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1. **Scope**

The Enhanced Visual VoiceMail XDM-specific data formats and Application Usage(s) are described in this specification.
2. References

2.1 Normative References

<table>
<thead>
<tr>
<th>Reference</th>
<th>Description</th>
<th>Version</th>
<th>URL</th>
</tr>
</thead>
<tbody>
<tr>
<td>[EVVM SUP GSP]</td>
<td>“XML Schema Definition: EVVM Global Service Preferences”</td>
<td>1.0</td>
<td><a href="http://www.openmobilealliance.org">http://www.openmobilealliance.org</a></td>
</tr>
<tr>
<td>[EVVM SUP SSP]</td>
<td>“XML Schema Definition: EVVM Subscription-specific Service Preferences”</td>
<td>1.0</td>
<td><a href="http://www.openmobilealliance.org">http://www.openmobilealliance.org</a></td>
</tr>
</tbody>
</table>

2.2 Informative References

<table>
<thead>
<tr>
<th>Reference</th>
<th>Description</th>
<th>Version</th>
<th>URL</th>
</tr>
</thead>
</table>
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.

All structure diagrams adhere to the conventions on the following diagram:

![Structure Diagram Conventions](image-url)

Figure 1: Conventions for structure diagrams

3.2 Definitions

- Access Permissions: See [OMA XDM Core]
- Application Usage: See [OMA XDM Core]
- Device: See [EVVM ER]
- Document Reference: See [OMA XDM Core]
- Document Selector: See [OMA XDM Core]
- EVVM Client: See [EVVM ER]
EVVM Server See [EVVM ER].
History Information See [OMA XDM Core].
XCAP User Identifier (XUI) See [OMA XDM Core].
XDM Resource See [OMA XDM Core].

### 3.3 Abbreviations

**AUID**  
Application Unique ID

**EVVM**  
Enhanced Visual Voicemail

**OMA**  
Open Mobile Alliance

**OMTP**  
Open Mobile Terminal Platform

**TUI**  
Telephony User Interface

**VM**  
voicemail

**VVM**  
Visual Voicemail

**XDM**  
XML Document Management

**XDMC**  
XDM Client

**XDMS**  
XDM Server

**XML**  
Extensible Markup Language
4. Introduction

The EVVM XDM specification defines the Application Usages for all EVVM XDM documents that are managed in accordance with the OMA XDM Enabler [OMA XDMS].

4.1 Version 1.0

EVVM XDM TS version 1.0 specifies the following Application Usages:

- EVVM Global Service Preferences
- EVVM Subscription-specific Server Preferences
- EVVM Client Preferences
- EVVM User Preferences
5. Application Usages

This section contains the description for each Application Usage. Each Application Usage contains its default authorization policies. These policies refer to the EVVM Server and EVVM users. The identity used to authenticate the EVVM Server, as well as any other administrative entities that manage the global service preferences on behalf of the service provider are not in the scope of this specification. EVVM users are authenticated using their XUIs.

5.1 EVVM Global Service Preferences

The global service preferences include EVVM Server capabilities, service provider policies, settings and other EVVM-related configuration information that apply to all EVVM users. The global service preferences are managed (read/write/update) by the EVVM Server, and, interpreted (read) by the EVVM Clients of their respective EVVM users, as described in [EVVM ER].

This Application Usage defines a document in the global tree, therefore, this Application Usage allows zero or one document.
5.1.1 Structure

```
prefs [version="1.0", ANY*]
  mediatypes [supplementary?, optional?, ANY*]
    mediatype*
  charsets [supplementary?, ANY*]
    charset*
  protocols
    protocol+ [id?, version]
  mappings
    mapping+ [logical]
      physical [encoded?]
    encryption+ [type, minstrength?, maxstrength?, preferredstrength?, ANY*]
  bounds [maxvmsize, maxgreetinglength?, maxvoicesignaturelength?, ANY*]
  evvm
    lui [usercontrol?]
      language+ [name?, code]
  ANY*
  contentadaptation [v2t?, tts?, ANY*]
  ANY*
```

Figure 2: Structure diagram, Global Service Preferences

The XML document MUST contain the ‘prefs’ element.
The ‘prefs’ element MUST have a ‘version’ attribute.

The ‘version’ attribute MUST be ‘1.0’.

The ‘prefs’ element MAY have any number of extension attributes.

The ‘prefs’ element MUST contain exactly one ‘mediatypes’ element.

The ‘mediatypes’ element MAY have a ‘supplementary’ attribute, an ‘optional’ attribute and any number of extension attributes.

The ‘mediatypes’ element MUST contain zero or more ‘mediatype’ elements.

The ‘prefs’ element MUST contain exactly one ‘charsets’ element.

The ‘charsets’ element MAY have a ‘supplementary’ attribute and any number of extension attributes.

The ‘charsets’ element MUST contain zero or more ‘charset’ elements.

The ‘prefs’ element MUST contain exactly one ‘protocols’ element.

The ‘protocols’ element MUST contain one or more ‘protocol’ elements.

Each ‘protocol’ element MAY have an ‘id’ attribute.

Each ‘protocol’ element MUST have a ‘version’ attribute.

Each ‘protocol’ element MUST be empty.

The ‘prefs’ element MUST contain exactly one ‘mappings’ element.

The ‘mappings’ element MUST contain one or more ‘mapping’ elements.

Each ‘mapping’ element MUST have a ‘logical’ attribute.

Each ‘mapping’ element MUST contain exactly one ‘physical’ element.

The ‘physical’ element MAY have an ‘encoded’ attribute.

The ‘prefs’ element MUST contain exactly one ‘notifications’ element.


The ‘notifications’ element MAY have any number of extension attributes.

The ‘notifications’ element MUST contain one or more ‘encryption’ elements.

Each ‘encryption’ element MUST have a ‘type’ attribute.

Each ‘encryption’ element MAY have a ‘minstrength’, a ‘maxstrength’, and a ‘preferredstrength’ attribute.

Each ‘encryption’ element MUST have any number of extension attributes.

Each ‘encryption’ element MUST be empty.

The ‘prefs’ element MUST contain exactly one ‘bounds’ element.

The ‘bounds’ element MUST have a ‘maxvmsize’ attribute.

The ‘bounds’ element MAY have a ‘maxgreetinglength’ attribute, a ‘maxvoicesignaturelength’ attribute and any number of extension attributes.

The ‘bounds’ element MUST contain exactly one ‘evvm’ element and exactly one ‘tui’ element.
The ‘evvm’ element MUST contain exactly one ‘password’ element.

The ‘password’ element MAY have a ‘minpasslength’ attribute, a ‘maxpasslength’ attribute, an ‘alphasallowed’ attribute, an ‘alphasrequired’ attribute, an ‘alphasuppercaserequired’ attribute, a ‘digitsallowed’ attribute, a ‘digitsrequired’ attribute, a ‘specialsallowed’ attribute, a ‘specialsrequired’ attribute, and a ‘specials’ attribute.

