

# PGM Provisioning over CAI3G

## Ericsson Dynamic Activation 1

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### SYSTEM INTERFACE

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# 1 Introduction

This section contains information about the prerequisites, purpose, scope, and target group for the document. This section also contains information about typographic conventions used in this document.

## 1.1 Purpose and Scope

This document describes the supported Customers Service Orders (CSOs) in the CAI3G interface which is used for provisioning of Presence, Group, and Data Management (PGM).

**Note:** This document is not a tutorial of CAI3G, it must be used together with document *Generic CAI3G Interface 1.2*, Reference [2].

## 1.2 Target Groups

The target group for this document is as follows:

- System Integrator

For more information about the different target groups, see *Library Overview*, Reference [1].

## 1.3 Typographic Conventions

Typographic conventions are described in the document *Library Overview*, Reference [1].

## 1.4 Prerequisites

This document is written with the assumption that the users:

- Have basic knowledge about the Ericsson Dynamic Activation (EDA) product.
- Have knowledge about *Generic CAI3G Interface 1.2*, Reference [2].

## 1.5 Web Service Interface

The Web Services Definition Language (WSDL) and XML Schema Definition Language (XSD) files that describe the provisioning interface can be found in



/home/dveinstaller/ma/. It is also possible to download the files and view or store them in an appropriate area by following below instruction:

1. Save the zip file, [Dynamic\\_Activation\\_WSDL\\_and\\_XSD\\_files.zip](#), to a local folder.
2. Unpack the zip file.

## 1.6 MOType

MOType is a plain text string based on the type `xs:string`. An MOType consists of two parts. One is the namespace of the MO, and the other is the MO name string that is always starting with an alphabetical character in either upper or lower case, followed by zero or more alphabetical characters, digits or underscores.

Those two parts are connected with symbol @. The syntax of the MOType string is `MO_Name@MO_Namespace`. The name string of an MOType must follow the regular expression: `[A-Za-z][A-Za-z0-9]*`

The MO name together with the MO namespace must be globally unique.

## 1.7 MOId

MOId is an XML fragment containing the MOId parameter-value pairs that are used to identify an MO instance in the interface data model. CAI3G 1.2 standard supports compound MO identifiers or multiple MO identifier. The following is an example of an MOId:

```
<MOId>
  <msisdn>46455395000</msisdn>
  <imsi>46234563545000</imsi>
</MOId>
```

### *Example 1 Example of MOId*

The MOId is defined as a sequence of `xs:any` element in CAI3G schema file. It is the developers responsibility to define the real schema for this parameter.

The MOId is also the key attributes that must be defined in the top-level element, `CreateMODefinition` or `SetMODefinition`, within `MOAttributes` parameter.

Each implementation of CAI3G interface is to define own logic relationship of MOId. It is also the CAI3GAgents responsibility to interpret this parameter correctly by either the hard-coded logic or the dynamic parsing of the schema.



## 2 Document

### 2.1 Creating a Document

This section describes how to create a Document.

#### MOType

Document@http://schemas.ericsson.com/ma/pgm/

#### 2.1.1 Request Data

##### MOId

*Table 1 MOID Parameters*

Parameter	Type	Occurrence	Example
auId	The ID of Application Usage String minLength value="1" maxLength value="100"	Mandatory	resource-lists
publicId	The XUI address in user tree String value="(sip:.{1,256}) (tel:.{1,256})"	Mandatory	sip:4687500061@tcv.ic s.se
documentSelector	The document name String minLength value="1" maxLength value="100"	Mandatory	index

##### MOAttributes

*Table 2 MOAttributes of Creating a Document*

Parameter	Type	Occurrence	Example
auId	The ID of Application Usage String minLength value="1" maxLength value="100"	Mandatory	resource-lists



Parameter	Type	Occurrence	Example
publicId	The XUI address in user tree String value="(sip:.{1,256}) (tel:.{1,256})"	Mandatory	sip:4687500061@tcv.ics.se
documentSelector	The document name String minLength value="1" maxLength value="100"	Mandatory	index
contentType	The type of the xml file content String	Mandatory	application/resource-lists+xml
xmlDocument	The xml file String minOccurs="0"	Optional	The content of XML file

