OMA IMPS Management Object

Candidate Version 1.0 – 11 Oct 2005

Open Mobile Alliance

OMA-TS-IMPS-MO-V1_0-20051011-C

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Contents

Figures

1. Scope

This document defines the OMA IMPS Management Object. The MO is defined using the OMA DM Device Description Framework.

2. References

2.1   Normative References

[DMTND]	"SyncML Device Management Tree and Description, Version 1.1.2", OMA-SyncML-DMTND-V1_1_2. Open Mobile Alliance™. URL: http://www.openmobilealliance.org
[ITU-T E.164]	The international public telecommunication numbering plan URL: http://www.itu.int/rec/recommendation.asp
[RFC791]	Internet protocol URL: http://www.ietf.org/rfc/rfc791.txt
[RFC2119]	Key words for use in RFCs to Indicate Requirement Levels URL: http://www.ietf.org/rfc/rfc2119.txt
[RFC2396]	Uniform Resource Identifiers (URI): Generic Syntax URL: http://www.ietf.org/rfc/rfc2396.txt

2.2   Informative References

None.

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

See the DM Tree and Description [DMTND] document for definitions of terms related to the management tree.

3.3 Abbreviations

IMPS	Instant Messaging and Presence Service
MO	Management Object
SAP	Service Access Point
SME	Short Message Entity

4. Introduction

This document describes the OMA IMPS management object syntax that allows configuration deployment to OMA IMPS clients.

5. OMA IMPS Management Object

OMA IMPS management object (MO) is an object, which is used to manage OMA IMPS's client provisioning. Management object enables to manage OMA IMPS related settings on behalf of the end user. E.g. it SHOULD be possible to set a new SAP without the end user knowing anything about it. Another possible scenario is when an end user has disabled JavaScript by mistake and is not able to see operator's homepage or use the service: the operator can send the default –and correct – settings to end user's device without forcing the end user to manually configure his settings – and possibly make mistakes.

Management object name: org.openmobilealliance/1.0/IMPS

The following diagram describes the same structure visually.
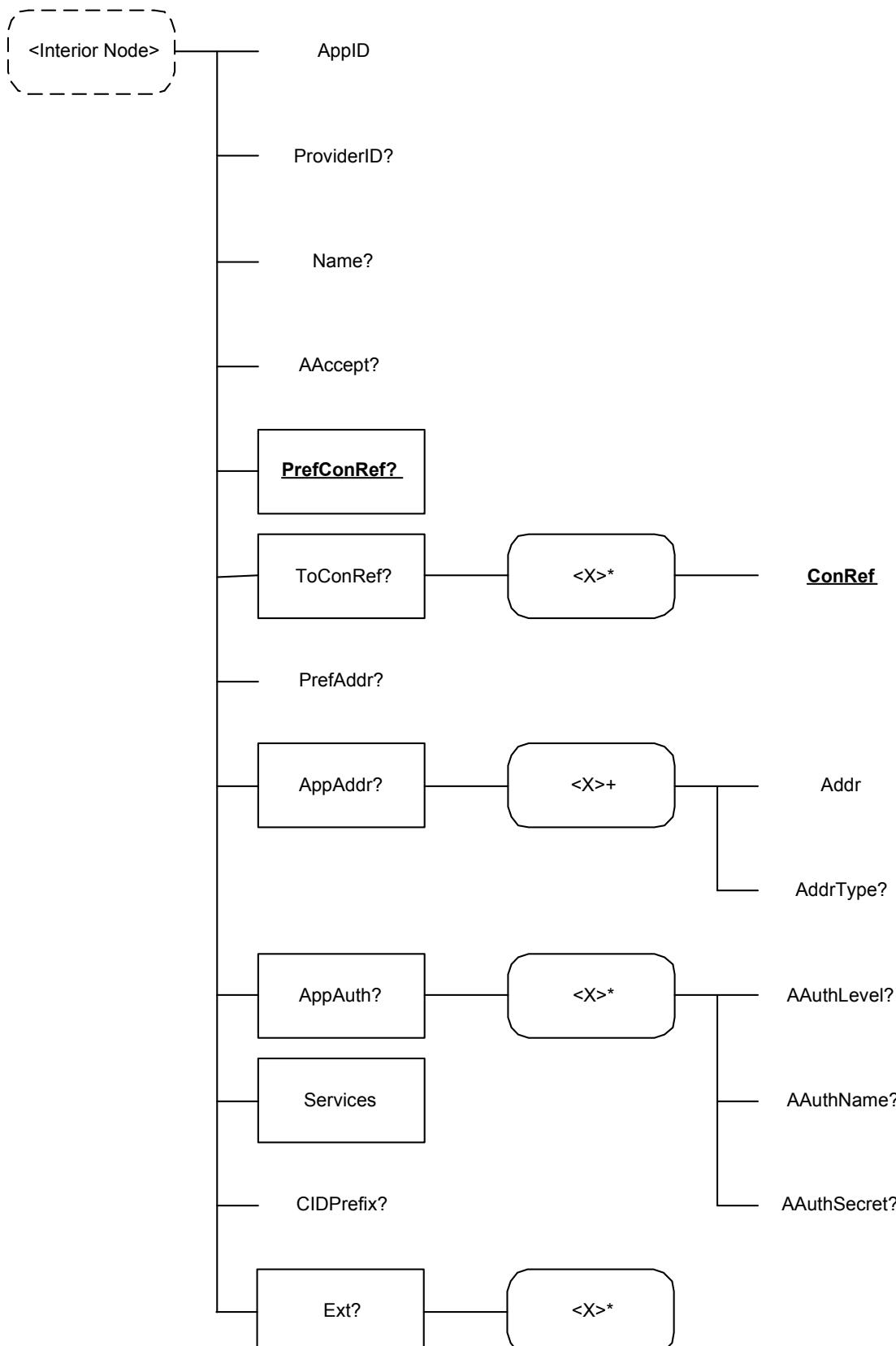
Figure 1: The OMA IMPS Management Object tree

