

# Multi Service Consumer Common Data 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 the provisioning of Multiple Service Consumer Common Data.

**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/da/. 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, [Multi Activation WSDL and XSD files.zip](#), to a local folder.
2. Unpack the zip file.

## 1.6 Namespaces

This document refers to the following namespaces:

- CAI3G 1.2 namespace:

`http://schemas.ericsson.com/cai3g1.2/`

- Provisioning namespace:

`http://schemas.ericsson.com/pg/cudb/1.0/`

## 1.7 Operations

One Managed Object (MO) with four operations is described in this document. See the following table for the commands and valid operations:

*Table 1 MultiSCCat Provisioning MOs*

MO	Operation			
	Create	Get	Set	Delete
MultiSCCat		x	x	

## 1.8 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.



## 1.9 MOld

MOld is an XML fragment containing the MOld 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 MOld:

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

### *Example 1 Example of MOld*

The MOld 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 MOld 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 MOld. 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 Get MultiSCCat

This section covers the MultiSCCat command GetMultiSCCat.

### MOType

MultiSCCat@http://schemas.ericsson.com/pg/cudb/1.0/

### 2.1 Request Data

#### MOId

The following table covers the parameters that can be received in a GetMultiSCCat request.

*Table 2 MOID Parameters of Getting MultiSCCat*

Parameter	Type	Occurrence	Description
imsi	Digit string 6-15 digits Each digit is 0-9	Mandatory	The IMSI number of the subscriber.

#### MOAttributes

The following table covers the parameters that can be received in a GetMultiSCCat response.

*Table 3 MOAttributes of Getting MultiSCCat*

Parameter	Type	Occurrence	Description
AdminUserDisable	Boolean	Optional	This parameter indicates whether the Administrative User Disable function is assigned to the EPS user.
NetworkAccessMode		Optional	
prov	Integer minInclusive value="0" maxInclusive value="2"	Mandatory	The provisioning state of the service 0 = Both GPRS and non-GPRS 1 = Non-GPRS 2 = GPRS

### 2.2 Example

The following shows an example of a GetMultiSCCat request.



```
<soapenv:Envelope xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/"
  xmlns:cai3="http://schemas.ericsson.com/cai3gl.2/"
  xmlns:ns="http://schemas.ericsson.com/pg/cudb/1.0/">
  <soapenv:Header>
    <cai3:SessionId>46b782d81cb348219bb4161988eb159e</cai3:SessionId>
  </soapenv:Header>
  <soapenv:Body>
    <cai3:Get>
      <cai3:MOType>MultiSCCat@http://schemas.ericsson.com/pg/cudb/1.0/</cai3:MOType>
      <cai3:MOId>
        <ns:imsi>497500009</ns:imsi>
      </cai3:MOId>
    </cai3:Get>
  </soapenv:Body>
</soapenv:Envelope>
```

### *Example 2 Getting MultiSCCat Request Message*

The following shows an example of a GetMultiSCCat response.

```
<S:Envelope xmlns:S="http://schemas.xmlsoap.org/soap/envelope/"
  xmlns:cai3g="http://schemas.ericsson.com/cai3gl.2/">
  <S:Header>
    <cai3g:SessionId>46b782d81cb348219bb4161988eb159e</cai3g:SessionId>
  </S:Header>
  <S:Body>
    <GetResponse xmlns="http://schemas.ericsson.com/cai3gl.2/">
      <MOAttributes>
        <ns:GetMultiSCCatResponse imsi="497500009" xmlns:ns="http://schemas.ericsson.com/pg/cudb/1.0/">
          <ns:imsi>497500009</ns:imsi>
          <ns:CSPS>
            <ns:NetworkAccessMode>
              <ns:prov>0</ns:prov>
            </ns:NetworkAccessMode>
          </ns:CSPS>
          <ns:EPS>
            <ns:AdminUserDisable>true</ns:AdminUserDisable>
            <ns:NetworkAccessMode>
              <ns:prov>1</ns:prov>
            </ns:NetworkAccessMode>
          </ns:EPS>
        </ns:GetMultiSCCatResponse>
      </MOAttributes>
    </GetResponse>
  </S:Body>
</S:Envelope>
```

### *Example 3 Get MultiSCCat Response Message*



## 3 Set MultiSCCat

This section covers the MultiSCCat command SetMultiSCCat.

### MOType

MultiSCCat@http://schemas.ericsson.com/pg/cudb/1.0/

### 3.1 Request Data

#### MOId

The following table covers the parameters that can be received in a SetMultiSCCat request.

*Table 4 MOID Parameters of Setting MultiSCCat*

Parameter	Type	Occurrence	Description
imsi	Digit string 6-15 digits Each digit is 0-9	Mandatory	The IMSI number of the subscriber.

#### MOAttributes

The following table covers the parameters that can be received in a SetMultiSCCat response.