The ‘password’ element MUST be empty.

The ‘tui’ element MAY have a ‘usercontrol’ attribute.

The ‘tui’ element MUST contain exactly one ‘password’ element and one or more ‘language’ elements.

The ‘password’ element MAY have a ‘minpasslength’ attribute, a ‘maxpasslength’ attribute, an ‘alphasallowed’ attribute, an ‘alphasrequired’ attribute, an ‘alphasuppercaserequired’ attribute, a ‘digitsallowed’ attribute, a ‘digitsrequired’ attribute, a ‘specialsallowed’ attribute, a ‘specialsrequired’ attribute, and a ‘specials’ attribute.

Each ‘language’ element MAY have a ‘name’ attribute.

Each ‘language’ element MUST have a ‘code’ attribute.

Each ‘language’ element MUST be empty.

The ‘bounds’ element MAY contain any number of extension elements.

The ‘prefs’ element MUST contain exactly one ‘contentadaptation’ element.

The ‘contentadaptation’ element MUST be empty.

The ‘contentadaptation’ element MAY have a ‘v2t’ attribute, a ‘tts’ attribute and any number of extension attributes.

The ‘prefs’ element MAY contain any number of extension elements.

5.1.2 Application Unique ID

The AUID MUST be “org.openmobilealliance.evvm-serviceprefs”.

5.1.3 XML Schema

The XML document MUST conform to the XML schema described in [EVVM SUP GSP].

5.1.4 Default Namespace

The default element namespace MUST be "urn:oma:xml:evvm:serviceprefs-global".

5.1.5 MIME Type

The MIME type MUST be “application/vnd.oma.evvm-serviceprefs-global+xml”.

5.1.6 Validation Constraints

See description in section 5.1.1.

5.1.7 Data Semantics

The data semantics are organized into basic types, elementary types and composite types. The definitions use ABNF notation [RFC5234] to define the data semantics of the elements and the attributes. The basic and elementary types are defined in section 6. The composite types are defined in this section, organized into sub-trees.
5.1.7.1 prefs

The ‘xmlns’ attribute MUST match the default names number of the XML document defined in this Application Usage.

The ‘version’ attribute MUST match the revision number of the XML document defined in this Application Usage.

```
xmns = default-namespace
version = revision-number
```

Example:
```
<prefs xmlns="urn:oma:xml:evvm:serviceprefs-global" version="1.0">
</prefs>
```

5.1.7.1.1 mediatypes

When the ‘supplementary’ attribute is omitted, the default value of ‘false’ MUST be used.

When the ‘optional’ attribute is omitted, the default value of ‘false’ MUST be used.

```
supplementary = boolean
optional = boolean
mediatype = media-type
```

Example:
```
<mediatypes supplementary="true" optional="false">
    <mediatype>image/tiff</mediatype>
    <mediatype>audio/mpeg</mediatype>
</mediatypes>
```

5.1.7.1.2 charsets

When the ‘supplementary’ attribute is omitted, the default value of ‘false’ MUST be used.

```
supplementary = boolean
charset = character-set
```

Example:
```
<charsets supplementary="false">
    <charset>ISO-8859-2</charset>
</charsets>
```

5.1.7.1.3 protocols

When the ‘id’ attribute is omitted, the default value of ‘OMA-EVVM’ MUST be used.

```
id = vvm-sdo-name
version = revision-number *("," revision-number)
```

Example:
```
<protocols>
    <protocol id="OMTP-VVM" version="1.3"/>
    <protocol id="OMA-EVVM" version="1.0,1.0.1,1.1"/>
</protocols>
```

5.1.7.1.4 mappings

5.1.7.1.4.1. mapping

```
logical = special-mailbox-token
```

Example:
```
<mappings>
    <mapping logical="inbox">
        ...
    </mapping>
</mappings>
```

5.1.7.1.4.1.1. physical

When the ‘encoded’ attribute is omitted, the default value of ‘false’ MUST be used.
The value of the ‘encoded’ attribute MUST be ‘true’ only when the UTF-8 content of the ‘physical’ element is encoded using Base64 [RFC4648].

```
physical = string | base64encoded
encoded = boolean
```

Example:
```
<mappings>
<mapping logical="inbox">physical>INBOX</physical>
</mapping>
<mapping logical="trash">physical encoded="true">TWFya2VkJk1vdmVk</physical>
</mappings>
```

### 5.1.7.1.5 notifications

When the ‘home’ attribute is omitted, the default value of ‘true’ MUST be used.

When the ‘roaming’ attribute is omitted, the default value of ‘true’ MUST be used.

When the ‘intlroaming’ attribute is omitted, the default value of ‘false’ MUST be used.

When the ‘encrypt’ attribute is omitted, the default value of ‘ifneeded’ MUST be used.

When the ‘deac’ attribute is omitted, the default value of ‘true’ MUST be used.

When the ‘pref’ attribute is omitted, the default value of ‘true’ MUST be used.

When the ‘sync’ attribute is omitted, the default value of ‘true’ MUST be used.

When the ‘tran’ attribute is omitted, the default value of ‘true’ MUST be used.

```
home = boolean
roaming = boolean
intlroaming = boolean
encrypt = indefinite-frequency
deac = boolean
pref = boolean
sync = boolean
tran = boolean
```

Example:
```
<notifications home="true" roaming="true" intlroaming="true" encrypt="always" deac="false" pref="false" sync="false" tran="false"/>
```

### 5.1.7.1.5.1. encryption

When the ‘minstrength’ attribute is omitted, the default value of ‘0’ (zero) MUST be used.

When the ‘maxstrength’ attribute is omitted, the default value of ‘∞’ (infinity) MUST be used.

When the ‘preferredstrength’ attribute is omitted, the value of ‘minstrength’ MUST be used as default value.

```
type = encryption-type
minstrength = integer
maxstrength = integer
preferredstrength = integer
```

Example:
```
<notifications>
<encryption type="ECIES" minstrength="128" maxstrength="256" preferredstrength="192"/>
</notifications>
```
5.1.7.1.6 bounds

When the ‘maxgreetinglength’ attribute is omitted, the default value of ‘0’ MUST be used.

When the ‘maxvoicesignaturelength’ attribute is omitted, the default value of ‘0’ MUST be used.

\[
\begin{align*}
\text{maxvmsize} & \quad \text{integer} \\
\text{maxgreetinglength} & \quad \text{integer} \\
\text{maxvoicesignaturelength} & \quad \text{integer} \\
\end{align*}
\]

Example:

\[
<\text{bounds} \text{ maxvmsize="20971520" maxgreetinglength="10" maxvoicesignaturelength="15"} >
\]

5.1.7.1.6.1. evvm

When the ‘minpasslength’ attribute is omitted, the default value of ‘0’ MUST be used.

When the ‘maxpasslength’ attribute is omitted, the default value of ‘∞’ (infinity) MUST be used.

When the ‘alphasallowed’ attribute is omitted, the default value of ‘true’ MUST be used.

