

Layered HLR Common Profile Data over CAI3G

Ericsson Dynamic Activation 1

INTERFACE DESCRIPTION

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1 Introduction

This section is an introduction to this document. It contains information about the prerequisites, purpose, scope, and target group for the document. This section also contains explanations of typographic conventions used in this document.

1.1 Purpose and Scope

This document describes a subset of the Customer Administration Interface Third Generation (CAI3G) inbound interface towards Ericsson™ Dynamic Activation (EDA). It covers the layered Home Location Register (HLR-FE) provisioning profiles. The CAI3G managed object corresponds to the MML family for HLR in monolithic architecture. See Section 1.7 on page 3 for an overview of the profiles and their applicable operations.

This document describes common profile data in CAI3G for User Data Consolidation (UDC), the different attributes used, and the format of input parameters. This document is not a tutorial of CAI3G; it must be used together with *Generic CAI3G Interface 1.2*, Reference [2].

1.2 Target Groups

The target groups for this document are as follows:

- System Integrator

For more information about the different target groups, see *Library Overview*, Reference [3].

1.3 Typographic Conventions

Typographic conventions are described in *Library Overview*, Reference [3].

In addition, this document uses the following to indicate operations:

C	Create
S	Set
G	Get
D	Delete

- HLR-FE is referred to as HLR throughout this document.

1.4 Prerequisites

To use this document fully, user must meet the following prerequisites:

- Basic knowledge about the Dynamic Activation product
- Knowledge about *Generic CAI3G Interface 1.2*, Reference [2].

1.5 Namespaces

The following namespaces are referred to in this document:

- CAI3G 1.2 namespace:

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

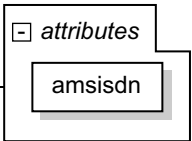
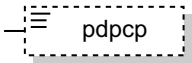

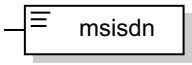
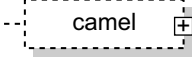
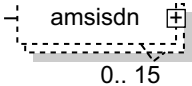
- Activation namespace:

`http://schemas.ericsson.com/pg/hlr/13.5/`

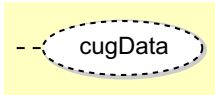
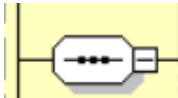
1.6 Legends

The following table shows the legends used in XML schema figures in this specification.

Table 1 *Legends Used in XML Schema Figures in This Specification*

Legend	Description
	XML attribute
	Optional XML element
	Choice icon
	Mandatory XML element
	Structured element
	Subobject element The occurrence of this element is 0–15.



Legend	Description
	User-defined type This is not a standard XML schema type. It is introduced to describe MO schema structure more clearly. In practice, this type is to be replaced by the corresponding elements.
	Sequence icon A list of elements, the sequence order must be followed.

1.7 Operations

See the following tables for the Managed Objects (MOs) and their valid operations:

Table 2 HLR Provisioning MOs - Subscriber Profile

MO	Operation			
	Create	Get	Set	Delete
Subscriber Profile		x	x	

Table 3 HLR Provisioning MOs - CAMEL Profile

MO	Operation			
	Create	Get	Set	Delete
CAMEL Subscription Data	x	x	x	x
CAMEL Extended Information			x	
CAMEL Triggering Criteria	x			x

Table 4 HLR Provisioning MOs - GPRS Profile

MO	Operation			
	Create	Get	Set	Delete
PDP Context Profile		x	x	

1.8 Multiple Values

Some parameters can have several values. In those cases, is mentioned in the type column for the parameter.

To define several values on a parameter, separate the values with “&” as in the following example:

ACC-1&ARD-1&ASL-0



Note: The example is for the parameter `sud`.

The multiple values can, for some parameters, be defined as a range of values. A value range is defined by `<start_value>& & <end_value>`.

1.9 Web Service Interface

The Web Services Description 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.

1.10 MOType

MOType is a plain text string based on the type `xs:string`. An MO type 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 MO type must follow the regular expression: `[A-Za-z][A-Za-z0-9]*`

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

1.11 MOId

MOId is an Extensible Markup Language (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 Get Subscriber Profile

This section covers the HLR Subscriber Profile command `GetSubscriberProfile`

MOType

`SubscriberProfile@http://schemas.ericsson.com/pg/hlr/13.5/`

2.1 Request Data

2.1.1 Parameters

MOId

Table 5 Get Subscriber Profile MOId

Parameter	Type	Occurrence	Description
profile	Integer 0-8192 ⁽¹⁾ String ALL	Mandatory	Subscriber profile
frontendid	String	Optional	HLRFE ID where to send the command. When the HLR FE ID is omitted, it means that the order is executed towards one randomly selected HLR. HLRFE ID is defined in Dynamic Activation.

