_URI-FWD-S-001-O OR XDM_URI-MHI-S-001-O OR XDM_URI-RHI-S-001-O)
XDM_URI-MHI-S-001-O	Support Modification History Information Document (XDMv2.1)	5.1.15	XDM_Core-MHI-S-001-O AND XDM_GRP-PRF-S-001-O
XDM_URI-RHI-S-001-O	Support Request History Information Document (XDMv2.1)	5.1.15	XDM_Core-RHI-S-001-O
XDM_URI-FWD-S-001-O	Support forwarding of URI List Document (XDMv2.1)	5.1.16	XDM_Core-FWD-S-001-O
XDM_URI-RES-S-001-O	Support restore of URI List Document (XDMv2.1)	5.1.17	XDM_Core-RES-S-001-O

Item	Function	Reference	Requirement
XDM_URI-REF-S-001-O	Support Document Reference of URI List Document (XDMv2.1)	5.1.18	XDM_Core-REF-S-001-O
XDM_URI-DIFF-S-001-O	Support Differential Write in a URI List Document (XDMv2.1)	5.1.19	XDM_Core-DIFF-S-003-O AND XDM_Core-DIFF-S-004-O
XDM_URI-DIFF-S-002-O	Support Differential Read in a URI List Document (XDMv2.1)	5.1.19	XDM_Core-DIFF-S-001-O AND XDM_Core-DIFF-S-002-O
XDM_GUL-AU-S-001-O	Support for Group Usage List Application Usage (XDMv1.1)	5.2	XDM_GUL-AU-S-002-O AND XDM_GUL-AU-S-003-O AND XDM_GUL-AU-S-004-O AND XDM_GUL-AU-S-005-O AND XDM_GUL-AU-S-006-O AND XDM_GUL-AU-S-007-O AND XDM_GUL-AU-S-008-O AND XDM_GUL-AU-S-009-O AND XDM_GUL-SEC-S-001-O AND XDM_GUL-SUB-S-001-O
XDM_GUL-AU-S-002-O	Support Group Usage List Document structure (XDMv1.1)	5.2.1	XDM_Core-XOP-S-001-M AND XDM_GUL-AU-S-010-O
XDM_GUL-AU-S-003-O	Support Application Unique ID of Group Usage List Application Usage (XDMv1.1)	5.2.2	XDM_GUL-AU-S-001-O
XDM_GUL-AU-S-004-O	Support default name space for Group Usage List Application Usage (XDMv1.1)	5.2.4	XDM_GUL-AU-S-001-O
XDM_GUL-AU-S-005-O	Support XML schema of Group Usage List Document (XDMv1.1)	5.2.3	XDM_GUL-AU-S-001-O
XDM_GUL-AU-S-006-O	Support MIME type of Group Usage List Document (XDMv1.1)	5.2.5	XDM_GUL-AU-S-001-O
XDM_GUL-AU-S-007-O	Support validation constraints of Group Usage List Document (XDMv1.1)	5.2.6	XDM_GUL-AU-S-001-O
XDM_GUL-AU-S-008-O	Support Data semantics of Group Usage List Document (XDMv1.1)	5.2.7	XDM_GUL-AU-S-001-O
XDM_GUL-AU-S-009-O	Support naming conventions for Group Usage List Document (XDMv1.1)	5.2.8	XDM_GUL-AU-S-001-O
XDM_GUL-SEC-S-001-O	Support default Authorization Policy for accessing Group Usage List Document (XDMv1.1)	5.2.11	XDM_GUL-AU-S-001-O AND XDM_Core-SEC-S-001-M
XDM_GUL-SEC-S-002-O	Support Authorization Policies defined in an Access Permissions Document governing access to a Group Usage List Document (XDMv2.1)	5.2.11	XDM_Core-SEC-S-002-O
XDM_GUL-SUB-S-001-O	Subscribing to changes in Group Usage List Documents (XDMv2.0)	5.2.12	XDM_Core-SUB-S-001-O AND XDM_Core-SUB-S-002-O
XDM_GUL-PRF-S-001-O	Support XDM Preferences Document (XDMv2.1)	5.2.14	XDM_Core-PRF-S-001-O AND (XDM_GUL-FWD-S-001-O OR XDM_GUL-MHI-S-001-O OR XDM_GUL-RHI-S-001-O)
XDM_GUL-MHI-S-001-O	Support Modification History Information Document (XDMv2.1)	5.2.15	XDM_Core-MHI-S-001-O AND XDM_GUL-PRF-S-001-O
XDM_GUL-RHI-S-001-O	Support Request History Information Document (XDMv2.1)	5.2.15	XDM_Core-RHI-S-001-O
XDM_GUL-FWD-S-001-O	Support forwarding of Group Usage List Document (XDMv2.1)	5.2.16	XDM_Core-FWD-S-001-O
XDM_GUL-RES-S-001-O	Support restore of Group Usage List Document (XDMv2.1)	5.2.17	XDM_Core-RES-S-001-O