When the ‘alphasrequired’ attribute is omitted, the default value of ‘false’ MUST be used.

When the ‘alphasuppercaserequired’ attribute is omitted, the default value of ‘0’ MUST be used.

When the ‘digitsallowed’ attribute is omitted, the default value of ‘true’ MUST be used.

When the ‘digitsrequired’ attribute is omitted, the default value of ‘false’ MUST be used.

When the ‘specialsallowed’ attribute is omitted, the default value of ‘true’ MUST be used.

When the ‘specialsrequired’ attribute is omitted, the default value of ‘false’ MUST be used.

\[
\begin{align*}
\text{minpasslength} & \quad \text{integer} \\
\text{maxpasslength} & \quad \text{integer} \\
\text{alphasallowed} & \quad \text{boolean} \\
\text{alphasrequired} & \quad \text{boolean} \\
\text{alphasuppercaserequired} & \quad \text{integer} \\
\text{digitsallowed} & \quad \text{boolean} \\
\text{digitsrequired} & \quad \text{boolean} \\
\text{specialsallowed} & \quad \text{boolean} \\
\text{specialsrequired} & \quad \text{boolean} \\
\text{specials} & \quad 1^*\text{special}
\end{align*}
\]

Example:

\[
<\text{bounds}>
<\text{evvm}>
  <\text{password} \text{ minpasslength="6" maxpasslength="12" alphasuppercaserequired="1" specials="-!@#$%^&*(){}_+-="} />
</\text{evvm}>
</\text{bounds}>
\]

5.1.7.1.6.2. tui

When the ‘usercontrol’ attribute is omitted, the default value of ‘false’ MUST be used.

The semantics of the ‘password’ element’s attributes are not duplicated here, see those in section 5.1.7.1.6.1.

When the ‘name’ attribute is omitted, a default value MAY be generated from the available information.

\[
\begin{align*}
\text{usercontrol} & \quad \text{boolean} \\
\text{language} & \quad \text{language-token} \\
\text{name} & \quad 1^*(\text{ALPHA} / \text{DIGIT} / \text{special})
\end{align*}
\]

Example:

\[
<\text{bounds}>
\]
5.1.7.1.7 contentadaptation

When the ‘v2t’ attribute is omitted, the default value of ‘false’ MUST be used.

When the ‘tts’ attribute is omitted, the default value of ‘false’ MUST be used.

v2t = boolean
tts = boolean

Example:
<contentadaptation v2t="true" tts="true"/>

5.1.8 Naming conventions

The filename MUST be “index”.

5.1.9 Global Documents

This Application Usage defines a Global Document:

http://xcap-root/org.openmobilealliance.evvm-serviceprefs/global/index

5.1.10 Resource interdependencies

Existing subscription-specific service preferences (see section 5.2) override individual global service preferences, as described in [EVVM ER].

5.1.11 Authorization Policies

The authorization policies are defined as follows:

- The EVVM Server MUST have permission to perform all operations defined in section “Document Management” of [OMA XDM Core].

- All EVVM users MUST have permissions that permit all read operation and forbid all writing/updating operations as defined in section “Document Management” of [OMA XDM Core].

- The EVVM Server and all EVVM users MUST have permission to perform all operations defined in section “Subscribing to changes in the XDM Resources” of [OMA XDM Core].

5.1.12 Subscription to Changes

Subscription to document changes MUST be supported as specified in [OMA XDM Core] section “Subscriptions to changes in the XDM Resources”.

5.1.13 Search Capabilities

Not applicable.

5.1.14 XDM Preferences Document

If History Information Document (section 5.1.15) is supported, the XDM Preferences Document MUST be supported, as described in section “XDM Preference Document” of [OMA XDM Core].
5.1.15 History Information Document

Modification History Information Document MAY be supported, as described in section “Modification History Information Document” of [OMA XDM Core].

Request History Information Document MAY be supported, as described in section “Request History Information Document” of [OMA XDM Core].

5.1.16 Forwarding

Not applicable.

5.1.17 Restore

Not applicable.

5.1.18 Document Reference

Not applicable.

5.1.19 Differential Read and Write

Not applicable.

5.2 EVVM Subscription-specific Service Preferences

The subscription-specific service preferences include EVVM Server capabilities, service provider policies, settings and other EVVM-related configuration information that apply to individual EVVM users. The subscription-specific service preferences are managed (read/write/update) by the EVVM Server, and, interpreted (read) by the EVVM Clients of their respective EVVM users, as described in [EVVM ER].

This Application Usage defines a document in the user tree. Each user may have zero or one document.
5.2.1 Structure
```xml
<sample XML content>
```

```xml
prefs [version="1.0", ANY*]
mediatypes [supplementary?, optional?, ANY*]
mediatype*
charsets [supplementary?, ANY*]
charset*
protocols
protocol* [id?, version]
mappings
mapping* [logical]
physical [encoded?]
encryption* [type, minstrength?, maxstrength?, preferredstrength?, ANY*]
bounds [maxvmsize?, maxgreetinglength?, maxvoicesignaturelength?, ANY*]
evvm
tui [usercontrol?] 
language* [name?, code]
address? [id]

ANY*
associations
user* [id]
contentadaptation [v2t?, tts?, ANY*]
ANY*
```
Figure 3: Structure diagram, Subscription-specific Service Preferences

The XML document MUST contain the ‘prefs’ element.

The ‘prefs’ element MUST have a ‘version’ attribute.

The ‘version’ attribute MUST be ‘1.0’.

The ‘prefs’ element MAY have any number of extension attributes.

The ‘prefs’ element MUST contain exactly one ‘mediatypes’ element.

The ‘mediatypes’ element MAY have a ‘supplementary’ attribute, an ‘optional’ attribute and any number of extension attributes.

The ‘mediatypes’ element MUST contain zero or more ‘mediatype’ elements.

The ‘prefs’ element MUST contain exactly one ‘charsets’ element.

The ‘charsets’ element MAY have a ‘supplementary’ attribute and any number of extension attributes.

The ‘charsets’ element MUST contain zero or more ‘charset’ elements.

The ‘prefs’ element MUST contain exactly one ‘protocols’ element.

The ‘protocols’ element MAY contain zero or more ‘protocol’ elements.

Each ‘protocol’ element MAY have an ‘id’ attribute

Each ‘protocol’ element MUST have a ‘version’ attribute.

Each ‘protocol’ element MUST be empty.

The ‘prefs’ element MUST contain exactly one ‘mappings’ element.

The ‘mappings’ element MAY contain zero or more ‘mapping’ elements.

Each ‘mapping’ element MUST have a ‘logical’ attribute.

Each ‘mapping’ element MUST contain exactly one ‘physical’ element.

The ‘physical’ element MAY have an ‘encoded’ attribute.

The ‘prefs’ element MUST contain exactly one ‘notifications’ element.


The ‘notifications’ element MAY have any number of extension attributes.

The ‘notifications’ element MUST contain zero or more ‘encryption’ elements.