5.1   Management Object Parameters

This section describes the parameters for OMA IMPS Management Object.

5.1.1   Node: /<X>

This interior node acts as a placeholder for one or more accounts or for the IMPS node.

   •   Status: Required

   •   Occurs: ZeroOrMore

   •   Format: Node

   •   Access Types: Get

   •   Values: N/A

5.1.2   Node: /<X>/AppID

The AppID identifies the type of the application service available at the described SAP. The value is expected to be globally unique.

   •   Support: Optional

   •   Occurrence: ZeroOrOne

   •   Value: Leaf values are in textual format as defined in the WAP Provisioning Content document. (The value is always wA for OMA IMPS.)

   •   Scope: Dynamic

   •   Access Type: Add, Delete, Get, Replace

   •   Format: Chr

Example: wA

5.1.3   Node: /<X>/ProviderID?

The ProviderID leaf provides an identifier for the SAP.

   •   Support: Optional

   •   Occurrence: ZeroOrOne

   •   Value:

   •   Scope: Dynamic

   •   Access Type: Add, Delete, Get, Replace

   •   Format: Chr

Example: 123.56.78.90

5.1.4   Node: /<X>/Name?

The Name leaf indicates a logical, user readable identity (property) of the SAP.

- •   Support: Optional

- •   Occurrence: ZeroOrOne

- •   Value:

- •   Scope: Dynamic

- •   Access Type: Add, Delete, Get, Replace

- •   Format: Chr

Example: Foo Company IMPS SAP

5.1.5   Node: /<X>/AAccept?

The AAccept leaf lists the content types that the SAP is able to receive from the client. The value is a string containing a comma-separated list of content type specifiers.

- •   Support: Optional

- •   Occurrence: ZeroOrOne

- •   Value:

- •   Scope: Dynamic

- •   Access Type: Add, Delete, Get, Replace

- •   Format: Chr

Example: application/vnd.wv.csp+xml;1.3;1.2;1.1;1.0,application/vnd.wv.csp+wbxml;1.3;1.2;1.1;1.0

5.1.6   Node: /<X>/PrefConRef?

The PrefConRef leaf indicates the preferred linkage to connectivity parameters (proxy or network access point).