Item	Function	Reference	Requirement
XDM_GUL-REF-S-001-O	Support Document Reference of Group Usage List Document (XDMv2.1)	5.2.18	XDM_Core-REF-S-001-O
XDM_GUL-DIFF-S-001-O	Support Differential Write in a Group Usage List Document (XDMv2.1)	5.2.19	XDM_Core-DIFF-S-003-O AND XDM_Core-DIFF-S-003-O
XDM_GUL-DIFF-S-002-O	Support Differential Read in a Group Usage List Document (XDMv2.1)	5.2.19	XDM_Core-DIFF-S-002-O AND XDM_Core-DIFF-S-002-O
XDM_FNL-AU-S-001-O	Support Forward Notification List Application Usage (XDMv2.1)	5.3	XDM_FNL-AU-S-002-O AND XDM_FNL-AU-S-003-O AND XDM_FNL-AU-S-004-O AND XDM_FNL-AU-S-005-O AND XDM_FNL-AU-S-006-O AND XDM_FNL-AU-S-007-O AND XDM_FNL-AU-S-008-O AND XDM_FNL-AU-S-009-O AND XDM_FNL-SEC-S-001-O AND XDM_FNL-SUB-S-001-O
XDM_FNL-AU-S-002-O	Support Forward Notification List Document structure (XDMv2.1)	5.3.1	XDM_Core-XOP-S-001-M AND XDM_FNL-AU-S-010-O
XDM_FNL-AU-S-003-O	Support Application Unique ID of Forward Notification List Application Usage (XDMv2.1)	5.3.2	XDM_FNL-AU-S-001-O
XDM_FNL-AU-S-004-O	Support XML schema of Forward Notification List Document (XDMv2.1)	5.3.3	XDM_FNL-AU-S-001-O
XDM_FNL-AU-S-005-O	Support default name space of Forward Notification List Application Document (XDMv2.1)	5.3.4	XDM_FNL-AU-S-001-O
XDM_FNL-AU-S-006-O	Support MIME type of Forward Notification List Document (XDMv2.1)	5.3.5	XDM_FNL-AU-S-001-O
XDM_FNL-AU-S-007-O	Support validation constraints of Forward Notification List Document (XDMv2.1)	5.3.6	XDM_FNL-AU-S-001-O
XDM_FNL-AU-S-008-O	Support data semantics of Forward Notification List Document (XDMv2.1)	5.3.7	XDM_FNL-AU-S-001-O
XDM_FNL-AU-S-009-O	Support naming conventions of Forward Notification List Document (XDMv2.1)	5.3.8	XDM_FNL-AU-S-001-O
XDM_FNL-SEC-S-001-O	Support default Authorization Policy for accessing Forward Notification List Document (XDMv2.1)	5.3.11	XDM_FNL-AU-S-001-O AND XDM_Core-SEC-S-001-M
XDM_FNL-SEC-S-002-O	Support Authorization Policies defined in an Access Permissions Document governing access to a Forward Notification List Document (XDMv2.1)	5.3.11	XDM_Core-SEC-S-002-O
XDM_FNL-SUB-S-001-O	Support subscribing to changes in Forward Notification List Document (XDMv2.1)	5.3.12	XDM_Core-SUB-S-001-O AND XDM_Core-SUB-S-002-O
XDM_FNL-PRF-S-001-O	Support XDM Preferences Document (XDMv2.1)	5.3.14	XDM_Core-PRF-S-001-O AND (XDM_FNL-MHI-S-001-O OR XDM_FNL-RHI-S-001-O)
XDM_FNL-MHI-S-001-O	Support Modification History Information Document (XDMv2.1)	5.3.15	XDM_Core-MHI-S-001-O AND XDM_FNL-PRF-S-001-O
XDM_FNL-RHI-S-001-O	Support Request History Information Document (XDMv2.1)	5.3.15	XDM_Core-RHI-S-001-O
XDM_FNL-DIFF-S-002-O	Support Differential Read in a Forward Notification List Document (XDMv2.1)	5.3.19	XDM_Core-DIFF-S-001-O AND XDM_Core-DIFF-S-002-O

Item	Function	Reference	Requirement
XDM_APL-AU-S-001-O	Support Access Permissions List Application Usage (XDMv2.1)	5.4	XDM_APL-AU-S-002-O AND XDM_APL-AU-S-003-O AND XDM_APL-AU-S-004-O AND XDM_APL-AU-S-005-O AND XDM_APL-AU-S-006-O AND XDM_APL-AU-S-007-O AND XDM_APL-AU-S-008-O AND XDM_APL-AU-S-009-O AND XDM_APL-SEC-S-001-O AND XDM_APL-SEC-S-002-O AND XDM_APL-SUB-S-001-O
XDM_APL-AU-S-002-O	Support Access Permissions List Document structure (XDMv2.1)	5.4.1	XDM_Core-XOP-S-001-M AND XDM_APL-AU-S-010-O
XDM_APL-AU-S-003-O	Support Application Unique ID of Access Permissions List Application Usage (XDMv2.1)	5.4.2	XDM_APL-AU-S-001-O
XDM_APL-AU-S-004-O	Support XML schema of Access Permissions List Document (XDMv2.1)	5.4.3	XDM_APL-AU-S-001-O
XDM_APL-AU-S-005-O	Support default name space of Access Permissions List Document (XDMv2.1)	5.4.4	XDM_APL-AU-S-001-O
XDM_APL-AU-S-006-O	Support MIME type of Access Permissions List Document (XDMv2.1)	5.4.5	XDM_APL-AU-S-001-O
XDM_APL-AU-S-007-O	Support validation constraints of Access Permissions List Document (XDMv2.1)	5.4.6	XDM_APL-AU-S-001-O
XDM_APL-AU-S-008-O	Support data semantics of Access Permissions List Document (XDMv2.1)	5.4.7	XDM_APL-AU-S-001-O
XDM_APL-AU-S-009-O	Support naming conventions for Access Permissions List Document (XDMv2.1)	5.4.8	XDM_APL-AU-S-001-O
XDM_APL-SEC-S-001-O	Support default Authorization Policy for accessing Access Permissions List Document (XDMv2.1)	5.4.11	XDM_APL-AU-S-001-O AND XDM_Core-SEC-S-001-M
XDM_APL-SEC-S-002-O	Support Authorization Policies defined in an Access Permissions Document governing access to a Access Permissions List Document (XDMv2.1)	5.4.11	XDM_Core-SEC-S-002-O
XDM_APL-SUB-S-001-O	Support subscribing to changes in Access Permissions List Document (XDMv2.1)	5.4.12	XDM_Core-SUB-S-001-O AND XDM_Core-SUB-S-002-O
XDM_APL-PRF-S-001-O	Support XDM Preferences Document (XDMv2.1)	5.4.14	XDM_Core-PRF-S-001-O AND (XDM_APL-FWD-S-001-O OR XDM_APL-MHI-S-001-O OR XDM_APL-RHI-S-001-O)
XDM_APL-MHI-S-001-O	Support Modification History Information Document (XDMv2.1)	5.4.15	XDM_Core-MHI-S-001-O AND XDM_APL-PRF-S-001-O
XDM_APL-RHI-S-001-O	Support Request History Information Document (XDMv2.1)	5.4.15	XDM_Core-RHI-S-001-O
XDM_APL-DIFF-S-002-O	Support Differential Read in a Access Permissions List Document (XDMv2.1)	5.4.19	XDM_Core-DIFF-S-001-O AND XDM_Core-DIFF-S-002-O

Item	Function	Reference	Requirement
XDM_ALL-AU-S-001-O	Support Alias Principals List Application Usage (XDMv2.1)	5.5	XDM_ALL-AU-S-002-O AND XDM_ALL-AU-S-003-O AND XDM_ALL-AU-S-004-O AND XDM_ALL-AU-S-005-O AND XDM_ALL-AU-S-006-O AND XDM_ALL-AU-S-007-O AND XDM_ALL-AU-S-008-O AND XDM_ALL-AU-S-009-O AND DM_ALL-SEC-S-001-O
XDM_ALL-AU-S-002-O	Support Alias Principals List Document structure (XDMv2.1)	5.5.1	XDM_Core-XOP-S-001-M AND XDM_ALL-AU-S-010-O
XDM_ALL-AU-S-003-O	Support Application Unique ID of Alias Principals List Application Usage (XDMv2.1)	5.5.2	XDM_ALL-AU-S-001-O
XDM_ALL-AU-S-004-O	Support XML schema of Alias Principals List Document (XDMv2.1)	5.5.3	XDM_ALL-AU-S-001-O
XDM_ALL-AU-S-005-O	Support default name space of Alias Principals List Document (XDMv2.1)	5.5.4	XDM_ALL-AU-S-001-O
XDM_ALL-AU-S-006-O	Support MIME type of Alias Principals List Document (XDMv2.1)	5.5.5	XDM_ALL-AU-S-001-O
XDM_ALL-AU-S-007-O	Support validation constraints of Alias Principals List Document (XDMv2.1)	5.5.6	XDM_ALL-AU-S-001-O
XDM_ALL-AU-S-008-O	Support data semantics of Alias Principals List Document (XDMv2.1)	5.5.7	XDM_ALL-AU-S-001-O
XDM_ALL-AU-S-009-O	Support naming conventions of Alias Principals List Document (XDMv2.1)	5.5.8	XDM_ALL-AU-S-001-O
XDM_ALL-SEC-S-001-O	Support default Authorization Policy for accessing Alias Principals List Document (XDMv2.1)	5.5.11	XDM_ALL-AU-S-001-O AND XDM_Core-SEC-S-001-M