Each ‘encryption’ element MUST have a ‘type’ attribute.

Each ‘encryption’ element MAY have a ‘minstrength’, a ‘maxstrength’ and a ‘preferredstrength’ attribute.

Each ‘encryption’ element MAY have any number of extension attributes.

Each ‘encryption’ element MUST be empty.

The ‘prefs’ element MUST contain exactly one ‘bounds’ element.
The ‘bounds’ element MAY have a ‘maxvmsize’ attribute, a ‘maxgreetinglength’ attribute, a ‘maxvoicesignaturelength’ attribute and any number of extension attributes.

The ‘bounds’ element MUST contain exactly one ‘evvm’ element and exactly one ‘tui’ element.

The ‘evvm’ element MAY contain exactly one ‘password’ element.

The ‘password’ element MAY have a ‘minpasslength’ attribute, a ‘maxpasslength’ attribute, an ‘alphasallowed’ attribute, an ‘alphasrequired’ attribute, an ‘alphasuppercaserequired’ attribute, a ‘digitsallowed’ attribute, a ‘digitsrequired’ attribute, a ‘specialsallowed’ attribute, a ‘specialsrequired’ attribute, and a ‘specials’ attribute.

The ‘password’ element MUST be empty.

The ‘tui’ element MAY have a ‘usercontrol’ attribute.

The ‘tui’ element MAY contain exactly one ‘password’ element and zero or more ‘language’ elements.

The ‘password’ element MAY have a ‘minpasslength’ attribute, a ‘maxpasslength’ attribute, an ‘alphasallowed’ attribute, an ‘alphasrequired’ attribute, an ‘alphasuppercaserequired’ attribute, a ‘digitsallowed’ attribute, a ‘digitsrequired’ attribute, a ‘specialsallowed’ attribute, a ‘specialsrequired’ attribute, and a ‘specials’ attribute.

The ‘password’ element MUST be empty.

Each ‘language’ element MAY have a ‘name’ attribute.

Each ‘language’ element MUST have a ‘code’ attribute.

Each ‘language’ element MUST be empty.

The ‘bounds’ element MAY any number of extension elements.

The ‘prefs’ element MUST contain exactly one ‘associations’ element.

The ‘associations’ element MAY contain zero or more ‘user’ elements.

Each ‘user’ element MUST have an ‘id’ attribute.

Each ‘user’ element MUST be empty.

The ‘prefs’ element MUST contain exactly one ‘contentadaptation’ element.

The ‘contentadaptation’ element MUST be empty.

The ‘contentadaptation’ element MAY have a ‘v2t’ attribute, a ‘tts’ attribute and any number of extension attributes.

The ‘prefs’ element MAY contain any number of extension elements.

5.2.2 Application Unique ID

The AUID MUST be “org.openmobilealliance.evvm-serviceprefs”.

5.2.3 XML Schema

The XML document MUST conform to the XML schema described in [EVVM SUP SSP].

5.2.4 Default Namespace

The default element namespace MUST be "urn:oma:xml:evvm:serviceprefs-subscription".
5.2.5  MIME Type
The MIME type MUST be “application/vnd.oma.evvm-serviceprefs-subscription+xml”.

5.2.6  Validation Constraints
See description in section 5.2.1.

5.2.7  Data Semantics
The data semantics are organized into basic types, elementary types and composite types. The definitions use ABNF notation [RFC5234] to define the data semantics of the elements and the attributes. The basic and elementary types are defined in section 6. The composite types are defined in this section, organized into sub-trees.

5.2.7.1  prefs
The ‘xmlns’ attribute MUST match the default names number of the XML document defined in this Application Usage.

The ‘version’ attribute MUST match the revision number of the XML document defined in this Application Usage.

\[
\text{xmlns} = \text{default-namespace} \\
\text{version} = \text{revision-number}
\]

Example:
<prefs xmlns="urn:oma:xml:evvm:serviceprefs-subscription" version="1.0">
</prefs>

5.2.7.1.1  mediatypes
See section 5.1.7.1.1.

5.2.7.1.2  charsets
See section 5.1.7.1.2

5.2.7.1.3  protocols
See section 5.1.7.1.3.

5.2.7.1.4  mappings
See section 5.1.7.1.4 and its subsections.

5.2.7.1.5  notifications
See section 5.1.7.1.4 and its subsections.

5.2.7.1.6  bounds
See section 5.1.7.1.4.

5.2.7.1.6.1  evvm
See section 5.1.7.1.6.1.

5.2.7.1.6.2  tui
See section 5.1.7.1.6.2 for the common semantics.

When the ‘address’ attribute is omitted, all values under the ‘tui’ element MUST be ignored.

\[
\text{address} = \text{tui-address}
\]

Example:
5.2.7.1.7 associations

id = user-id

Examples:

<associations>
  <user id="tel:+1234567890"/>
  <user id="me.myself.i@notmail.com"/>
  <user id="me.myself.i@jeemail.com"/>
  <user id="sip:me.myself.i@sipit.com"/>
  <user id="sip:me.myself.i@sipper.com"/>
</associations>

5.2.7.1.8 contentadaptation

See section 5.1.7.1.7.

5.2.8 Naming conventions

The filename MUST be “index”.

5.2.9 Global Documents

Not applicable.

5.2.10 Resource interdependencies

Existing subscription-specific service override individual global service preferences, as described in [EVVM ER].

5.2.11 Authorization Policies

The authorization policies are defined as follows:

- The EVVM Server MUST have permission to perform all operations defined in section “Document Management” of [OMA XDM Core].

- The EVVM user MUST have permissions that permit all read operation and forbid all writing/updating operations as defined in section “Document Management” of [OMA XDM Core].

- The EVVM Server and the EVVM user MUST have permission to perform all operations defined in section “Subscribing to changes in the XDM Resources” of [OMA XDM Core].

5.2.12 Subscription to Changes

Subscription to changes MUST be supported as specified in section “Subscriptions to changes in the XDM Resources” of [OMA XDM Core].

5.2.13 Search Capabilities

Not applicable.

5.2.14 XDM Preferences Document

If History Information Document (section 5.2.15) is supported, the XDM Preferences Document MUST be supported, as described in section “XDM Preference Document” of [OMA XDM Core].
5.2.15 History Information Document

Modification History Information Document MAY be supported, as described in section “Modification History Information Document” of [OMA XDM Core].

Request History Information Document MAY be supported, as described in section “Request History Information Document” of [OMA XDM Core].

5.2.16 Forwarding

Not applicable.

5.2.17 Restore

Not applicable.

5.2.18 Document Reference

Not applicable.

5.2.19 Differential Read and Write

Not applicable.

5.3 EVVM Client Preferences

The client preferences include EVVM Client capabilities, and other EVVM-related configuration information. The client preferences are managed (read/write/update) by the EVVM Clients on behalf of their respective EVVM users, and, interpreted (read) by the EVVM Server, as described in [EVVM ER].