- •   Support: Optional

- •   Occurrence: ZeroOrOne

- •   Value: Relative URI

- •   Scope: Dynamic

- •   Access Type: Add, Delete, Get, Replace

- •   Format: Chr

Example: `./AP/ThisOperator/NAPDef/1/ThisItem`

5.1.7   Node: /<X>/ToConRef?

The ToConRef interior node is used to allow application to refer to a collection of connectivity definitions. Several connectivity parameters may be listed for a give application under this interior node.

- Support: Optional

- Occurrence: ZeroOrOne

- Value:

- Scope: Dynamic

- Access Type: Add, Delete, Get, Replace

- Format: Node

5.1.8   Node: /<X>/ToConRef?/<X>*

This run-time node acts as a placeholder for zero or more connectivity parameters.

- Support: Optional

- Occurrence: ZeroOrMore

- Value:

- Scope: Dynamic

- Access Type: Add, Delete, Get, Replace

- Format: Node

5.1.9   Node: /<X>/ToConRef?/<X>*/ConRef

The ConRef leaf indicates the linkage to connectivity parameters.

- Support: Optional

- Occurrence: ZeroOrOne

- Value: Relative URI

- Scope: Dynamic

- Access Type: Add, Delete, Get, Replace

- Format: Chr

Example: `./AP/ThatOperator/Px/1/ThatItem`

5.1.10   Node: /<X>/PrefAddr?

The PrefAddr leaf MAY be used to provide the address of the application server. The value can be an absolute URI [RFC2396], an IPv4 address [RFC791] represented in decimal format with dots as delimiters, or a fully qualified Internet domain name (i.e. hostname as defined in section 3.2.2 of [RFC2396]). The presence of this parameter is equivalent to including an AppAddr node containing only the Addr parameter with the same value.

- Support: Optional

- Occurrence: ZeroOrOne

- Value:

- Scope: Dynamic

- Access Type: Add, Delete, Get, Replace

- Format: Chr

Example: http://127.0.0.1:80/SAPApp

5.1.11   Node: /<X>/AppAddr?

The AppAddr interior node is used to allow multiple addresses to be defined for application. Several addresses may be listed for a give application under this interior node.

- Support: Optional

- Occurrence: ZeroOrOne

- Value:

- Scope: Dynamic

- Access Type: Add, Delete, Get, Replace

- Format: Node

5.1.12   Node: /<X>/AppAddr?/<X>+

This run-time node acts as a placeholder for one or more application address definitions.

- Support: Optional

- Occurrence: OneOrMore

- Value:

- Scope: Dynamic

- Access Type: Add, Delete, Get, Replace

- Format: Node

5.1.13 Node: /<X>/AppAddr?/<X>+/Addr

The Addr node can hold addresses of different kinds, for example, an IP address or an SME number. The type of address in the field can be determined on the AddrType node. If the parameter AddrType is not defined or if no value is given, then the parameter Addr can contain the same type of values as the PrefAddr node defined above.

- • Support: Optional

- • Occurrence: ZeroOrOne

- • Value:

- • Scope: Dynamic

- • Access Type: Add, Delete, Get, Replace

- • Format: Chr

Example: +1234567890

Example: https://123.56.78.90

5.1.14 Node: /<X>/AppAddr?/<X>+/AddrType?

The AddrType leaf indicates the format and interpretation of the Addr parameter. When the value is omitted, the address type is an absolute URI [RFC2396], or a fully qualified Internet domain name (i.e. hostname as defined in section 3.2.2 of [RFC2396]).

- • Support: Optional

- • Occurrence: ZeroOrOne

- • Value: The value E164 is used under for non-IP based bearers (e.g. SMS). For IP based bearers this parameter is omitted.

- • Interpretation: International public telecommunication number as described in [ITU-T E.164].

- • Scope: Dynamic

- • Access Type: Add, Delete, Get, Replace

- • Format: Chr

Example: E164

5.1.15 Node: /<X>/AppAuth?

The AppAuth interior node is a container for authentication information to be used with the SAP.