(1) This parameter can have multiple values, see Section 1.8 on page 3.

2.2 Response Data

2.2.1 Parameters

MOId

Table 6 *Get Response Subscriber Profile MOld*

Parameter	Type	Occurrence	Description
profile	Integer 0-8192 ⁽¹⁾ String ALL	Mandatory	Subscriber profile
frontendid	String	Optional	HLRFE ID where to send the command. When the HLR FE ID is omitted, it means that the order is executed towards one randomly selected HLR. HLRFE ID is defined in Dynamic Activation.

(1) This parameter can have multiple values, see Section 1.8 on page 3.

MOAttributes

The parameters that are used in the operation are shown in Figure 1.



Figure 1 *Parameters in Get Response Subscriber Profile*

The following table covers the parameters that can be used in a `GetSubscriberProfile` request.

Table 7 *Get Response Subscriber Profile Parameters*

Parameter	Type	Occurrence	Description
profile	Integer 0-8192	Mandatory	Subscriber profile
sud	String ⁽¹⁾	Mandatory	Subscriber Data

(1) See *HLR Subscriber Data Type Definitions, Reference [4]* for a specific definition.

2.3 Examples

Request Example

This section gives an example of a `GetSubscriberProfile` request message, as shown in Example 8.



```
<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/hlr/13.5/">
  <soapenv:Header>
    <cai3:SessionId?></cai3:SessionId>
  </soapenv:Header>
  <soapenv:Body>
    <cai3:Get>
      <cai3:MOType>
        SubscriberProfile@http://schemas.ericsson.com/pg/hlr/13.5/
      </cai3:MOType>
      <cai3:MOId>
        <ns:profile>1</ns:profile>
      </cai3:MOId>
    </cai3:Get>
  </soapenv:Body>
</soapenv:Envelope>
```

Example 2 *Get Subscriber Profile Request Message*

The subscriber data specified in subscriber profile 1 is printed.

Response Example

This section gives an example of a GetSubscriberProfile response message, as shown in Example 9.

```
<S:Envelope xmlns:S="http://schemas.xmlsoap.org/soap/envelope/"
  xmlns:cai3g="http://schemas.ericsson.com/cai3g1.2/">
  <S:Header>
    <cai3g:SessionId?></cai3g:SessionId>
  </S:Header>
  <S:Body>
    <ns2:GetResponse xmlns:ns2="http://schemas.ericsson.com/cai3g1.2/">
      <ns2:MOAttributes>
        <ns:GetSubscriberProfile
          xmlns:ns="http://schemas.ericsson.com/pg/hlr/13.5/">
          <ns:SubscriberProfileData>
            <ns:profile>1</ns:profile>
            <ns:sud>CFU-1</ns:sud>
            <ns:sud>AOC-2</ns:sud>
          </ns:SubscriberProfileData>
        </ns:GetSubscriberProfile>
      </ns2:MOAttributes>
    </ns2:GetResponse>
  </S:Body>
</S:Envelope>
```

Example 3 *Get Subscriber Profile Response Message*



3 Set Subscriber Profile

This section covers the HLR Subscriber Profile command `SetSubscriberProfile`

MOType

SubscriberProfile@http://schemas.ericsson.com/pg/hlr/13.5/

3.1 Request Data

3.1.1 Parameters

MOId

Table 8 Set Subscriber Profile MOId

Parameter	Type	Occurrence	Description
profile	Integer 0-8192	Mandatory	Subscriber profile

MOAttributes

The parameters that are used in the operation are shown in Figure 2.

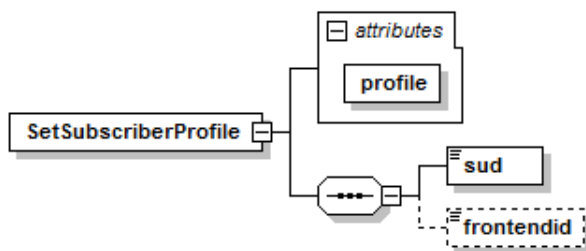


Figure 2 Parameters in Set Subscriber Profile

The following table covers the parameters that can be used in a `SetSubscriberProfile` request.