*Table 5 MOAttributes of Setting MultiSCCat*

Parameter	Type	Occurrence	Description
AdminUserDisable	Boolean	Optional	This parameter indicates whether the Administrative User Disable function is assigned to the EPS user.
NetworkAccessMode		Optional	
prov	Integer 0-2	Mandatory	The provisioning state of the service 0 = Both GPRS and non-GPRS 1 = Non-GPRS 2 = GPRS
keep	Integer 0-1 0 = Does not keep subscriber data, default value. 1 = Keeps subscriber data.	Optional	This parameter indicates whether to keep subscriber data related to the network to which access is not allowed.



## 3.2 Example

The following shows an example of a SetMultiSCCat request.

```
<soapenv:Envelope xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/"
xmlns:cai3="http://schemas.ericsson.com/cai3g1.2/"
xmlns:ns="http://schemas.ericsson.com/pg/cudb/1.0/">
  <soapenv:Header>
    <cai3:SessionId>46b782d81cb348219bb4161988eb159e</cai3:SessionId>
  </soapenv:Header>
  <soapenv:Body>
    <cai3:Set>
      <cai3:MOType>MultiSCCat@http://schemas.ericsson.com/pg/cudb/1.0/</cai3:MOType>
      <cai3:MOId>
        <ns:imsi>497500009</ns:imsi>
      </cai3:MOId>
      <cai3:MOAttributes>
        <ns:SetMultiSCCat imsi="497500009">
          <ns:AdminUserDisable>true</ns:AdminUserDisable>
          <ns:NetworkAccessMode>
            <ns:prov>1</ns:prov>
            <ns:keep>1</ns:keep>
          </ns:NetworkAccessMode>
        </ns:SetMultiSCCat>
      </cai3:MOAttributes>
    </cai3:Set>
  </soapenv:Body>
</soapenv:Envelope>
```

### *Example 4 Setting MultiSCCat Request Message*

The following shows an example of a SetMultiSCCat response.

```
<S:Envelope xmlns:S="http://schemas.xmlsoap.org/soap/envelope/" xmlns:cai3g="http://schemas.ericsson.com/cai3g1.2/">
  <S:Header>
    <cai3g:SessionId>46b782d81cb348219bb4161988eb159e</cai3g:SessionId>
  </S:Header>
  <S:Body>
    <SetResponse xmlns="http://schemas.ericsson.com/cai3g1.2/" />
  </S:Body>
</S:Envelope>
```

### *Example 5 Set MultiSCCat Response Message*



## 4 Faults and Errors

This section covers the general `MultiSCCat` interface errors including two new error codes, reusing the EPS specific error codes, and HLR specific error codes. They can appear in the `errorcode` element in the error message.

For details on the EPS error codes, refer to *Layered EPS Provisioning over CAI3G*, Reference [3].

For details on the HLR error codes, refer to *CAI3G Interface Specification for HLR Components*, Reference [4].

### 4.1 MultiSCCat Interface Error Codes

The following table covers general `MultiSCCat` interface error codes for `MultiSCCat` commands over the CAI3G interface.

*Table 6 General MultiSCCat Interface Error Codes*

Error Code	Error Message	Description	MO	Operation
12001	IDENTIFIER NOT DEFINED	No IMSI in Identity Entry or No IMSI in Multi Services Consumer Entry	MultiSCCat	S, G
38000	PARTIAL EXECUTION	EPS service executed successfully, HLR service failed in execution	MultiSCCat	S
38001	SERVICE NOT DEFINED	EPS and HLR services are not defined	MultiSCCat	S

### 4.2 MultiSCCat Error Message Example

The following shows an example of a `MultiSCCat` interface error message (new error code):



```
<S:Envelope xmlns:S="http://schemas.xmlsoap.org/soap/envelope/"
  xmlns:cai3g="http://schemas.ericsson.com/cai3g1.2/">
  <S:Header>
    <cai3g:SessionId>96d940102d514543af7cf41dcc9e04e6</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>38000</errorcode>
              <errormessage>PARTIAL EXECUTION</errormessage>
              <errordetails>
                EPS service executed successfully, HLR service failed in execution.System error.
                Unexpected POD format - [Processed by PG Node: ema162-devenv]
              </errordetails>
            </PGFault:PGFault>
          </details>
        </Cai3gFault:Cai3gFault>
      </detail>
    </ns2:Fault>
  </S:Body>
</S:Envelope>
```

### **Example 6**    *MultiSCCat Error Message*



## Reference List

- [1] *Library Overview*, 18/1553-CSH 109 628 Uen
- [2] *Generic CAI3G Interface 1.2*, 2/15519-FAY3020003 Uen
- [3] *Layered EPS Provisioning over CAI3G*, 11/155 19-CSH 109 628 Uen
- [4] *CAI3G Interface Specification for HLR Components*, 25/155 19-CSH 109 628 Uen