- • Support: Optional

- • Occurrence: ZeroOrOne

- • Value:

- • Scope: Dynamic

- • Access Type: Add, Delete, Get, Replace

- • Format: Node

5.1.16   Node: /<X>/AppAuth?/<X>*

This run-time node acts as a placeholder for zero or more application authentication definitions.

- •   Support: Optional

- •   Occurrence: ZeroOrMore

- •   Value:

- •   Scope: Dynamic

- •   Access Type: Add, Delete, Get, Replace

- •   Format: Node

5.1.17   Node: /<X>/AppAuth?/<X>*/AAuthLevel

The AAuthLevel leaf tells how the provided authentication credentials are to be applied. If no value is given, then the AppAuth node contains client credentials for HTTP or WSP authentication.

- •   Support: Required

- •   Occurrence: ZeroOrOne

- •   Value: The value APPSRV is used to indicate that the whole sub-node contains application-specific credentials. For client credentials the value is omitted (e.g. an empty value is sent).

- •   Scope: Dynamic

- •   Access Type: Add, Delete, Get, Replace

- •   Format: Chr

Example: APPSRV

5.1.18   Node: /<X>/AppAuth?/<X>*/AAuthName?

The AAuthName leaf indicates the ID (plain text). The format and use of this parameter depends on AAuthLevel.

- •   Support: Optional

- •   Occurrence: ZeroOrOne

- •   Value: Protocol-specific user identification.

- •   Scope: Dynamic

- •   Access Type: Add, Delete, Get, Replace

- •   Format: Chr

Example: wv:user@domain.com

5.1.19   Node: /<X>/AppAuth?/<X>*/AAuthSecret?

The AAuthSecret leaf indicates the authentication secret. The format and use of this parameter depend on AAuthLevel.

- Support: Optional

- Occurrence: ZeroOrOne

- Value: Protocol-specific secret token (password).

- Scope: Dynamic

- Access Type: Add, Delete, Replace

- Format: Chr

Example: 1pass2with3numbers4

5.1.20   Node: /<X>/Services

The Services leaf provides the list of supported high-level services.

- Support: Required

- Occurrence: One

- Value: IM;PS;GR

     o   IM - instant messaging

     o   PS - presence

     o   GR - groups

- Scope: Dynamic

- Access Type: Add, Delete, Get, Replace

- Format: Chr

Example: `IM;PR;GR`

5.1.21   Node: /<X>/Ext?

The Ext node is an interior node where the vendor specific information about this particular application is being placed (vendor meaning application vendor, device vendor, OS vendor etc.). Usually the vendor extension is identified by vendor specific name under the ext node. The tree structure under the vendor identified is not defined and can therefore include non-standardized sub-tree.

- Support: Optional

- Occurrence: ZeroOrOne

- Value:

- Scope: Dynamic

- Access Type: Add, Delete, Get, Replace

- Format: Node

5.1.22 Node: /<X>/Ext?/<X>*

This run-time node acts as a placeholder for zero or more vendor-specific extensions.

- Support: Optional

- Occurrence: ZeroOrMore

- Value:

- Scope: Dynamic

- Access Type: Add, Delete, Get, Replace

- Format: Node

5.1.23 Node: /<X>/CIDPrefix?

CIDPrefix is a string value containing the provider-specific Client-ID part.

The CIDPrefix in terms of character set MUST follow the Client-ID syntax defined in OMA IMPS standard.

A client upon receiving the CIDPrefix MUST append two hash marks ('##') and the internal Client-ID to the CIDPrefix, and MUST use the resulting string as ClientID whenever it accesses the SAP for which the configuration message is valid. The formula that describes the aforementioned concatenation is:

```
ClientID = [ <CIDPrefix> + "##" + ] <Internal ClientID>
```

The CIDPrefix MUST be formatted in a manner that after the concatenation described above the Client-ID remains conformant to the Client-ID syntax that is defined in the OMA IMPS standard.

When CIDPrefix is missing from the configuration message, the client MUST use the internal ClientID without changes.