## B.2 List XDM Application Usages (XDMC)

Item	Function	Reference	Requirement
XDM_URI-AU-C-001-O	Support URI List Document structure (XDMv1.1)	5.1.1	XDM_Core-XOP-C-003-M AND XDM_URI-AU-C-002-O AND XDM_URI-AU-C-003-O AND XDM_URI-AU-C-004-O AND XDM_URI-AU-C-005-O AND XDM_URI-AU-C-006-O AND XDM_URI-AU-C-007-O AND XDM_URI-AU-C-008-O AND XDM_URI-ERR-C-001-O
XDM_URI-AU-C-002-O	Support Application Unique ID of URI List Application Usage (XDMv1.1)	5.1.2	XDM_URI-AU-C-001-O
XDM_URI-AU-C-003-O	Support XML schema of URI List Document (XDMv1.1)	5.1.3	XDM_URI-AU-C-001-O
XDM_URI-AU-C-004-O	Support default name space of URI List Document(XDMv1.1)	5.1.4	XDM_URI-AU-C-001-O
XDM_URI-AU-C-005-O	Support MIME type of URI List Document (XDMv1.1)	5.1.5	XDM_URI-AU-C-001-O

Item	Function	Reference	Requirement
XDM_URI-AU-C-006-O	Support validation constraints of URI List Document (XDMv1.1)	5.1.6	XDM_URI-AU-C-001-O
XDM_URI-ERR-C-001-O	Support handling of HTTP “409 Conflict” response from the XDMS (XDMv1.1)	5.1.6	XDM_URI-AU-C-001-O
XDM_URI-AU-C-007-O	Support data semantics of URI List Document (XDMv1.1)	5.1.7	XDM_URI-AU-C-001-O
XDM_URI-AU-C-008-O	Support naming conventions for URI List Document (XDMv1.1)	5.1.8	XDM_URI-AU-C-001-O
XDM_URI-SEC-C-001-O	Support Access Permissions Document (XDMv2.1)	5.1.11	XDM_Core-SEC-C-002-O
XDM_URI-SUB-C-001-O	Subscribing to changes in XDM Documents (XDMv2.0)	5.1.12	XDM_Core-SUB-C-001-O AND XDM_Core-SUB-C-002-O
XDM_URI-PRF-C-001-O	Support XDM Preferences Document (XDMv2.1)	5.1.14	XDM_Core-PRF-C-001-O AND (XDM_URI-FWD-C-001-O OR XDM_URI-MHI-C-001-O OR XDM_URI-RHI-C-001-O)
XDM_URI-MHI-C-001-O	Support Modification History Information Document (XDMv2.1)	5.1.15	XDM_Core-MHI-C-001-O AND XDM_URI-PRF-C-001-O
XDM_URI-RHI-C-001-O	Support Request History Information Document (XDMv2.1)	5.1.15	XDM_Core-RHI-C-001-O
XDM_URI-FWD-C-001-O	Support forwarding of URI List Document (XDMv2.1)	5.1.16	XDM_Core-FWD-C-001-O
XDM_URI-RES-C-001-O	Support restore of URI List Document (XDMv2.1)	5.1.17	XDM_Core-RES-C-001-O
XDM_URI-REF-C-001-O	Support Document Reference of URI List Document (XDMv2.1)	5.1.18	XDM_Core-REF-C-001-O
XDM_URI-DIFF-C-001-O	Support Differential Write in a URI List Document (XDMv2.1)	5.1.19	XDM_Core-DIFF-C-003-O AND XDM_Core-DIFF-C-004-O
XDM_URI-DIFF-C-002-O	Support Differential Read in a URI List Document (XDMv2.1)	5.1.19	XDM_Core-DIFF-C-001-O AND XDM_Core-DIFF-C-002-O
XDM_GUL-AU-C-001-O	Support for Group Usage List Application Usage (XDMv1.1)	5.2	XDM_GUL-AU-C-002-O AND XDM_GUL-AU-C-003-O AND XDM_GUL-AU-C-004-O AND XDM_GUL-AU-C-005-O AND XDM_GUL-AU-C-006-O AND XDM_GUL-AU-C-007-O AND XDM_GUL-AU-C-008-O AND XDM_GUL-AU-C-009-O AND XDM_GUL-ERR-C-001-O
XDM_GUL-AU-C-002-O	Support Group Usage List Document structure (XDMv1.1)	5.2.1	XDM_Core-XOP-C-003-M AND XDM_GUL-AU-C-001-O
XDM_GUL-AU-C-003-O	Support Application Unique ID of Group Usage List Application Usage (XDMv1.1)	5.2.2	XDM_GUL-AU-C-001-O
XDM_GUL-AU-C-004-O	Support XML schema of Group Usage List Document (XDMv1.1)	5.2.3	XDM_GUL-AU-C-001-O
XDM_GUL-AU-C-005-O	Support default name space of Group Usage List Document (XDMv1.1)	5.2.4	XDM_GUL-AU-C-001-O
XDM_GUL-AU-C-006-O	Support MIME type of Group Usage List Document (XDMv1.1)	5.2.5	XDM_GUL-AU-C-001-O
XDM_GUL-AU-C-007-O	Support Validation constraints of Group Usage List Document (XDMv1.1)	5.2.6	XDM_GUL-AU-C-001-O