This Application Usage defines multiple documents in the user tree. Each user may have multiple clients; therefore each user may have zero or more documents.
5.3.1 Structure

The XML document MUST contain the ‘prefs’ element.

The ‘prefs’ element MUST have a ‘version’ attribute.

The ‘version’ attribute MUST be ‘1.0’.

The ‘prefs’ element MAY have any number of extension attributes.

The ‘prefs’ element MUST contain exactly one ‘client’ element.

The ‘client’ element MUST have a ‘type’ attribute.

The ‘client’ element MUST be empty.

The ‘prefs’ element MUST contain exactly one ‘mediatypes’ element.

Figure 4: Structure diagram, Client Preferences
The ‘mediatypes’ element MAY have a ‘supplementary’ attribute, an ‘optional’ attribute and any number of extension attributes.

The ‘mediatypes’ element MUST contain zero or more ‘mediatype’ elements.

The ‘prefs’ element MUST contain exactly one ‘charsets’ element.

The ‘charsets’ element MAY have a ‘supplementary’ attribute and any number of extension attributes.

The ‘charsets’ element MUST contain zero or more ‘charset’ elements.

The ‘prefs’ element MUST contain exactly one ‘protocols’ element.

The ‘protocols’ element MUST contain one or more ‘protocol’ elements.

Each ‘protocol’ element MAY have an ‘id’ attribute

Each ‘protocol’ element MUST have a ‘version’ attribute.

Each ‘protocol’ element MUST be empty.

The ‘prefs’ element MUST contain exactly one ‘notifications’ element.

The ‘notifications’ element MAY have an ‘encrypt’, a ‘deac’, a ‘pref’, a ‘sync’ and a ‘trans’ attribute.

The ‘notifications’ element MAY have any number of extension attributes.

The ‘notifications’ element MUST contain exactly one ‘encryptions’ element.

The ‘encryptions’ element MAY contain zero or more ‘encryption’ elements.

Each ‘encryption’ element MUST have an ‘index’, a ‘type’ and a ‘strength’ attribute.

The value of the ‘index’ attribute MUST be in the range of 0 to 15 (0 and 15 inclusive).

The value of the ‘index’ attribute MUST be unique within the scope of this ‘encryption’ element.

Each ‘encryption’ element MAY have any number of extension attributes.

Each ‘encryption’ element MUST contain exactly one ‘publickey’ or exactly one ‘sharedsecret’ element.

Each ‘encryption’ element MAY contain any number of extension elements.

The ‘notifications’ element MAY contain any number of extension elements.

The ‘prefs’ element MUST contain exactly one ‘device’ element.

The ‘device’ element MAY have a ‘type’ attribute.

The ‘device’ element MUST be empty.

The ‘prefs’ element MUST contain exactly one ‘filterlargemedia’ element.

The ‘filterlargemedia’ element MAY have an ‘active’ attribute.

The ‘filterlargemedia’ element MAY contain exactly one ‘largerthan’ element.

The ‘prefs’ element MAY contain any number of extension elements.

5.3.2 Application Unique ID

The AUID MUST be “org.openmobilealliance.evvm-clientprefs”. 
5.3.3 XML Schema

The XML document MUST conform to the XML schema described in [EVVM SUP CP].

5.3.4 Default Namespace

The default element namespace MUST be "urn:oma:xml:evvm:clientprefs".

5.3.5 MIME Type

The MIME type MUST be “application/vnd.oma.evvm-clientprefs+xml”.

5.3.6 Validation Constraints

See description in section 5.3.1.

5.3.7 Data Semantics

The data semantics are organized into basic types, elementary types and composite types. The definitions use ABNF notation [RFC5234] to define the data semantics of the elements and the attributes. The basic and elementary types are defined in section 6. The composite types are defined in this section, organized into sub-trees.

5.3.7.1 prefs

The ‘xmlns’ attribute MUST match the default namespaces number of the XML document defined in this Application Usage.

The ‘version’ attribute MUST match the revision number of the XML document defined in this Application Usage.

```xml
<prefs xmlns="urn:oma:xml:evvm:clientprefs" version="1.0">
  ...
</prefs>
```

5.3.7.1.1 client

```xml
<client type="iVoice Unlimited;IVMC;0.9rc1;b=test build 23;d=debug, norush"/>
```

5.3.7.1.2 mediatypes

See section 5.1.7.1.1.

5.3.7.1.3 charsets

See section 5.1.7.1.2.

5.3.7.1.4 protocols

See section 5.1.7.1.3.

5.3.7.1.5 notifications

See section 5.1.7.1.4.

5.3.7.1.5.1 encryption

```xml
<encryption index="integer" type="encryption-type" strength="integer" publickey="base64encoded"/>
```
sharedsecret - base64encoded

Example:
<notifications>
  <encryption index="1" type="ECIES" strength="128">
    <sharedsecret>SecretTokenFor128bit</sharedsecret>
  </encryption>
  <encryption index="2" type="ECIES" strength="192">
    <sharedsecret>SecretTokenFor192bit</sharedsecret>
  </encryption>
  <encryption index="3" type="ECIES" strength="256">
    <sharedsecret>SecretTokenFor256bit</sharedsecret>
  </encryption>
</notifications>

5.3.7.1.6 device
device = host-device-type

Example:
<device type="HANDHELD_COMPUTER;uToo Fullconductors Inc.;uPad3;uOS 3.0.9;hwid=1"/>

5.3.7.1.7 filterlargemedia
When the ‘active’ attribute is omitted, the default value of ‘false’ MUST be used.
active = boolean
The sub-element ‘largerthan’ contains a message size value given in the unit of “byte”.

Example:
<filterlargemedia active="true">
  <largerthan>10000000</largerthan>
</filterlargemedia>

5.3.8 Naming conventions

The filename MUST be “<ClientID>”, where <ClientID> corresponds to an identifiers associated with the client; see section “Client Identifier (Client-ID)” in [EVVM ER].

5.3.9 Global Documents

Not applicable.

5.3.10 Resource interdependencies

Not applicable.

5.3.11 Authorization Policies

The authorization policies are defined as follows:

- The EVVM user MUST have permission to perform all operations defined in sections “Document Management”.
- The EVVM Server MUST have permissions that permit all read operation and forbid all writing/updating operations defined in section “Document Management” of [OMA XDM Core].
- The EVVM User and the EVVM Server MUST have permission to perform all operations defined in section “Subscribing to changes in the XDM Resources” of [OMA XDM Core].

5.3.12 Subscription to Changes

Subscription to changes MUST be supported as specified in [OMA XDM Core] section “Subscriptions to changes in the XDM Resources”.

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5.3.13 Search Capabilities

Not applicable.

5.3.14 XDM Preferences Document

If History Information Document (section 5.3.15) is supported, the XDM Preferences Document MUST be supported, as described in section “XDM Preference Document” of [OMA XDM Core].

5.3.15 History Information Document

Modification History Information Document MAY be supported, as described in section “Modification History Information Document” of [OMA XDM Core].