The OMA IMPS standard allows 200 characters for Client-IDs. In order to guarantee that the generated Client-ID will not exceed this limit, the CIDPrefix MUST NOT be longer than 99 characters, and if the internal (client-implementation-specific) Client-ID is longer than 99 characters, it MUST be truncated.

- Support: Optional

- Occurrence: ZeroOrOne

- Value:

- Scope: Dynamic

- Access Type: Add, Delete, Get, Replace

- Format: Chr

Example: http://imps.operator.com/customfield1/customfield2

5.2   Management Object DDF (Normative)

```
<?xml version="1.0" encoding="UTF-8"?>
<!DOCTYPE MgmtTree SYSTEM "http://www.openmobilealliance.org/tech/DTD/OMA-SyncML-DMDDFDTD-V1_1_2-
    20030508-D.dtd">
<MgmtTree>
    <VerDTD>1.1</VerDTD>
    <Man>--The manufacturer--</Man>
    <Mod>--The device model--</Mod>
    <Node>
    <NodeName/>
    <DFProperties>
      <AccessType>
          <Add/>
```

```
            <Delete/>
            <Get/>
            <Replace/>
        </AccessType>
        <DFFormat>
            <node/>
        </DFFormat>
        <Occurrence>
            <ZeroOrMore/>
        </Occurrence>
        <Scope>
            <Dynamic/>
        </Scope>
        <DFTitle>The "name" node for a IMPS object</DFTitle>
        <DFType>
            <DDFName/>
        </DFType>
    </DFProperties>
    <Node>
        <NodeName>APPID</NodeName>
        <DFProperties>
            <AccessType>
                <Add/>
                <Delete/>
                <Get/>
                <Replace/>
            </AccessType>
            <DFFormat>
                <chr/>
            </DFFormat>
            <Occurrence>
                <ZeroOrOne/>
            </Occurrence>
            <Scope>
                <Dynamic/>
            </Scope>
            <DFTitle>Application ID</DFTitle>
            <DFType>
                <MIME>text/plain</MIME>
            </DFType>
        </DFProperties>
    </Node>
    <Node>
        <NodeName>ProviderID</NodeName>
        <DFProperties>
            <AccessType>
                <Add/>
                <Delete/>
                <Get/>
                <Replace/>
            </AccessType>
            <DFFormat>
                <chr/>
            </DFFormat>
            <Occurrence>
                <ZeroOrOne/>
            </Occurrence>
            <Scope>
                <Dynamic/>
            </Scope>
            <DFTitle>ProviderID</DFTitle>
            <DFType>
                <MIME>text/plain</MIME>
            </DFType>
        </DFProperties>
    </Node>
    <Node>
        <NodeName>Name</NodeName>
        <DFProperties>
            <AccessType>
                <Add/>
                <Delete/>
                <Get/>
                <Replace/>
            </AccessType>
            <DFFormat>
                <chr/>
            </DFFormat>
```

```
            <Occurrence>
                <ZeroOrOne/>
            </Occurrence>
            <Scope>
                <Dynamic/>
            </Scope>
            <DFTitle>User displayable name for the node</DFTitle>
            <DFType>
                <MIME>text/plain</MIME>
            </DFType>
        </DFProperties>
    </Node>
    <Node>
        <NodeName>AAccept</NodeName>
        <DFProperties>
            <AccessType>
                <Add/>
                <Delete/>
                <Get/>
                <Replace/>
            </AccessType>
            <DFFormat>
                <chr/>
            </DFFormat>
            <Occurrence>
                <ZeroOrOne/>
            </Occurrence>
            <Scope>
                <Dynamic/>
            </Scope>
            <DFTitle>Accepted Content Types</DFTitle>
            <DFType>
                <MIME>text/plain</MIME>
            </DFType>
        </DFProperties>
    </Node>
    <Node>
        <NodeName>PrefConRef</NodeName>
        <DFProperties>
            <AccessType>
                <Add/>
                <Delete/>
                <Get/>
                <Replace/>
            </AccessType>
            <DFFormat>
                <chr/>
            </DFFormat>
            <Occurrence>
                <ZeroOrOne/>
            </Occurrence>
            <Scope>
                <Dynamic/>
            </Scope>
            <DFTitle>Preferred Connection Reference</DFTitle>
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                <MIME>text/plain</MIME>
            </DFType>
        </DFProperties>
    </Node>
    <Node>
        <NodeName>ToConRef</NodeName>
        <!--ToConRef  node starts here.-->
        <DFProperties>
            <AccessType>
                <Add/>
                <Delete/>
                <Get/>
                <Replace/>
            </AccessType>
            <DFFormat>
                <node/>
            </DFFormat>
            <Occurrence>
                <ZeroOrOne/>
            </Occurrence>
            <Scope>
                <Dynamic/>
```

```
                </Scope>
                <DFTitle>A collection of To Con Ref objects.</DFTitle>
                <DFType>
                    <DDFName/>
                </DFType>
            </DFProperties>
            <Node>
                <NodeName/>
                <DFProperties>
                    <AccessType>
                        <Add/>
                        <Delete/>
                        <Get/>
                        <Replace/>
                    </AccessType>
                    <DFFormat>
                        <node/>
                    </DFFormat>
                    <Occurrence>
                        <ZeroOrMore/>
                    </Occurrence>
                    <Scope>
                        <Dynamic/>
                    </Scope>
                    <DFTitle>The "name" node for a Connection Reference  Object</DFTitle>
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                        <DDFName/>
                    </DFType>
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                    <NodeName>ConRef</NodeName>
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                            <Delete/>
                            <Get/>
                            <Replace/>
                        </AccessType>
                        <DFFormat>
                            <chr/>
                        </DFFormat>
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                            <ZeroOrOne/>
                        </Occurrence>
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                            <Dynamic/>
                        </Scope>
                        <DFTitle>Connection Reference</DFTitle>
                        <DFType>
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                        </DFType>
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            </Node>
        </Node>
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                <Delete/>
                <Get/>
                <Replace/>
            </AccessType>
            <DFFormat>
                <chr/>
            </DFFormat>
            <Occurrence>
                <ZeroOrOne/>
            </Occurrence>
            <Scope>
                <Dynamic/>
            </Scope>
            <DFTitle>Preferred Address</DFTitle>
            <DFType>