## 2.1.2 Example

An example for creating a Document is as follows:





```

Request:
<cai3:Create>
  <cai3:MOType>Document@http://schemas.ericsson.com/ma/pgm/</cai3:MOType>
  <cai3:MOId>
    <pgm:auId>resource-lists</pgm:auId>
    <pgm:publicId>${Properties#Users}</pgm:publicId>
    <pgm:documentSelector>index</pgm:documentSelector>
  </cai3:MOId>
  <cai3:MOAttributes>
    <pgm:createDocument auId="resource-lists"
      publicId="${Properties#Users}" documentSelector="index">
      <pgm:auId>resource-lists</pgm:auId>
      <pgm:publicId>${Properties#Users}</pgm:publicId>
      <pgm:documentSelector>index</pgm:documentSelector>
      <pgm:contentType>application/resource-lists+xml</pgm:contentType>
      <pgm:xmlDocument>
        <resource-lists xmlns="urn:ietf:params:xml:ns:resource-lists">
          <list name="oma_buddylist">
            <external anchor=
"http://10.80.132.50:8080/xcap-ap-service/resource-lists/users/sip:4687500061@tcv.ics.se/index/~~/resource-lists"
            </list>
          </resource-lists>
        </pgm:xmlDocument>
      </pgm:createDocument>
    </cai3:MOAttributes>
  </cai3:Create>

Response:
<CreateResponse xmlns="http://schemas.ericsson.com/cai3g1.2/">
  <MOId>
    <pgm:auId xmlns:cai3="http://schemas.ericsson.com/cai3g1.2/"
      xmlns:pgm="http://schemas.ericsson.com/ma/pgm/"
      xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/">
      resource-lists
    </pgm:auId>
    <pgm:publicId xmlns:cai3="http://schemas.ericsson.com/cai3g1.2/"
      xmlns:pgm="http://schemas.ericsson.com/ma/pgm/"
      xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/">
      sip:4687500061@tcv.ics.se
    </pgm:publicId>
    <pgm:documentSelector xmlns:cai3="http://schemas.ericsson.com/cai3g1.2/"
      xmlns:pgm="http://schemas.ericsson.com/ma/pgm/"
      xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/">
      index
    </pgm:documentSelector>
  </MOId>
</CreateResponse>

```

## Example 2 Creating a Document

## 2.2 Deleting a Document

This section describes how to delete a Document.

### MOType

Document@http://schemas.ericsson.com/ma/pgm/

### 2.2.1 Request Data

#### MOId

**Table 3** *MOID Parameters*

Parameter	Type	Occurrence	Example
auId	The ID of Application Usage String minLength value="1" maxLength value="100"	Mandatory	resource-lists
publicId	The XUI address in user tree String value="(sip:{1,256}) (tel:{1,256})"	Mandatory	sip:4687500061@tcv.ics.se
documentSelector	The document name String minLength value="1" maxLength value="100"	Mandatory	index

## MOAttributes

**Table 4** *MOAttributes of Deleting a Document*

Parameter	Type	Occurrence	Example
auId	The ID of Application Usage String minLength value="1" maxLength value="100"	Mandatory	resource-lists
publicId	The XUI address in user tree String value="(sip:{1,256}) (tel:{1,256})"	Mandatory	sip:4687500061@tcv.ics.se
documentSelector	The document name String minLength value="1" maxLength value="100"	Mandatory	index

### 2.2.2

## Example

An example for deleting a Document is as follows:



```

Request:
<cai3:Delete>
  <cai3:MOType>Document@http://schemas.ericsson.com/ma/pgm/</cai3:MOType>
  <cai3:MOId>
    <pgm:auId>resource-lists</pgm:auId>
    <pgm:publicId>${Properties#Users}</pgm:publicId>
    <pgm:documentSelector>index</pgm:documentSelector>
  </cai3:MOId>
</cai3:Delete>

Response:
<ns2:DeleteResponse xmlns:ns2="http://schemas.ericsson.com/cai3gl.2/">
  <ns2:MOId>
    <pgm:auId xmlns:pgm="http://schemas.ericsson.com/ma/pgm/">
      org.openmobilealliance.group-usage-list
    </pgm:auId>
    <pgm:publicId xmlns:pgm="http://schemas.ericsson.com/ma/pgm/">
      sip:john.doe@123456.turkcell.com.tr
    </pgm:publicId>
    <pgm:documentSelector xmlns:pgm="http://schemas.ericsson.com/ma/pgm/">
      Index
    </pgm:documentSelector>
  </ns2:MOId>
</ns2:DeleteResponse>