Request History Information Document MAY be supported, as described in section “Request History Information Document” of [OMA XDM Core].

5.3.16 Forwarding

Not applicable.

5.3.17 Restore

Not applicable.

5.3.18 Document Reference

Document Reference MUST be supported, as described in section “Document Reference” of [OMA XDM Core].

5.3.19 Differential Read and Write

Not applicable.

5.4 EVVM User Preferences

The user preferences include EVVM user settings and other EVVM-related configuration information. The user preferences are managed (read/write/update) by the EVVM Clients on behalf of their respective EVVM users, and, interpreted (read) by the EVVM Server, as described in [EVVM ER].

This Application Usage defines a document in the user tree. Each user may have zero or one document.
5.4.1 Structure

```xml
prefs [version="1.0", ANY*]
  evvm [active?, password, storesentvm?, ANY*]
    ANY*
  tui [active?, password, languagecode?, ANY*]
    ANY*
  groups
    group* [name?, id]
      user+ [name?, id]
  blacklists
    ?
    groupid+
  whitelists
    ?
    groupid+
  mappings
    mapping*
      physical [encoded?]
      display [encoded?]
  notifications [home?, roaming?, introaming?, ANY*]
    ANY*
  v2t [active?, includeoriginalvm?, ANY*]
  tts [greetings?, voicemails?, ANY*]
  nonvmreception
  ANY*
```

**Figure 5: Structure diagram, User Preferences**

The XML document MUST contain the ‘prefs’ element.

The ‘prefs’ element MUST have a ‘version’ attribute.

The ‘version’ attribute MUST be ‘1.0’.

The ‘prefs’ element MAY have any number of extension attributes.

The ‘prefs’ element MUST contain exactly one ‘evvm’ element.
The ‘evvm’ element MAY have an ‘active’ attribute, a ‘storeervisedvm’ attribute and any number of extension attributes.

The ‘evvm’ element MUST have a ‘password’ attribute.

The ‘evvm’ element MUST either be empty or contain at least one extension element.

The ‘prefs’ element MUST contain exactly one ‘tui’ element.

The ‘tui’ element MAY have an ‘active’ attribute, a ‘languagecode’ attribute and any number of extension attributes.

The ‘tui’ element MUST have a ‘password’ attribute.

The ‘tui’ element MUST either be empty or contain at least one extension element.

The ‘prefs’ element MUST contain exactly one ‘groups’ element.

The ‘groups’ element MAY contain zero or more ‘group’ elements.

Each ‘group’ element MAY have a ‘name’ attribute.

Each ‘group’ element MUST have an ‘id’ attribute.

Each ‘group’ element MUST contain one or more ‘user’ elements.

Each ‘user’ element MAY have a ‘name’ attribute.

Each ‘user’ element MUST have an ‘id’ attribute.

Each ‘user’ element MUST be empty.

The ‘prefs’ element MAY contain zero or one ‘blacklists’ element, or, zero or one ‘whitelists’ element.

The ‘blacklists’ element MUST contain one or more ‘groupid’ elements.

The ‘whitelists’ element MUST contain one or more ‘groupid’ elements.

The ‘prefs’ element MUST contain exactly one ‘mappings’ element.

The ‘mappings’ element MAY contain zero or more ‘mapping’ elements.

Each ‘mapping’ element MAY contain exactly one ‘physical’ element.

The ‘physical’ element MAY have an ‘encoded’ attribute.

Each ‘mapping’ element MUST contain exactly one ‘display’ element.

The ‘display’ element MAY have an ‘encoded’ attribute.

The ‘prefs’ element MUST contain exactly one ‘notifications’ element.

The ‘notifications’ element MAY have a ‘home’, a ‘roaming’, an ‘intlroaming’ attribute and any number of extension attributes.

The ‘notifications’ element MAY contain any number of extension elements.

The ‘prefs’ element MUST contain exactly one ‘v2t’ element.

The ‘v2t’ element MUST be empty.

The ‘v2t’ element MAY have an ‘active’ attribute, an ‘includeoriginalvm’ attribute and any number of extension attributes.
The ‘prefs’ element MUST contain exactly one ‘tts’ element.

The ‘tts’ element MUST be empty.

The ‘tts’ element MAY have a ‘greetings’ attribute, a ‘voicemails’ attribute and any number of extension attributes.

The ‘prefs’ element MUST contain exactly one ‘nonvmreception’ element.

The ‘prefs’ element MAY contain any number of extension elements.

5.4.2 Application Unique ID

The AUID MUST be “org.openmobilealliance.evvm-userprefs”.

5.4.3 XML Schema

The XML document MUST conform to the XML schema described in [EVVM SUP UP].

5.4.4 Default Namespace

The default element namespace MUST be "urn:oma:xml:evvm:userprefs".

5.4.5 MIME Type

The MIME type MUST be “application/vnd.oma.evvm-userprefs+xml”.

5.4.6 Validation Constraints

See description in section 5.4.1.

All ‘groupid’ elements under the ‘blacklists’ and ‘whitelists’ elements MUST identify a unique group using the corresponding ‘id’ attribute of a ‘group’ element defined under the ‘groups’ element.

5.4.7 Data Semantics

The data semantics are organized into basic types, elementary types and composite types. The definitions use ABNF notation [RFC5234] to define the data semantics of the elements and the attributes. The basic and elementary types are defined in section 6. The composite types are defined in this section, organized into sub-trees.

5.4.7.1 prefs

The ‘xmlns’ attribute MUST match the default names number of the XML document defined in this Application Usage.

The ‘version’ attribute MUST match the revision number of the XML document defined in this Application Usage.

xmlns = default-namespace
version = revision-number

Example:
<pre><code>&lt;prefs xmlns="urn:oma:xml:evvm:userprefs" version="1.0"&gt;&lt;/prefs&gt;</code>
</pre>

5.4.7.1.1 evvm

When the ‘active’ attribute is omitted, the default value of ‘false’ MUST be used.

When the ‘storesentvm’ attribute is omitted, the default value of ‘false’ MUST be used.

active = boolean
password = raw-password
storesentvm = boolean
Example:
<evvm active="true" password="H4ckDis" storesentvm="true"/>

5.4.7.1.2 tui

When the ‘active’ attribute is omitted, the default value of ‘false’ MUST be used.

active = boolean
password = raw-password
languagecode = language-token

Example:
<tui password="123456" languagecode="eng" active="true"/>

5.4.7.1.3 groups

When the ‘name’ attribute is omitted, a default value MAY be generated from the available information.

name = group-name
id = group-id

Examples:
<groups>
  <group name="Friends" id="friends">
  </group>
</groups>

5.4.7.1.3.1. user

When the ‘name’ attribute is omitted, a default value MAY be generated from the available information.

name = user-name
id = user-id

Examples:
<user name="Fred" id="tel:+1122334455"/>
<user name="Mom" id="mrs@smith.name"/>

5.4.7.1.4 blacklists

Refers to groups defined in 5.4.7.1.3.