Item	Function	Reference	Requirement
XDM_GUL-ERR-C-001-O	Support handling of HTTP “409 Conflict” response from the XDMS (XDMv1.1)	5.2.6	XDM_GUL-AU-C-001-O
XDM_GUL-AU-C-008-O	Support data semantics of Group Usage List Document (XDMv1.1)	5.2.7	XDM_GUL-AU-C-001-O
XDM_GUL-AU-C-009-O	Support naming conventions for Group Usage List Document (XDMv1.1)	5.2.8	XDM_GUL-AU-C-001-O
XDM_GUL-SEC-C-001-O	Support Access Permissions Document (XDMv2.1)	5.2.11	XDM_Core-SEC-C-002-O
XDM_GUL-SUB-C-001-O	Support subscribing to changes in Group Usage List Document (XDMv2.0)	5.2.12	XDM_Core-SUB-C-001-O AND XDM_Core-SUB-C-002-O
XDM_GUL-PRF-C-001-O	Support XDM Preferences Document (XDMv2.1)	5.2.14	XDM_Core-PRF-C-001-O AND (XDM_GUL-FWD-C-001-O OR XDM_GUL-MHI-C-001-O OR XDM_GUL-RHI-C-001-O)
XDM_GUL-MHI-C-001-O	Support Modification History Information Document (XDMv2.1)	5.2.15	XDM_Core-MHI-C-001-O AND XDM_GUL-PRF-C-001-O
XDM_GUL-RHI-C-001-O	Support Request History Information Document (XDMv2.1)	5.2.15	XDM_Core-RHI-C-001-O
XDM_GUL-FWD-C-001-O	Support forwarding of Group Usage List Document (XDMv2.1)	5.2.16	XDM_Core-FWD-C-001-O
XDM_GUL-RES-C-001-O	Support restore of Group Usage List Document (XDMv2.1)	5.2.17	XDM_Core-RES-C-001-O
XDM_GUL-REF-C-001-O	Support Document Reference of Group Usage List Document (XDMv2.1)	5.2.18	XDM_Core-REF-C-001-O
XDM_GUL-DIFF-C-001-O	Support Differential Write in a Group Usage List Document (XDMv2.1)	5.2.19	XDM_Core-DIFF-C-003-O AND XDM_Core-DIFF-C-004-O
XDM_GUL-DIFF-C-002-O	Support Differential Read in a Group Usage List Document (XDMv2.1)	5.2.19	XDM_Core-DIFF-C-001-O AND XDM_Core-DIFF-C-002-O
XDM_FNL-AU-C-001-O	Support Forward Notification List Application Usage (XDMv2.1)	5.3	XDM_FNL-AU-C-002-O AND XDM_FNL-AU-C-003-O AND XDM_FNL-AU-C-004-O AND XDM_FNL-AU-C-005-O AND XDM_FNL-AU-C-006-O AND XDM_FNL-AU-C-007-O AND XDM_FNL-AU-C-008-O AND XDM_FNL-AU-C-009-O AND XDM_FNL-AU-C-010-O
XDM_FNL-AU-C-002-O	Support Forward Notification List Document structure (XDMv2.1)	5.3.1	XDM_Core-XOP-C-003-M AND XDM_FNL-AU-C-010-O
XDM_FNL-AU-C-003-O	Support Application Unique ID of Forward Notification List Application Usage (XDMv2.1)	5.3.2	XDM_FNL-AU-C-001-O
XDM_FNL-AU-C-004-O	Support XML schema of Forward Notification List Document (XDMv2.1)	5.3.3	XDM_FNL-AU-C-001-O
XDM_FNL-AU-C-005-O	Support default name space of Forward Notification List Document (XDMv2.1)	5.3.4	XDM_FNL-AU-C-001-O

Item	Function	Reference	Requirement
XDM_FNL-AU-C-006-O	Support MIME type of Forward Notification List Document (XDMv2.1)	5.3.5	XDM_FNL-AU-C-001-O
XDM_FNL-AU-C-007-O	Support validation constraints of Forward Notification List Document (XDMv2.1)	5.3.6	XDM_FNL-AU-C-001-O
XDM_FNL-AU-C-008-O	Support data semantics of Forward Notification List Document (XDMv2.1)	5.3.7	XDM_FNL-AU-C-001-O
XDM_FNL-AU-C-009-O	Support naming conventions of Forward Notification List Document (XDMv2.1)	5.3.8	XDM_FNL-AU-C-001-O
XDM_FNL-SEC-C-002-O	Support Access Permissions Document (XDMv2.1)	5.3.11	XDM_Core-SEC-C-002-O
XDM_FNL-SUB-C-001-O	Support subscribing to changes in Forward Notification List Document (XDMv2.1)	5.3.12	XDM_Core-SUB-C-001-O AND XDM_Core-SUB-C-002-O
XDM_FNL-PRF-C-001-O	Support XDM Preferences Document (XDMv2.1)	5.3.14	XDM_Core-PRF-C-001-O AND (XDM_FNL-MHI-C-001-O OR XDM_FNL-RHI-C-001-O)
XDM_FNL-MHI-C-001-O	Support Modification History Information Document (XDMv2.1)	5.3.15	XDM_Core-MHI-C-001-O AND XDM_FNL-PRF-C-001-O
XDM_FNL-RHI-C-001-O	Support Request History Information Document (XDMv2.1)	5.3.15	XDM_Core-RHI-C-001-O
XDM_FNL-DIFF-C-002-O	Support Differential Read in a Forward Notification List Document (XDMv2.1)	5.3.19	XDM_Core-DIFF-C-001-O AND XDM_Core-DIFF-C-002-O
XDM_APL-AU-C-001-O	Support for Access Permissions List Application Usage (XDMv2.1)	5.4	XDM_APL-AU-C-002-O AND XDM_APL-AU-C-003-O AND XDM_APL-AU-C-004-O AND XDM_APL-AU-C-005-O AND XDM_APL-AU-C-006-O AND XDM_APL-AU-C-007-O AND XDM_APL-AU-C-008-O AND XDM_APL-AU-C-009-O
XDM_APL-AU-C-002-O	Support Access Permissions List Document structure (XDMv2.1)	5.4.1	XDM_Core-XOP-C-003-M AND XDM_APL-AU-C-001-O
XDM_APL-AU-C-003-O	Support Application Unique ID of Access Permissions List Application Usage (XDMv2.1)	5.4.2	XDM_APL-AU-C-001-O
XDM_APL-AU-C-004-O	Support XML schema of Access Permissions List Document (XDMv2.1)	5.4.3	XDM_APL-AU-C-001-O
XDM_APL-AU-C-005-O	Support default name space of Access Permissions List Document (XDMv2.1)	5.4.4	XDM_APL-AU-C-001-O
XDM_APL-AU-C-006-O	Support MIME type of Access Permissions List Document (XDMv2.1)	5.4.5	XDM_APL-AU-C-001-O
XDM_APL-AU-C-007-O	Support validation constraints of Access Permissions List Document (XDMv2.1)	5.4.6	XDM_APL-AU-C-001-O