```

### Example 3 Deleting a Document

## 2.3 Setting a Document

This section describes how to set a Document.

### MOType

Document@http://schemas.ericsson.com/ma/pgm/

### 2.3.1 Request Data

#### MOId

Table 5 MOID Parameters

Parameter	Type	Occurrence	Example
auId	The ID of Application Usage  String  minLength value="1"  maxLength value="100"	Mandatory	resource-lists

Parameter	Type	Occurrence	Example
publicId	The XUI address in user tree  String  value="(sip:.{1,256}) (tel:.{1,256})"	Mandatory	sip:4687500061@tcv.ics.se
documentSelector	The document name  String  minLength value="1"  maxLength value="100"	Mandatory	index

## MOAttributes

*Table 6 MOAttributes of Setting a Document*

Parameter	Type	Occurrence	Example
auId	The ID of Application Usage  String  minLength value="1"  maxLength value="100"	Mandatory	resource-lists
publicId	The XUI address in user tree  String  value="(sip:.{1,256}) (tel:.{1,256})"	Mandatory	sip:4687500061@tcv.ics.se
documentSelector	The document name  String  minLength value="1"  maxLength value="100"	Mandatory	index
eTag	The unique entity tag  String  minOccurs="0"	Optional	91862573492599024454863110320452269317
contentType	The type of the xml file content  String	Mandatory	application/resource-lists+xml
xmlDocument	The xml file  String  minOccurs="0"	Optional	The content of XML file

## 2.3.2 Example

An example for setting a Document is as follows:

```
Request:
<cai3:Set>
  <cai3:MOType>Document@http://schemas.ericsson.com/ma/pgm/</cai3:MOType>
  <cai3:MOId>
    <pgm:auId>resource-lists</pgm:auId>
    <pgm:publicId>${Properties#Users}</pgm:publicId>
    <pgm:documentSelector>index</pgm:documentSelector>
  </cai3:MOId>
  <cai3:MOAttributes>
    <pgm:setDocument auId="resource-lists" publicId="${Properties#Users}"
      documentSelector="index">
      <pgm:auId>resource-lists</pgm:auId>
      <pgm:publicId>${Properties#Users}</pgm:publicId>
      <pgm:documentSelector>index</pgm:documentSelector>
      <pgm:eTag>91862573492599024454863110320452269317</pgm:eTag>
      <pgm:contentType>application/resource-lists+xml</pgm:contentType>
      <pgm:xmlDocument>
        <resource-lists xmlns="urn:ietf:params:xml:ns:resource-lists">
          <list name="oma_buddylist">
            <external anchor=
"http://10.80.132.51:8080/xcap-ap-service/resource-lists/users/sip:4687500061@tcv.ics.se/index/~~/resource-lists">
              </list>
            </resource-lists>
          </pgm:xmlDocument>
        </pgm:setDocument>
      </cai3:MOAttributes>
    </cai3:Set>

Response:
<S:Body>
  <SetResponse xmlns="http://schemas.ericsson.com/cai3g1.2/" />
</S:Body>
```

### Example 4 Setting a Document

## 2.4 Getting a Document

This section describes how to get a Document.