                <MIME>text/plain</MIME>
            </DFType>
        </DFProperties>
```

```
    </Node>
    <Node>
       <NodeName>AppAddr</NodeName>
       <!--AppAddr node starts here.-->
       <DFProperties>
          <AccessType>
             <Add/>
             <Delete/>
             <Get/>
             <Replace/>
          </AccessType>
          <DFFormat>
             <node/>
          </DFFormat>
          <Occurrence>
             <ZeroOrOne/>
          </Occurrence>
          <Scope>
             <Dynamic/>
          </Scope>
          <DFTitle>A collection of all AppAddr  objects.</DFTitle>
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             <DDFName/>
          </DFType>
       </DFProperties>
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          <NodeName/>
          <DFProperties>
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                <Delete/>
                <Get/>
                <Replace/>
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                </Occurrence>
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                <DFTitle>Address</DFTitle>
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                </DFType>
             </DFProperties>
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                   <Delete/>
```

```
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                <Replace/>
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            </DFFormat>
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            </Occurrence>
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            </Scope>
            <DFTitle>Address Type</DFTitle>
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            </DFType>
        </DFProperties>
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  </Node>
</Node>
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    <NodeName>AppAuth</NodeName>
    <!--AppAuth node starts here.-->
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            <Replace/>
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            <node/>
        </DFFormat>
        <Occurrence>
            <ZeroOrOne/>
        </Occurrence>
        <Scope>
            <Dynamic/>
        </Scope>
        <DFTitle>A collection of all Application Authentication  objects.</DFTitle>
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            <DDFName/>
        </DFType>
    </DFProperties>
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        <NodeName/>
        <DFProperties>
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                <Get/>
                <Replace/>
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            </DFFormat>
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                <ZeroOrMore/>
            </Occurrence>
            <Scope>
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            </Scope>
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            </DFType>
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                    <Replace/>
                </AccessType>
                <DFFormat>
                    <chr/>
```

```
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                </Occurrence>
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                </Scope>
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                </DFType>
            </DFProperties>
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                    <Replace/>
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                    <chr/>
                </DFFormat>
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                    <ZeroOrOne/>
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                </Scope>
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                    <Replace/>
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                    <Dynamic/>
                </Scope>
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                </DFType>
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            <Replace/>
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        <DFFormat>
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        </DFFormat>
        <Occurrence>
            <One/>
        </Occurrence>
        <Scope>
```

```
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                    </Scope>
                    <DFTitle>High level service list</DFTitle>
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                    </DFType>
                </DFProperties>
            </Node>
            <Node>
                <NodeName>CIDPrefix</NodeName>
                <DFProperties>
                    <AccessType>
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                        <Delete/>
                        <Get/>
                        <Replace/>
                    </AccessType>
                    <DFFormat>
                        <chr/>
                    </DFFormat>
                    <Occurrence>
                        <ZeroOrOne/>
                    </Occurrence>
                    <Scope>
                        <Dynamic/>
                    </Scope>
                    <DFTitle>CIDPrefix</DFTitle>
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                    </DFType>
                </DFProperties>
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            <Node>
                <NodeName>Ext</NodeName>
                <!--Ext  node starts here.-->
                <DFProperties>
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                        <Delete/>
                        <Get/>
                        <Replace/>
                    </AccessType>
                    <DFFormat>
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                    </DFFormat>
                    <Occurrence>
                        <ZeroOrOne/>
                    </Occurrence>
                    <Scope>
                        <Dynamic/>
                    </Scope>
                    <DFTitle>A collection of all Extension objects.</DFTitle>
                    <DFType>
                        <DDFName/>
                    </DFType>
                </DFProperties>
                <Node>
                    <NodeName/>
                    <DFProperties>
                        <AccessType>
                            <Add/>
                            <Delete/>
                            <Get/>
                            <Replace/>
                        </AccessType>
                        <DFFormat>
                            <node/>
                        </DFFormat>
                        <Occurrence>
                            <ZeroOrMore/>
                        </Occurrence>
                        <Scope>
                            <Dynamic/>
                        </Scope>
                        <DFTitle>The "name" node for a Extension  Object</DFTitle>
                        <DFType>
                            <DDFName/>
                        </DFType>
```

```
            </DFProperties>
        </Node>
    </Node>
</Node>
```