Table 9 Set Subscriber Profile Parameters

Parameter	Type	Occurrence	Description
profile	Integer 0-8192	Mandatory	Subscriber profile



Parameter	Type	Occurrence	Description
sud	String ⁽¹⁾⁽²⁾	Mandatory	SUD
frontendid	String	Optional	HLRFE ID where to send the command. When the HLRFE ID is omitted, it means that the order is executed towards all HLRs. HLRFE ID is defined in Dynamic Activation.

(1) See *HLR Subscriber Data Type Definitions, Reference [4]* for a specific definition.

(2) This parameter can have multiple values, see Section 1.8 on page 3.

3.2 Examples

Request Example

This section gives an example of a `SetSubscriberProfile` request message, as shown in Example 10.

```
<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/hlr/13.5/">
  <soapenv:Header>
    <cai3:SessionId?></cai3:SessionId>
  </soapenv:Header>
  <soapenv:Body>
    <cai3:Set>
      <cai3:MOType>
        SubscriberProfile@http://schemas.ericsson.com/pg/hlr/13.5/
      </cai3:MOType>
      <cai3:MOId>
        <ns:profile>1</ns:profile>
      </cai3:MOId>
      <cai3:MOAttributes>
        <ns:SetSubscriberProfile profile="1">
          <ns:sud>CFU-1&AOC-2</ns:sud>
        </ns:SetSubscriberProfile>
      </cai3:MOAttributes>
    </cai3:Set>
  </soapenv:Body>
</soapenv:Envelope>
```

Example 4 Set Subscriber Profile Request Message

Call forwarding unconditional and Advice of Charge charging are set to be provided in subscriber profile number one.

Response Example

This section gives an example of a `SetSubscriberProfile` response message, as shown in Example 11.



```
<S:Envelope xmlns:S="http://schemas.xmlsoap.org/soap/envelope/"
  xmlns:cai3g="http://schemas.ericsson.com/cai3g1.2/">
  <S:Header>
    <cai3g:SessionId?></cai3g:SessionId>
  </S:Header>
  <S:Body>
    <ns2:SetResponse xmlns:ns2="http://schemas.ericsson.com/cai3g1.2/" />
  </S:Body>
</S:Envelope>
```

Example 5 *Set Subscriber Profile Response Message*





4 Create CAMEL Subscription Data

This section covers the CAMEL Subscription Data command `CreateCAMELSubscriptionData`.

`CreateCAMELSubscriptionData` initiates CAMEL subscription data for a CAMEL Subscription Profile (CSP).

MOType

`CAMELSubscriptionData@http://schemas.ericsson.com/pg/hlr/13.5/`

4.1 Request Data

4.1.1 Parameters

MOId

Table 10 Create CAMEL Subscription Data MOId

Parameter	Type	Occurrence	Description
csp	Integer 1-8160	Mandatory	CAMEL Subscription Profile

MOAttributes

The parameters that are used in the operation are shown in Figure 3 and Figure 4.

Parameter `msisdn` is deprecated.