Item	Function	Reference	Requirement
XDM_APL-AU-C-008-O	Support data semantics of Access Permissions List Document (XDMv2.1)	5.4.7	XDM_APL-AU-C-001-O
XDM_APL-AU-C-009-O	Support naming conventions of Access Permissions List Document (XDMv2.1)	5.4.8	XDM_APL-AU-C-001-O
XDM_APL-SEC-C-002-O	Support Access Permissions Document (XDMv2.1)	5.4.11	XDM_Core-SEC-C-002-O
XDM_APL-SUB-C-001-O	Subscribing to changes in Access Permissions List Document (XDMv2.1)	5.4.12	XDM_Core-SUB-C-001-O AND XDM_Core-SUB-C-002-O
XDM_APL-PRF-C-001-O	Support XDM Preferences Document (XDMv2.1)	5.4.14	XDM_Core-PRF-C-001-O AND (XDM_APL-MHI-C-001-O OR XDM_APL-RHI-C-001-O)
XDM_APL-MHI-C-001-O	Support Modification History Information Document (XDMv2.1)	5.4.15	XDM_Core-MHI-C-001-O AND XDM_APL-PRF-C-001-O
XDM_APL-RHI-C-001-O	Support Request History Information Document (XDMv2.1)	5.4.15	XDM_Core-RHI-C-001-O
XDM_APL-DIFF-C-002-O	Support Differential Read in a Access Permissions List Document (XDMv2.1)	5.4.19	XDM_Core-DIFF-C-001-O AND XDM_Core-DIFF-C-002-O
XDM_ALL-AU-C-001-O	Support for Alias Principals List Application Usage (XDMv2.1)	5.5	XDM_ALL-AU-C-002-O AND XDM_ALL-AU-C-003-O AND XDM_ALL-AU-C-004-O AND XDM_ALL-AU-C-005-O AND XDM_ALL-AU-C-006-O AND XDM_ALL-AU-C-007-O AND XDM_ALL-AU-C-008-O AND XDM_ALL-AU-C-009-O
XDM_ALL-AU-C-002-O	Support Alias Principals List Document structure (XDMv2.1)	5.5.1	XDM_Core-XOP-C-003-M AND XDM_ALL-AU-C-001-O
XDM_ALL-AU-C-003-O	Support Application Unique ID of Alias Principals List Application Usage (XDMv2.1)	5.5.2	XDM_ALL-AU-C-001-O
XDM_ALL-AU-C-004-O	Support XML schema of Alias Principals List Document (XDMv2.1)	5.5.3	XDM_ALL-AU-C-001-O
XDM_ALL-AU-C-005-O	Support default name space of Alias Principals List Document (XDMv2.1)	5.5.4	XDM_ALL-AU-C-001-O
XDM_ALL-AU-C-006-O	Support MIME type of Alias Principals List Document (XDMv2.1)	5.5.5	XDM_ALL-AU-C-001-O
XDM_ALL-AU-C-007-O	Support validation constraints of Alias Principals List Document (XDMv2.1)	5.5.6	XDM_ALL-AU-C-001-O
XDM_ALL-AU-C-008-O	Support data semantics of Alias Principals List Document (XDMv2.1)	5.5.7	XDM_ALL-AU-C-001-O
XDM_ALL-AU-C-009-O	Support naming conventions of Alias Principals List Document (XDMv2.1)	5.5.8	XDM_ALL-AU-C-001-O

## B.3 List XDM Application Usages (XDM Agent)

Item	Function	Reference	Requirement
XDM_URI-AU-A-001-O	Support URI List Document structure (XDMv1.1)	5.1.1	XDM_Core-XOP-A-003-M AND XDM_URI-AU-A-002-O AND XDM_URI-AU-A-003-O AND XDM_URI-AU-A-004-O AND XDM_URI-AU-A-005-O AND XDM_URI-AU-A-006-O AND XDM_URI-AU-A-007-O AND XDM_URI-AU-A-008-O AND XDM_URI-ERR-A-001-O
XDM_URI-AU-A-002-O	Support Application Unique ID of URI List Application Usage (XDMv1.1)	5.1.2	XDM_URI-AU-A-001-O
XDM_URI-AU-A-003-O	Support XML schema of URI List Document (XDMv1.1)	5.1.3	XDM_URI-AU-A-001-O
XDM_URI-AU-A-004-O	Support default name space of URI List Document(XDMv1.1)	5.1.4	XDM_URI-AU-A-001-O
XDM_URI-AU-A-005-O	Support MIME type of URI List Document (XDMv1.1)	5.1.5	XDM_URI-AU-A-001-O
XDM_URI-ERR-A-001-O	Support validation constraints of URI List Document (XDMv1.1)	5.1.6	XDM_URI-AU-A-001-O
XDM_URI-AU-A-006-O	Support handling of HTTP “409 Conflict” response from the XDMS (XDMv1.1)	5.1.6	XDM_URI-AU-A-001-O
XDM_URI-AU-A-007-O	Support data semantics of URI List Document (XDMv1.1)	5.1.7	XDM_URI-AU-A-001-O
XDM_URI-AU-A-008-O	Support naming conventions for URI List Document (XDMv1.1)	5.1.8	XDM_URI-AU-A-001-O
XDM_URI-SEC-A-001-O	Support Access Permissions Document (XDMv2.1)	5.1.11	XDM_Core-SEC-A-002-O
XDM_URI-SUB-A-001-O	Subscribing to changes in XDM Documents (XDMv2.0)	5.1.12	XDM_Core-SUB-A-001-O AND XDM_Core-SUB-A-002-O
XDM_URI-PRF-A-001-O	Support XDM Preferences Document (XDMv2.1)	5.1.14	XDM_Core-PRF-A-001-O AND (XDM_URI-FWD-A-001-O OR XDM_URI-MHI-A-001-O OR XDM_URI-RHI-A-001-O)
XDM_URI-MHI-A-001-O	Support Modification History Information Document (XDMv2.1)	5.1.15	XDM_Core-MHI-A-001-O AND XDM_URI-PRF-A-001-O
XDM_URI-RHI-A-001-O	Support Request History Information Document (XDMv2.1)	5.1.15	XDM_Core-RHI-A-001-O