### MOType

Document@http://schemas.ericsson.com/ma/pgm/

### 2.4.1 Request Data

#### MOId

Table 7 MOID Parameters

Parameter	Type	Occurrence	Example
auId	The ID of Application Usage String minLength value="1" maxLength value="100"	Mandatory	resource-lists



Parameter	Type	Occurrence	Example
publicId	The XUI address in user tree String value="(sip:.{1,256}) (tel:.{1,256})"	Mandatory	sip:4687500061@tcv.ic s.se
documentSelector	The document name String minLength value="1" maxLength value="100"	Mandatory	index

## MOAttributes

Table 8 MOAttributes of Getting a Document

Parameter	Type	Occurrence	Example
auId	The ID of Application Usage String minLength value="1" maxLength value="100"	Mandatory	resource-lists
publicId	The XUI address in user tree String value="(sip:.{1,256}) (tel:.{1,256})"	Mandatory	sip:4687500061@tcv.ic s.se
documentSelector	The document name String minLength value="1" maxLength value="100"	Mandatory	index
eTag	The unique entity tag String minOccurs="0"	Optional	9186257349259902445 4863110320452269317

## 2.4.2

## Response Data

Table 9 MOAttributes of Getting a Document Response

Parameter	Type	Occurrence	Example
auId	The ID of Application Usage String minLength value="1" maxLength value="100"	Mandatory	resource-lists



Parameter	Type	Occurrence	Example
publicId	The XUI address in user tree String value="(sip:.{1,256}) (tel:.{1,256})"	Mandatory	sip:4687500061@tcv.ic s.se
documentSelector	The document name String minLength value="1" maxLength value="100"	Mandatory	index
contentType	The type of the xml file content String	Mandatory	application/resource-lis ts+xml
eTag	The unique entity tag String minOccurs="0"	Optional	9186257349259902445 4863110320452269317
xmlDocument	The xml file String minOccurs="0"	Optional	The content of XML file

### 2.4.3

### Example

An example for getting a Document is as follows:



## Request:

```
<soapenv:Envelope xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/"
  xmlns:cai3="http://schemas.ericsson.com/cai3g1.2/"
  xmlns:pgm="http://schemas.ericsson.com/ma/pgm/">
  <soapenv:Header>
    <cai3:SessionId>${Properties#sessionId}</cai3:SessionId>
  </soapenv:Header>
  <soapenv:Body>
    <cai3:Get>
      <cai3:MOType>
        Document@http://schemas.ericsson.com/ma/pgm/
      </cai3:MOType>
      <cai3:MOId>
        <pgm:auId>resource-lists</pgm:auId>
        <pgm:publicId>${Properties#Users}</pgm:publicId>
        <pgm:documentSelector>index</pgm:documentSelector>
      </cai3:MOId>
    </cai3:Get>
  </soapenv:Body>
</soapenv:Envelope>
```

## Response:

```
<GetResponse xmlns="http://schemas.ericsson.com/cai3g1.2/">
  <MOAttributes>
    <pgm:getDocumentResponse
      xmlns:pgm="http://schemas.ericsson.com/ma/pgm/">
      <pgm:auId>resource-lists</pgm:auId>
      <pgm:publicId>sip:4687500061@tcv.ics.se</pgm:publicId>
      <pgm:documentSelector>index</pgm:documentSelector>
      <pgm:eTag>"91862573492599024454863110320452269317"</pgm:eTag>
      <pgm:contentType>
        application/resource-lists+xml; charset=UTF-8
      </pgm:contentType>
      <pgm:xmlDocument>
        <resource-lists:resource-lists xmlns="urn:ietf:params:xml:ns:resource-lists"
          xmlns:resource-lists="urn:ietf:params:xml:ns:resource-lists">
          <list name="oma_buddylist">
            <external anchor=
"http://10.80.132.50:8080/xcap-ap-service/resource-lists/users/sip:4687500061@tcv.ics.se/index/~/resource-lists/"
            </list>
          </resource-lists:resource-lists>
        </pgm:xmlDocument>
      </pgm:getDocumentResponse>
    </MOAttributes>
  </GetResponse>
```

**Example 5** *Getting a Document*



## 3 User

### 3.1 Deleting a User

This section describes how to delete a User.