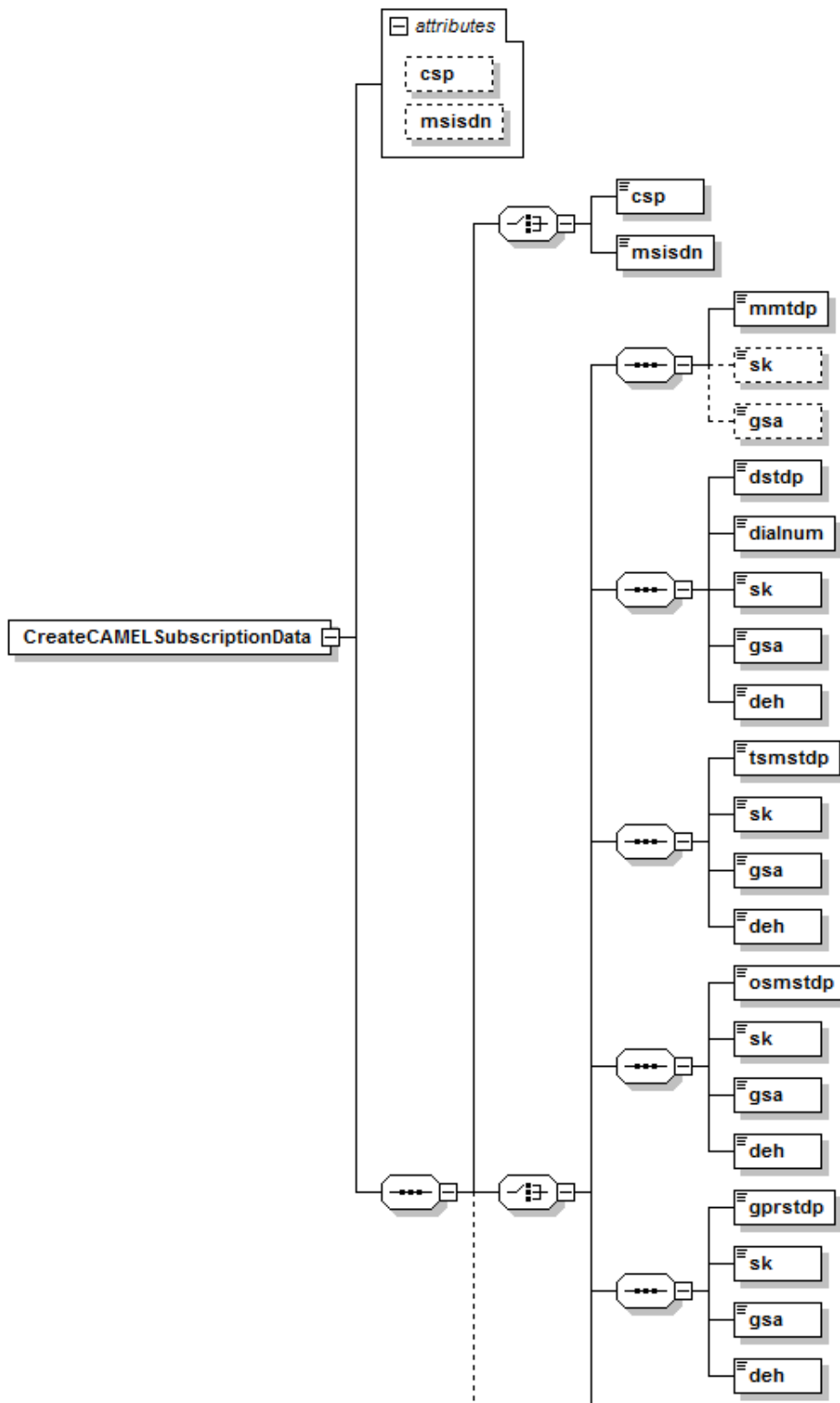


Figure 3 Parameters in Create CAMEL Subscription Data, Part 1

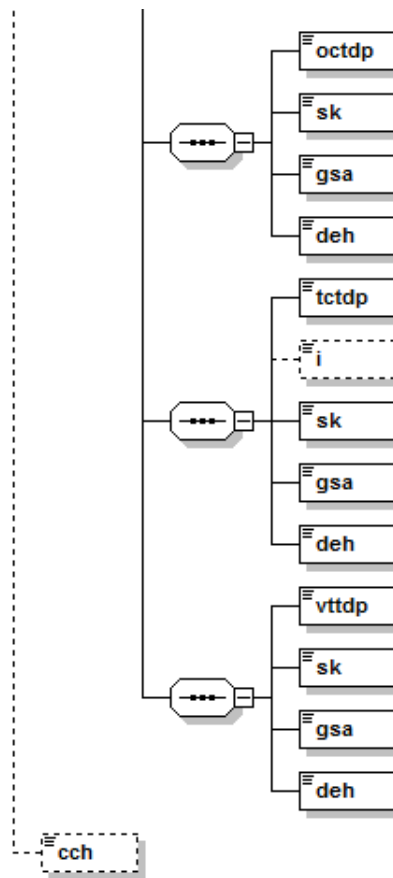


Figure 4 Parameters in Create CAMEL Subscription Data, Part 2

The following table covers the parameters that can be used in a CreateCAMELSubscriptionData request.

Table 11 Create CAMEL Subscription Data Parameters

Parameter	Type	Occurrence	Description
cch	Integer 1-4 CAMEL Phase	Optional	CAMEL capability handling
csp	Integer 1-8160	Mandatory	CAMEL Subscription Profile
deh	Integer 0-1 0 = Transaction released in case of error in the Global System for Mobile Communication (GSM) service control function to GSM or General Packet Radio Service (GPRS) service switching function dialogue 1 = Transaction continued in case of error in the GSM service control function to GSM or GPRS service switching function dialogue	Optional	Default error handling