Examples:
<blacklists>
  <groupid="12345">
  </blacklists>

5.4.7.1.5 whitelists

Refers to groups defined in 5.4.7.1.3.

Examples:
<whitelists>
  <groupid="qwerty">
  <groupid="friends">
  </whitelists>

5.4.7.1.6 mappings

5.4.7.1.6.1. mapping

5.4.7.1.6.1.1. physical

When the ‘encoded’ attribute is omitted, the default value of ‘false’ MUST be used.

The value of the ‘encoded’ attribute MUST be ‘true’ only when the UTF-8 content of the ‘physical’ element is encoded using Base64 [RFC4648].
physical - string | base64encoded
encoded - boolean

Example:
<mappings>
  <mapping>
    <physical>INBOX</physical>
    ...
  </mapping>
  <mapping>
    <physical encoded="true">TWFya2VkJk1vdmVk</physical>
    ...
  </mapping>
</mappings>

5.4.7.1.6.1.12. display

When the ‘encoded’ attribute is omitted, the default value of ‘false’ MUST be used.

The value of the ‘encoded’ attribute MUST be ‘true’ only when the UTF-8 content of the ‘display’ element is encoded using Base64 [RFC4648].

display - string | base64encoded
encoded - boolean

Example:
<mappings>
  <mapping>
    <display>Posteingang</display>
    ...
  </mapping>
  <mapping>
    <display encoded="true">TWFya2llcnQmVmVyc2Nob2Jlbg==</display>
    ...
  </mapping>
</mappings>

5.4.7.1.7 notifications

When the ‘home’ attribute is omitted, the default value of ‘true’ MUST be used.

When the ‘roaming’ attribute is omitted, the default value of ‘true’ MUST be used.

When the ‘intlroaming’ attribute is omitted, the default value of ‘false’ MUST be used.

home - boolean
roaming - boolean
intlroaming - boolean

Example:
<notifications home="true" roaming="true" intlroaming="true"/>

5.4.7.1.8 v2t

When the ‘active’ attribute is omitted, the default value of ‘false’ MUST be used.

When the ‘includeoriginalvm’ attribute is omitted, the default value of ‘true’ MUST be used.

active - boolean
includeoriginalvm - boolean

Example:
<v2t active="true" includeoriginalvm="true"/>

5.4.7.1.9 tts

When the ‘greetings’ attribute is omitted, the default value of ‘false’ MUST be used.

When the ‘voicemails’ attribute is omitted, the default value of ‘false’ MUST be used.
greetings = boolean
voicemails = boolean

Example:
<tt values="true" voicemails="true"/>

5.4.7.1.10  nonvmreception

The content of the ‘nonvmreception’ element (if present) SHALL be either ‘off’, ‘sms’, ‘mms’ or ‘email’, corresponding to the selection of receiving voicemails via SMS, MMS or e-mail service, respectively.

Example:
<nonvmreception>sms</nonvmreception>

5.4.8  Naming conventions

The filename MUST be “index”.

5.4.9  Global Documents

Not applicable.

5.4.10  Resource interdependencies

Not applicable.

5.4.11  Authorization Policies

The authorization policies are defined as follows:

- The EVVM user MUST have permission to perform all operations defined in sections “Document Management” of [OMA XDM Core].
- The EVVM Server MUST have permissions that permit all read operation and forbid all writing/updating operations defined in section “Document Management” of [OMA XDM Core].
- The EVVM User and the EVVM Server MUST have permission to perform all operations defined in section “Subscribing to changes in the XDM Resources” of [OMA XDM Core].

5.4.12  Subscription to Changes

Subscription to changes MUST be supported as specified in [OMA XDM Core] section “Subscriptions to changes in the XDM Resources”.

5.4.13  Search Capabilities

Not applicable.

5.4.14  XDM Preferences Document

If History Information Document (section 5.3.15) is supported, the XDM Preferences Document MUST be supported, as described in section “XDM Preference Document” of [OMA XDM Core].

5.4.15  History Information Document

Modification History Information Document MAY be supported, as described in section “Modification History Information Document” of [OMA XDM Core].
Request History Information Document MAY be supported, as described in section “Request History Information Document” of [OMA XDM Core].

5.4.16 Forwarding

Not applicable.

5.4.17 Restore

Not applicable.

5.4.18 Document Reference

Document Reference MUST be supported, as described in section “Document Reference” of [OMA XDM Core].

5.4.19 Differential Read and Write

Not applicable.
6. Data Types

This section contains the description of basic and elementary data types. These descriptions are referenced from the ABNF notations defined in the “Data Semantics” section of applicable Application Usages.

6.1 Basic Data Types

The basic types are defined as follows (organized alphabetically):

- boolean = "true" / "false"
- char-delimiter-safe = <any XML-safe special character except semicolon>
- char-special = <any XML-safe special character>
- integer = DIGIT *DIGIT

6.2 Elementary Data Types

The elementary types are defined as follows (organized alphabetically):

- base64encoded = <Data encoded using Base64 encoding, as defined in [RFC4648].>
- character-set = <A character set token registered with IANA.>
- client-type = client-manufacturer ";" client-name ";" \
  client-revision *(";" custom-list-item)
- client-manufacturer = string-delimiter-safe
- client-name = string-delimiter-safe
- client-revision = revision-number
- custom-list-item = string-delimiter-safe
- default-namespace = <The default namespace defined for an Application Usage.>
- device-type = "MOBILE_PHONE" / "COMPUTER" / "HANDHELD_COMPUTER" / "OTHER"
- device-manufacturer = string-delimiter-safe
- device-model = string-delimiter-safe
- device-os = string-delimiter-safe
- encryption-type = "ECIES" / string
- group-name = string
- group-id = 1*( ALPHA / DIGIT )
- host-device-type = device-type ";" device-manufacturer ";" \
  device-model ";" device-os *(";" custom-list-item)
- indefinite-frequency = "always" / "ifneeded" / "never"
- language-code = 3*ALPHA; an ISO 639-2 code defined in [ISO639-2]
- language-token = language-code *1(language-variant)
- language-variant = "." integer; see language variant definition in [OMTP VVM]
- media-type = discrete-type "/" subtype *(";" parameter)
- raw-password = <see section 'User Identifier' in [EVVM ER]>
- revision-number = DIGIT *((ALPHA / DIGIT / ".")
- special-mailbox-token = "inbox" / "greetings" / "draftbox" / "outbox" \
  / "sentbox" / "spambox" /"trash"
- string = 1*( ALPHA / DIGIT / char-special)
- string-delimiter-safe = 1*( ALPHA / DIGIT / char-delimiter-safe)
- tui-address = tel-uri; see tel-URI in [RFC3966]
- user-id = <see section 'User Identifier' in [EVVM ER]>
- user-name = string
- vvm-sdo-name = "OMTP-VVM" / "OMA-EVVM"
### Appendix A. Change History