XDM_URI-FWD-A-001-O	Support forwarding of URI List Document (XDMv2.1)	5.1.16	XDM_Core-FWD-A-001-O
XDM_URI-RES-A-001-O	Support restore of URI List Document (XDMv2.1)	5.1.17	XDM_Core-RES-A-001-O
XDM_URI-REF-A-001-O	Support Document Reference of URI List Document (XDMv2.1)	5.1.18	XDM_Core-REF-A-001-O
XDM_URI-DIFF-A-001-O	Support Differential Write in a URI List Document (XDMv2.1)	5.1.19	XDM_Core-DIFF-A-003-O AND XDM_Core-DIFF-A-003-O
XDM_URI-DIFF-A-002-O	Support Differential Read in a URI List Document (XDMv2.1)	5.1.19	XDM_Core-DIFF-A-002-O AND XDM_Core-DIFF-A-002-O
XDM_GUL-AU-A-001-O	Support for Group Usage List Application Usage (XDMv1.1)	5.2	XDM_GUL-AU-A-002-O AND XDM_GUL-AU-A-003-O AND XDM_GUL-AU-A-004-O AND XDM_GUL-AU-A-005-O AND XDM_GUL-AU-A-006-O AND XDM_GUL-AU-A-007-O AND XDM_GUL-AU-A-008-O AND XDM_GUL-AU-A-009-O AND XDM_GUL-ERR-A-001-O
XDM_GUL-AU-A-002-O	Support Group Usage List Document structure (XDMv1.1)	5.2.1	XDM_Core-XOP-A-003-M AND XDM_GUL-AU-A-001-O
XDM_GUL-AU-A-003-O	Support Application Unique ID of Group Usage List Application Usage (XDMv1.1)	5.2.2	XDM_GUL-AU-A-001-O
XDM_GUL-AU-A-004-O	Support XML schema of Group Usage List Document (XDMv1.1)	5.2.3	XDM_GUL-AU-A-001-O
XDM_GUL-AU-A-005-O	Support default name space of Group Usage List Document (XDMv1.1)	5.2.4	XDM_GUL-AU-A-001-O
XDM_GUL-AU-A-006-O	Support MIME type of Group Usage List Document (XDMv1.1)	5.2.5	XDM_GUL-AU-A-001-O
XDM_GUL-AU-A-007-O	Support Validation constraints of Group Usage List Document (XDMv1.1)	5.2.6	XDM_GUL-AU-A-001-O
XDM_GUL-ERR-A-001-O	Support handling of HTTP “409 Conflict” response from the XDMS (XDMv1.1)	5.2.6	XDM_GUL-AU-A-001-O
XDM_GUL-AU-A-008-O	Support data semantics of Group Usage List Document (XDMv1.1)	5.2.7	XDM_GUL-AU-A-001-O
XDM_GUL-AU-A-009-O	Support naming conventions for Group Usage List Document (XDMv1.1)	5.2.8	XDM_GUL-AU-A-001-O
XDM_GUL-SEC-A-001-O	Support Access Permissions Document (XDMv2.1)	5.2.11	XDM_Core-SEC-A-002-O

XDM_GUL-SUB-A-001-O	Support subscribing to changes in Group Usage List Document (XDMv2.0)	5.2.12	XDM_Core-SUB-A-001-O AND XDM_Core-SUB-A-002-O
XDM_GUL-PRF-A-001-O	Support XDM Preferences Document (XDMv2.1)	5.2.14	XDM_Core-PRF-A-001-O AND (XDM_GUL-FWD-A-001-O OR XDM_GUL-MHI-A-001-O OR XDM_GUL-RHI-A-001-O)
XDM_GUL-MHI-A-001-O	Support Modification History Information Document (XDMv2.1)	5.2.15	XDM_Core-MHI-A-001-O AND XDM_GUL-PRF-A-001-O
XDM_GUL-RHI-A-001-O	Support Request History Information Document (XDMv2.1)	5.2.15	XDM_Core-RHI-A-001-O
XDM_GUL -FWD-A-001-O	Support forwarding of Group Usage List Document (XDMv2.1)	5.2.16	XDM_Core-FWD-A-001-O
XDM_GUL -RES-A-001-O	Support restore of Group Usage List Document (XDMv2.1)	5.2.17	XDM_Core-RES-A-001-O
XDM_GUL-REF-A-001-O	Support Document Reference of Group Usage List Document (XDMv2.1)	5.2.18	XDM_Core-REF-A-001-O
XDM_GUL-DIFF-A-001-O	Support Differential Write in a Group Usage List Document (XDMv2.1)	5.2.19	XDM_Core-DIFF-A-003-O AND XDM_Core-DIFF-A-004-O
XDM_GUL-DIFF-A-002-O	Support Differential Read in a Group Usage List Document (XDMv2.1)	5.2.19	XDM_Core-DIFF-A-001-O AND XDM_Core-DIFF-A-002-O
XDM_FNL-AU-A-001-O	Support for Forward Notification List Application Usage (XDMv2.1)	5.3	XDM_FNL-AU-A-002-O AND XDM_FNL-AU-A-003-O AND XDM_FNL-AU-A-004-O AND XDM_FNL-AU-A-005-O AND XDM_FNL-AU-A-006-O AND XDM_FNL-AU-A-007-O AND XDM_FNL-AU-A-008-O AND XDM_FNL-AU-A-009-O AND XDM_FNL-AU-A-010-O AND XDM_FNL-SUB-A-001-O
XDM_FNL-AU-A-002-O	Support Forward Notification List Document structure (XDMv2.1)	5.3.1	XDM_Core-XOP-A-001-M AND XDM_FNL-AU-A-010-O
XDM_FNL-AU-A-003-O	Support Application Unique ID of Forward Notification List Application Usage (XDMv2.1)	5.3.2	XDM_FNL-AU-A-001-O
XDM_FNL-AU-A-004-O	Support XML schema of Forward Notification List Document (XDMv2.1)	5.3.3	XDM_FNL-AU-A-001-O
XDM_FNL-AU-A-005-O	Support default name space of Forward Notification List Document (XDMv2.1)	5.3.4	XDM_FNL-AU-A-001-O

XDM_FNL-AU-A-006-O	Support MIME type of Forward Notification List Document (XDMv2.1)	5.3.5	XDM_FNL-AU-A-001-O
XDM_FNL-AU-A-007-O	Support validation constraints of Forward Notification List Document (XDMv2.1)	5.3.6	XDM_FNL-AU-A-001-O
XDM_FNL-AU-A-008-O	Support data semantics of Forward Notification List Document (XDMv2.1)	5.3.7	XDM_FNL-AU-A-001-O
XDM_FNL-AU-A-009-O	Support naming conventions of Forward Notification List Document (XDMv2.1)	5.3.8	XDM_FNL-AU-A-001-O
XDM_FNL-SEC-A-002-O	Support Access Permissions Document (XDMv2.1)	5.3.11	XDM_Core-SEC-A-002-O
XDM_FNL-SUB-A-001-O	Support subscribing to changes in Forward Notification List Document (XDMv2.1)	5.3.12	XDM_Core-SUB-A-001-O AND XDM_Core-SUB-A-002-O
XDM_FNL-PRF-A-001-O	Support XDM Preferences Document (XDMv2.1)	5.3.14	XDM_Core-PRF-A-001-O AND (XDM_FNL-MHI-A-001-O OR XDM_FNL-RHI-A-001-O)
XDM_FNL-MHI-A-001-O	Support Modification History Information Document (XDMv2.1)	5.3.15	XDM_Core-MHI-A-001-O AND XDM_FNL-PRF-A-001-O
XDM_FNL-RHI-A-001-O	Support Request History Information Document (XDMv2.1)	5.3.15	XDM_Core-RHI-A-001-O
XDM_FNL-DIFF-A-002-O	Support Differential Read in a Forward Notification List Document (XDMv2.1)	5.3.19	XDM_Core-DIFF-A-001-O AND XDM_Core-DIFF-A-002-O
XDM_APL-AU-A-001-O	Support for Access Permissions List Application Usage (XDMv2.1)	5.4	XDM_APL-AU-A-002-O AND XDM_APL-AU-A-003-O AND XDM_APL-AU-A-004-O AND XDM_APL-AU-A-005-O AND XDM_APL-AU-A-006-O AND XDM_APL-AU-A-007-O AND XDM_APL-AU-A-008-O AND XDM_APL-AU-A-009-O
XDM_APL-AU-A-002-O	Support Access Permissions List Document structure (XDMv2.1)	5.4.1	XDM_Core-XOP-A-003-M AND XDM_APL-AU-A-010-O
XDM_APL-AU-A-003-O	Support Application Unique ID of Access Permissions List Application Usage (XDMv2.1)	5.4.2	XDM_APL-AU-A-001-O
XDM_APL-AU-A-004-O	Support XML schema of Access Permissions List Document (XDMv2.1)	5.4.3	XDM_APL-AU-A-001-O