Parameter	Type	Occurrence	Description
dialnum	String starting with a digit 0-4: <ul style="list-style-type: none">• 0 = Unknown• 1 or 2 = Not used• 3 = National number• 4 = International number followed by -, followed by a text string 1-15 characters. Acceptable characters are 0-9, *, #, a, b, and c Example: 2-abc2#	Optional	Dialed number
dstdp	Integer 1-10	Optional	Dialed service CAMEL Trigger Detection Point (TDP)
gprstdp	Integer 0-255	Optional	GPRS CAMEL TDP
gsa	Digit string 3-15. Each digit is 0-9.	Optional	GSM service control function address
i	Boolean {true, false}	Optional	Inhibition indicator
mmtdp	Integer 0-255 ⁽¹⁾	Optional	Mobility management CAMEL TDP
octdp	Integer 0-255	Optional	Originating CAMEL TDP
osmstdp	Integer 0-255	Optional	Originating Short Message Service (SMS) CAMEL TDP
sk	Integer 0-2147483647	Optional	Service key
tctdp	Integer 0-255	Optional	Terminating CAMEL TDP
tsmstdp	Integer 0-255	Optional	Terminating SMS CAMEL TDP
vttdp	Integer 0-255	Optional	Visited Mobile Switching Center (VMSC) terminating CAMEL TDP

(1) This parameter can have multiple values, see Section 1.8 on page 3.

4.2 Examples

Request Example

This section gives an example of a `CreateCAMELSubscriptionData` request message, as shown in Example 6.



```
<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/hlr/13.5/">
  <soapenv:Header>
    <cai3:SessionId?></cai3:SessionId>
  </soapenv:Header>
  <soapenv:Body>
    <cai3:Create>
      <cai3:MOType>
        CAMELSubscriptionData@http://schemas.ericsson.com/pg/hlr/13.5/
      </cai3:MOType>
      <cai3:MOId>
        <ns:csp>25</ns:csp>
      </cai3:MOId>
      <cai3:MOAttributes>
        <ns:CreateCAMELSubscriptionData csp="25">
          <ns:csp>25</ns:csp>
          <ns:octdp>2</ns:octdp>
          <ns:sk>1234333</ns:sk>
          <ns:gsa>98765432</ns:gsa>
          <ns:deh>0</ns:deh>
          <ns:cch>2</ns:cch>
        </ns:CreateCAMELSubscriptionData>
      </cai3:MOAttributes>
    </cai3:Create>
  </soapenv:Body>
</soapenv:Envelope>
```

Example 6 Create CAMEL Subscription Data Request Message

The service key 1234333 and the GSM service control function address 98765432 are associated to the originating TDP 2, CAMEL phase 2, for CAMEL subscription profile number 25. If error occur in the dialogue between GSM service control function and GSM service switching function the call is released.

Response Example

This section gives an example of a CreateCAMELSubscriptionData response message, as shown in Example 7.

```
<S:Envelope xmlns:S="http://schemas.xmlsoap.org/soap/envelope/"
  xmlns:cai3g="http://schemas.ericsson.com/cai3g1.2/">
  <S:Header>
    <cai3g:SessionId?></cai3g:SessionId>
  </S:Header>
  <S:Body>
    <ns2:CreateResponse xmlns:ns2="http://schemas.ericsson.com/cai3g1.2/">
      <ns2:MOId>
        <ns:csp xmlns:ns="http://schemas.ericsson.com/pg/hlr/13.5/">25</ns:csp>
      </ns2:MOId>
    </ns2:CreateResponse>
  </S:Body>
</S:Envelope>
```

Example 7 Create CAMEL Subscription Data Response Message





5 Get CAMEL Subscription Data

This section covers the CAMEL Subscription Data command `GetCAMELSubscriptionData`.

MOType

`CAMELSubscriptionData@http://schemas.ericsson.com/pg/hlr/13.5/`

5.1 Request Data

5.1.1 Parameters

MOld

Note: Optional parameters are `opt`, `ext`, and `crit`. When `opt` is given in the MOld, CAMEL subscription options are returned. When `ext` is given in the MOld, extended CAMEL data are returned. When `crit` is given in the MOld, CAMEL triggering criteria is returned.

Table 12 Get CAMEL Subscription Data MOld

Parameter	Type	Occurrence	Description
<code>crit</code>	anyType <crit/>	Optional	CAMEL triggering criteria
<code>csp</code>	Integer 1-8160	Mandatory	CAMEL Subscription Profile
<code>ext</code>	anyType <ext/>	Optional	Extended CAMEL data
<code>opt</code>	anyType <opt/>	Optional	CAMEL subscription options

5.2 Response Data

MOld

Table 13 Get Response CAMEL Subscription Data MOld

Parameter	Type	Occurrence	Description
<code>crit</code>	anyType <crit/>	Optional	CAMEL triggering criteria
<code>csp</code>	Integer 1-8160	Mandatory	CAMEL Subscription Profile



Parameter	Type	Occurrence	Description
ext	anyType <ext/>	Optional	Extended CAMEL data
opt	anyType <opt/>	Optional	CAMEL subscription options

MOAttributes

The parameters that are used in the operation are shown in Figure 5 and Figure 6.