#### MOType

User@http://schemas.ericsson.com/ma/pgm/

#### 3.1.1 Request Data

##### MOId

Table 10 MOID Parameters

Parameter	Type	Occurrence	Example
publicId	The XUI address in user tree String value="(sip:.{1,256}) (tel:.{1,256})"	Mandatory	sip:4687500061@tcv.ic s.se

#### 3.1.2 Example

An example for deleting a User is as follows:

Request:

```
<cai3:Delete>
  <cai3:MOType>User@http://schemas.ericsson.com/ma/pgm/</cai3:MOType>
  <cai3:MOId>
    <pgm:publicId>${Properties#Users}</pgm:publicId>
  </cai3:MOId>
</cai3:Delete>
```

#### Example 6 Deleting a User





## 4 Error Code

Table 11 PGM Error Code

Error Code	Error Message
37271	PGM delete user failure
1101	External error
37201	Bad request, invalid request
37202	Unauthorized
37203	Forbidden, not authorized to create or replace the document
37204	Document Not Found
37205	Method Not Allowed
37206	Precondition Failed
37207	Unsupported Media Type
37208	PGM Server Error or Unavailable
37209	Conflict
37299	Other PGM Document fault

```

<S:Envelope xmlns:S="http://schemas.xmlsoap.org/soap/envelope/"
  xmlns:cai3g="http://schemas.ericsson.com/cai3g1.2/">
  <S:Header>
    <cai3g:SessionId>7b8d6b01a6804ffaa3a74cfb2409f1c1</cai3g:SessionId>
  </S:Header>
  <S:Body>
    <ns2:Fault xmlns:ns2="http://schemas.xmlsoap.org/soap/envelope/"
      xmlns:ns3="http://www.w3.org/2003/05/soap-envelope">
      <faultcode>ns2:Server</faultcode>
      <faultstring>This is a server fault</faultstring>
      <detail>
        <Cai3gFault:Cai3gFault xmlns="http://schemas.ericsson.com/cai3g1.2/"
          xmlns:Cai3gFault="http://schemas.ericsson.com/cai3g1.2/">
          <faultcode>4006</faultcode>
          <faultreason>
            <reasonText>External error.</reasonText>
          </faultreason>
          <faultrole>MF</faultrole>
          <details>
            <PGFault:PGFault xmlns="http://schemas.ericsson.com/pg/1.0"
              xmlns:PGFault="http://schemas.ericsson.com/pg/1.0">
              <errorcode>37201</errorcode>
              <errormessage>Bad Request, invalid request</errormessage>
              <errordetails>External error. Bad Request -
                [Processed by PG Node: node1]
              </errordetails>
            </PGFault:PGFault>
          </details>
        </Cai3gFault:Cai3gFault>
      </detail>
    </ns2:Fault>
  </S:Body>
</S:Envelope>

```

Example 7 Dynamic Activation Document Error Message



```
<ns2:Fault xmlns:ns2="http://schemas.xmlsoap.org/soap/envelope/"
  xmlns:ns3="http://www.w3.org/2003/05/soap-envelope">
  <faultcode>ns2:Server</faultcode>
  <faultstring>This is a server fault</faultstring>
  <detail>
    <Cai3gFault:Cai3gFault xmlns="http://schemas.ericsson.com/cai3g1.2/"
      xmlns:Cai3gFault="http://schemas.ericsson.com/cai3g1.2/">
      <faultcode>4006</faultcode>
      <faultreason>
        <reasonText>External error.</reasonText>
      </faultreason>
      <faultrole>MF</faultrole>
      <details>
        <PGFault:PGFault xmlns="http://schemas.ericsson.com/pg/1.0"
          xmlns:PGFault="http://schemas.ericsson.com/pg/1.0">
          <errorcode>1101</errorcode>
          <errormessage>External error.</errormessage>
          <errordetails>External error. PGM Provisioning Error; NE fault code:
4005. Reason: Internal IO error. - [Processed by PG Node: node1]</errordetails>
        </PGFault:PGFault>
      </details>
    </Cai3gFault:Cai3gFault>
  </detail>
</ns2:Fault>
```

**Example 8**    *Dynamic Activation User Error Message*



## Reference List

- [1] *Library Overview*, 18/1553-CSH 109 628 Uen
- [2] *Generic CAI3G Interface 1.2*, 2/15519-FAY3020003 Uen