Appendix A.   Change History   (Informative)

A.1   Approved Version History

Reference	Date	Description
N/A	N/A	No previous version

A.2   Draft/Candidate Version 1.0 History

Document Identifier	Date	Sections	Description
Draft versions OMA-IMPS-WV-MO-V0_1	14 Sep-2004	All	Initial draft
	12 Dec 2004	5, 5.1.20, 5.2.2	Changed according to the changes in the wA.txt approved in OMA-IM-2004-0263R02-wAUpdate.
Draft versions OMA-IMPS-MO-V1_0	25 Feb 2005	All	The document went through review in OMA-DM. As a result, the embedded DDF file has been removed. Applied the 2005 document template. Removed [CREQ] from references, as it is not used in the document.
	24 Apr 2005	All	Added approved change requests: OMA-IM-2005-0205-IMPS13_CIDPrefix_DM
Draft version OMA-TS-IMPS-MO-V1_0	01 Jun 2005	All	Changed "C0 Code0" font size from 11 to 8. Removed unused references from normative references. Added -TS- to the document name.
	27 Jul 2005	All	Added approved change requests: OMA-IM-2005-0518-IMPS13_CIDPrefixUpdate-MO
	25 Aug 2005	All	Fixed additional inconsistencies reported by e-mail (editorials): - OMA document references, Accepted field updates (TOC, table and figure references) to shorten the document.
Candidate Versions OMA-TS-IMPS-MO-V1_0	11 Oct 2005	n/a	Status changed to Candidate by TP TP ref # OMA-TP-2005-0279R01-IMPS-V1_3-for-Candidate-approval