XDM_APL-AU-A-005-O	Support default name space of Access Permissions List Document (XDMv2.1)	5.4.4	XDM_APL-AU-A-001-O
XDM_APL-AU-A-006-O	Support MIME type Access Permissions List Document (XDMv2.1)	5.4.5	XDM_APL-AU-A-001-O
XDM_APL-AU-A-007-O	Support validation constraints of Access Permissions List Document (XDMv2.1)	5.4.6	XDM_APL-AU-A-001-O
XDM_APL-AU-A-008-O	Support data semantics of Access Permissions List Document (XDMv2.1)	5.4.7	XDM_APL-AU-A-001-O
XDM_APL-AU-A-009-O	Support naming conventions of Access Permissions List Document (XDMv2.1)	5.4.8	XDM_APL-AU-A-001-O
XDM_APL-SEC-A-002-O	Support Access Permissions Document (XDMv2.1)	5.4.11	XDM_Core-SEC-A-002-O
XDM_APL-SUB-A-001-O	Subscribing to changes in Access Permissions List Document (XDMv2.1)	5.4.12	XDM_Core-SUB-A-001-O AND XDM_Core-SUB-A-002-O
XDM_APL-PRF-A-001-O	Support XDM Preferences Document (XDMv2.1)	5.4.14	XDM_Core-PRF-A-001-O AND (XDM_APL-FWD-A-001-O OR XDM_APL-MHI-A-001-O OR XDM_APL-RHI-A-001-O)
XDM_APL-MHI-A-001-O	Support Modification History Information Document (XDMv2.1)	5.4.15	XDM_Core-MHI-A-001-O AND XDM_APL-PRF-A-001-O
XDM_APL-RHI-A-001-O	Support Request History Information Document (XDMv2.1)	5.4.15	XDM_Core-RHI-A-001-O
XDM_APL-DIFF-A-002-O	Support Differential Read in a Access Permissions List Document (XDMv2.1)	5.4.19	XDM_Core-DIFF-A-001-O AND XDM_Core-DIFF-A-002-O
XDM_ALL-AU-A-001-O	Support Alias Principals List Application Usage (XDMv2.1)	5.5	XDM_ALL-AU-A-002-O AND XDM_ALL-AU-A-003-O AND XDM_ALL-AU-A-004-O AND XDM_ALL-AU-A-005-O AND XDM_ALL-AU-A-006-O AND XDM_ALL-AU-A-007-O AND XDM_ALL-AU-A-008-O AND XDM_ALL-AU-A-009-O
XDM_ALL-AU-A-002-O	Support Alias Principals List Document structure (XDMv2.1)	5.5.1	XDM_Core-XOP-A-003-M AND XDM_ALL-AU-A-010-O
XDM_ALL-AU-A-003-O	Support Application Unique ID of Alias Principals List Application Usage (XDMv2.1)	5.5.2	XDM_ALL-AU-A-001-O

XDM_ALL-AU-A-004-O	Support XML schema of Alias Principals List Document (XDMv2.1)	5.5.3	XDM_ALL-AU-A-001-O
XDM_ALL-AU-A-005-O	Support default name space of Alias Principals List Document (XDMv2.1)	5.5.4	XDM_ALL-AU-A-001-O
XDM_ALL-AU-A-006-O	Support MIME type of Alias Principals List Document (XDMv2.1)	5.5.5	XDM_ALL-AU-A-001-O
XDM_ALL-AU-A-007-O	Support validation constraints of Alias Principals List Document (XDMv2.1)	5.5.6	XDM_ALL-AU-A-001-O
XDM_ALL-AU-A-008-O	Support data semantics of Alias Principals List Document (XDMv2.1)	5.5.7	XDM_ALL-AU-A-001-O
XDM_ALL-AU-A-009-O	Support naming conventions of Alias Principals List Document (XDMv2.1)	5.5.8	XDM_ALL-AU-A-001-O

## Appendix C. Examples

(Informative)

**Editor's Note: Examples for Forwarding Notification List is TBD**

### C.1 URI Lists Document Structure

#### C.1.1 URI Lists

Following XDM Document shows the sample structure of URI List Document.

```
<?xml version="1.0" encoding="UTF-8"?>
<resource-lists xmlns="urn:ietf:params:xml:ns:resource-lists"
  xmlns:oau="urn:oma:xml:xdm:resource-list:appusage">
  <list name="oma_buddylist">
    <external anchor="http://xcap.example.org/resource-lists/users/
      sip:ronald.underwood@example.org/index/~/resource-lists/list%5B@name=%22list-a%22%5D">
    </external>
  </list>
  <list name="list-a">
    <display-name>Close Friends</display-name>
    <entry uri="sip:hermione.blossom@example.com">
      <display-name>Hermione</display-name>
    </entry>
    <entry uri="tel:+43012349999"/>
    <oau:appusages>
      <oau:nodeuri oau:uri="http://xcap.example.com/org.openmobilealliance.groups/
        users/sip:ronald.underwood@example.com/mygroup1/~/group/list-
        service%5B@uri=%22sip:my_poc_group@example.com%22%5D/list/
        external%5B@anchor=%22http://xcap.example.com/resource-lists/users/
        sip:ronald.underwood@example.com/index/~/resource-lists/
        list%5B@name=%22list-a%22%5D%22%5D"
        oau:auid="org.openmobilealliance.groups"/>
    </oau:appusages>
  </list>
  <list name="oma_blockedcontacts">
    <entry uri="sip:joe.blogs@example.com">
      <display-name>Joe</display-name>
    </entry>
  </list>
</resource-lists>
```