#### A.1 Approved Version History

<table>
<thead>
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| OMA-TS-EVVM_XDM-V1_0-20150915-A | 15 Sep 2015 | Status changed to Approved by TP  
|                            |         | TP Ref # OMA-TP-2015-0145-INP_EVVM_V1_0_ERP_for_final_Approval                |
Appendix B. Static Conformance Requirements (Normative)

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

The SCRs defined in the following tables include SCRs for each Application Usage:

- Global service preferences
- Subscription-specific server preferences
- Client preferences
- User preferences

### B.1 EVVM Global Service Preferences

#### B.1.1 XDMS

<table>
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<tr>
<th>Item</th>
<th>Function</th>
<th>Reference</th>
<th>Requirement</th>
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#### B.1.2 XDMC

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#### B.1.3 XDM Agent

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### B.2 EVVM Subscription-specific Server Preferences

#### B.2.1 XDMS

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#### B.2.2 XDMC

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#### B.2.3 XDM Agent

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### B.3 EVVM Client Preferences

#### B.3.1 XDMS

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#### B.3.2 XDMC

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### B.3.3 XDM Agent

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### B.4 EVVM User Preferences

#### B.4.1 XDMS

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#### B.4.2 XDMC

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#### B.4.3 XDM Agent

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Appendix C. Flows  (Informative)

The EVVM XDMS document management flows are described in the [EVVM ER].
Appendix D. Document examples (Informative)

D.1 EVVM Global Service Preferences

The following example demonstrates the use of global service preferences, where the EVVM Server:

- Supports all supplementary content types,
- Does not support optional content types,
- Defines two additional custom content types,
- Does not support supplementary character sets,
- Defines an additional custom character set,
- Supports the VVM 1.3 and EVVM 1.0 protocols,
- Limits the maximum VM size to 2Mbytes,
- Limits the maximum greeting length to 10 seconds,
- Limits the maximum voice signature length to 15 seconds,
- Imposes the following EVVM passwords requirements:
  - Minimum 6 characters long
  - Maximum 12 characters long
  - Contain at least one uppercase character
  - Allow the use of the following special characters: ~!@#$%^*()[]{}_-+=
- Imposes the following TUI passwords requirements:
  - Minimum 4 characters long
  - Maximum 6 characters long
  - Forbid the use of alphabetical and special characters
- Supports three voice prompt variants for the TUI: English, Chinese female, Chinese male.

```
<prefs xmlns="urn:oma:xml:evvm:serviceprefs-global" version="1.0">
  <mediatypes supplementary="true" optional="false">
    <mediatype>image/tiff</mediatype>
    <mediatype>audio/mpeg</mediatype>
  </mediatypes>
  <charsets supplementary="false">
    <charset>ISO-8859-2</charset>
  </charsets>
  <protocols>
    <protocol id="OMTP-VVM" version="1.3"/>
    <protocol id="OMA-EVVM" version="1.0"/>
  </protocols>
  <bounds maxvmsize="2097152" maxgreetinglength="10" maxvoicesignaturelength="15">
    <evvm>
      <password minpasslength="6" maxpasslength="12" alphasuppercaserequired="1" specials="-!@#$%^*()[]{}_-+="/>
    </evvm>
    <tui>
      <password minpasslength="4" maxpasslength="6" alphasallowed="false" specialssallowed="false"/>
    </tui>
  </bounds>
</prefs>
```
D.2 EVVM Subscription-specific Server Preferences

The following example demonstrates the use of subscription-specific service preferences, where the EVVM Server:

- Supports all supplementary and optional content types,
- Supports all supplementary sets,
- Limits the maximum VM size to 20Mbytes,
- Limits the maximum greeting length to 20 seconds,
- Limits the maximum voice signature length to 30 seconds,
- Indicates the TUI address.
- Indicates all UserIDs associated with the subscription.

```xml
<prefs xmlns="urn:oma:xml:evvm:serviceprefs-subscription" version="1.0">
  <mediatypes supplementary="true" optional="true"/>
  <charsets supplementary="true"/>
  <protocols/>
  <mappings/>
  <notifications/>
  <bounds maxvmsize="20971520" maxgreetinglength="20" maxvoicesignaturelength="30">
    <tui>
      <address id="tel:+9876543210"/>
    </tui>
  </bounds>
  <associations>
    <user id="tel:+1234567890"/>
    <user id="me.myself.i@notmail.com"/>
    <user id="me.myself.i@jeemail.com"/>
    <user id="sip:me.myself.i@sipit.com"/>
    <user id="sip:me.myself.i@sipper.com"/>
  </associations>
  <contentadaptation/>
</prefs>
```

D.3 EVVM Client Preferences

The following example demonstrates the use of client preferences, where the EVVM Client:

- Discloses its type,
- Discloses the Device’s type,
- Supports all supplementary content types,
- Does not support optional content types,
- Does not support supplementary character sets,
- Supports the EVVM 1.0 protocol.

```xml
<prefs xmlns="urn:oma:xml:evvm:clientprefs" version="1.0">
  <client type="iVoice Unlimited;iVMC;0.9rc1;b=test build 23;d=debug,norush"/>
  <mediatypes supplementary="true" optional="false"/>
</prefs>
```
The following example demonstrates the use of user preferences, where the user:

- Wishes the EVVM service to be active.
- Specifies the password to access the EVVM service.
- Wishes the TUI to be active.
- Specifies the password to access the TUI.
- Specifies the language to be used while accessing the service via the TUI.
- Wishes to store sent VMs.
- Defines three groups.
- Specifies one of the groups to be blacklisted.
- Specifies two of the groups to be whitelisted.

Note: The example below violates the XML schema on purpose for the sake of completeness; "blacklists" and "whitelists" are mutually exclusive.

```xml
<prefs xmlns="urn:oma:xml:evvm:userprefs" version="1.0">
  <evvm active="true" password="H4ckDis" storesentvm="true"/>
  <tui active="true" password="123456" languagecode="eng"/>
  <groups>
    <group name="Friends" id="friends">
      <user name="Fred" id="tel:+1122344555"/>
      <user name="Wilma" id="tel:+2234455666"/>
      <user name="Barney" id="tel:+33445566777"/>
      <user name="Betty" id="tel:+4455667788"/>
    </group>
    <group name="White list" id="qwerty">
      <user name="Mom" id="tel:+1111111111"/>
      <user name="Mom" id="mrs@smith.name"/>
      <user name="Dad" id="tel:+2222222222"/>
      <user name="Dad" id="mr@smith.name"/>
    </group>
    <group name="Never call" id="12345">
      <user name="Unknown number" id="tel:+9999999999"/>
      <user name="Spammer" id="rosie@spam.biz"/>
    </group>
  </groups>
  <blacklists>
    <groupid="12345">
    </blacklists>
  <whitelists>
    <groupid="qwerty">
    </whitelists>
    <groupid="friends">
    </whitelists>
  <mappings/>
  <notifications/>
  <v2t/>
</prefs>
```
<pre>    <tts/>
    <nonvmreception>off</nonvmreception>
</pre>