#### C.1.2 Group Usage Lists Document Structure

Following XDM Document shows the sample structure of Group Usage Lists Document.

```
<?xml version="1.0" encoding="UTF-8"?>
<resource-lists xmlns="urn:ietf:params:xml:ns:resource-lists"
  xmlns:ou="urn:oma:xml:xdm:resource-list:oma-uriusage"
  xmlns:oxe="urn:oma:xml:xdm:extensions"
  xmlns:oga="urn:oma:xml:poc:group-advertisement"
  xmlns:opu="urn:oma:xml:poc:oma-pousage"
  xmlns:oiu="urn:oma:xml:im:oma-imusage">
  <list name="bookmarkedGroups">
    <entry uri="sip:group1_joebloggs@example.com">
      <display-name>Joe Bloggs's golf team</display-name>
      <ou:uriusages>
        <oxe:common-usage id="a1">
          <oga:group-advertisement>
            <oga:note>This group will meet next week</oga:note>
            <oga:group type="dialed-in">
              <oga:display-name>Joe Bloggs's golf team</oga:display-name>
              <oga:uri>sip:group1_joebloggs@example.com</oga:uri>
            <oxe:group-media>
              <oxe:all-media-except>
```

```

        <oxe:file-transfer/>
    </oxe:all-media-except>
    </oxe:group-media>
    <oxe:supported-services>
        <oxe:service enabler="poc"/>
        <oxe:service enabler="im"/>
    </oxe:supported-services>
    </oxa:group>
    </oxa:group-advertisement>
</oxe:common-usage>
<opu:pocusage>chat</opu:pocusage>
<iu:imusage>chat</iu:imusage>
</ou:uriusages>
</entry>
<entry uri="sip:group1_bob@example.com">
    <display-name>Bob's ski friends</display-name>
    <ou:uriusages>
        <opu:pocusage>prearranged</opu:pocusage>
    </ou:uriusages>
</entry>
</list>
</resource-lists>

```

## C.1.3 Access Permissions List Document Examples

### C.1.3.1 A user having Access Permissions to two other users' URI Lists

In this example the user “sip:bob@example.com” is the Primary Principal of the Access Permissions List Document. This user has been given some Access Permissions by users “sip:adam@example.com” and “sip:carl@example.com” to their URI List Documents. The details about which type of Access Permission given can be obtained using the Document Selector in the “document-selector” attribute of the `<entry>` elements.

```

<?xml version="1.0" encoding="UTF-8"?>
<access-permissions-lists xmlns="urn:oma:xml:xdm:ap-list">
    <access-permissions-document-selectors>
        <entry document-selector="resource-lists/users/sip:adam@example.com/oma_ap/access-permissions"
            etag="xcvbnmhy"/>
        <entry document-selector="resource-lists/users/sip:carl@example.com/oma_ap/access-permissions"
            etag="xcvyjukl"/>
    </access-permissions-document-selectors>
</access-permissions-lists>

```

## C.1.4 Alias Principals List Document Examples

### C.1.4.1 Three XUIs belonging to two different Alias Groups

In this example the Primary Principals with the XUIs “sip:bob@example.com” and tel:+1234567890 are Alias Principals to each others and therefore grouped together in the same Alias Principals group. The Primary Principal with the XUI “sip:bob\_at\_work@example.com” is associated with the other two Principals (e.g. belongs to the same user) but is not an Alias Principal with the other Primary Principals and is therefore part of its own Alias Principals group. The XUI used to address this Alias Principals List Document can be “tel:+1234567890”, sip:bob@example.com” or “sip:bob\_at\_work@example.com”.

```

<?xml version="1.0" encoding="UTF-8"?>
<alias-principals-list xmlns="urn:oma:xml:xdm:alias-principals-list">
    <alias-principals-group id="bcdgtwlw35fgfs2h">
        <alias uri="tel:+1234567890"/>
        <alias uri="sip:bob@example.com"/>
    </alias-principals-group>
</alias-principals-list>

```

```

</alias-principals-group>
<alias-principals-group id="asdfwehdgftywonf">
    <alias uri="sip:bob_at_work@example.com"/>
</alias-principals-group>
</alias-principals-list>

```

### C.1.4.2 One Alias Group with one XUI

This example shows a user with only one XUI, namely “sip:joe@example.com”. I.e. there is no other XUI associated with the XUI “sip:joe@example.com”.

```

<?xml version="1.0" encoding="UTF-8"?>
<alias-principals-list xmlns="urn:oma:xml:xdm:alias-principals-list">
    <alias-principals-group id="lctgtwlw35fgf7hr">
        <alias uri="sip:joe@example.com"/>
    </alias-principals-group>
</alias-principals-list>

```

## C.2 Access Permissions Documents

The section gives some examples of Access Permission Documents related to the Application Usages in this document.

### C.2.1 URI List Access Permissions Document Examples

The example contains an Access Permissions Document for a URI List User Directory that gives the user “sip:bob@example.com” the right to do any operation on the Access Permission Document itself (i.e. this user is an Admin Principal for this URI List User Directory) and on all other documents in this URI List User Directory. It also gives the user “sip:joe@example.com” the right to do any operation on all documents apart from the Access Permissions Document in this URI List User Directory. It also gives all members that exist in a list with the name “list-a” in the document “index” the right to retrieve this list and to do operations on their own data in the list (e.g. a member can remove himself from the list).

```

<?xml version="1.0" encoding="UTF-8"?>
<ap-rules xmlns="urn:oma:xml:xdm:ap"
    xmlns:cp="urn:ietf:params:ns:common-policy"
    xmlns:ocp="urn:oma:xml:xdm:common-policy"
    xmlns:fi="urn:ietf:params:xml:ns:simple-filter">

<access-permissions-document-rule>
    <cp:ruleset>
        <cp:rule cp:id="ap-admin">
            <cp:conditions>
                <cp:identity>
                    <cp:one cp:id="sip:bob@example.com"/>
                </cp:identity>
            </cp:conditions>
            <cp:actions>
                <allow-any-operation/>
            </cp:actions>
        </cp:rule>
    </cp:ruleset>
</access-permissions-document-rule>

<directory-rule>
    <cp:ruleset>
        <cp:rule cp:id="allow-all">
            <cp:conditions>
                <cp:identity>
                    <cp:one cp:id="sip:joe@example.com"/>
                    <cp:one cp:id="sip:bob@example.com"/>
                </cp:identity>
            </cp:conditions>
        </cp:rule>
    </cp:ruleset>
</directory-rule>

```

```
<cp:actions>
    <allow-any-operation>true</allow-any-operation>
</cp:actions>
</cp:rule>
</cp:ruleset>
</directory-rule>
<document-rule path="index">
<cp:ruleset>
    <cp:rule cp:id="own-data-list-a">
        <cp:conditions>
            <oocp:external-list>
                <oocp:entry anc="http://xcap.example.org/resource-
list/users/sip:joe@example.com/index/~/resource-lists/list%5B@name=%22list-a%22%5D"/>
            </oocp:external-list>
        </cp:conditions>
        <cp:actions>
            <allow-retrieve>true</allow-retrieve>
            <allow-any-operation-own-data>true</allow-any-operation-own-data>
        </cp:actions>
        <cp:transformations>
            <fi:filter-set>
                <fi:ns-bindings>
                    <fi:ns-binding prefix="gr" urn="urn:ietf:params:xml:ns:resource-lists"/>
                </fi:ns-bindings>
                <fi:filter id="include">
                    <fi:what>
                        <fi:include type="xpath">/resource-lists/list[@name="list-a"]</fi:include>
                    </fi:what>
                </fi:filter>
            </fi:filter-set>
        </cp:transformations>
    </cp:rule>
</cp:ruleset>
</document-rule>
</ap-rules>
```