Parameter `msisdn` is deprecated.

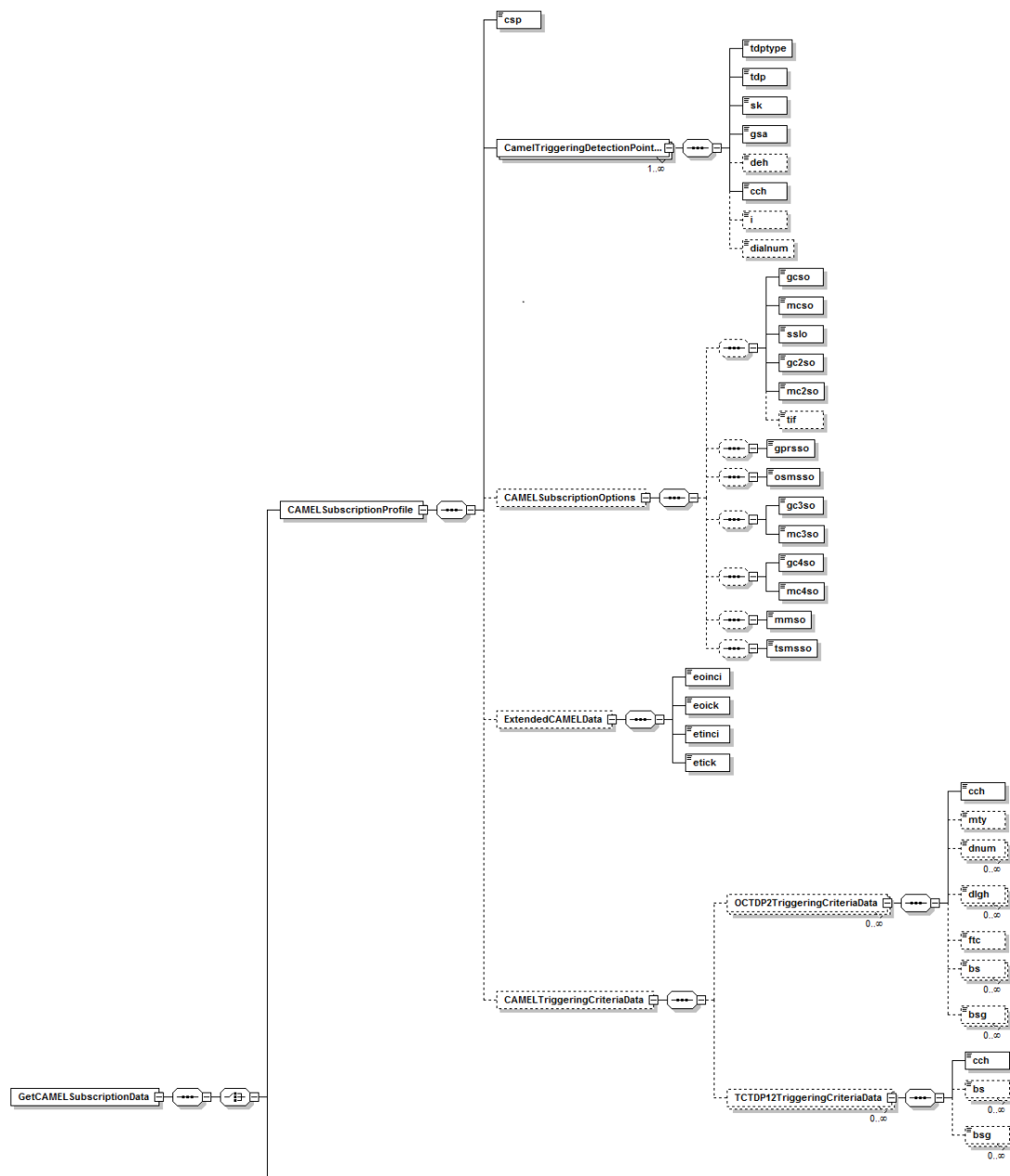


Figure 5 Parameters in Get Response CAMEL Subscription Data, Part 1

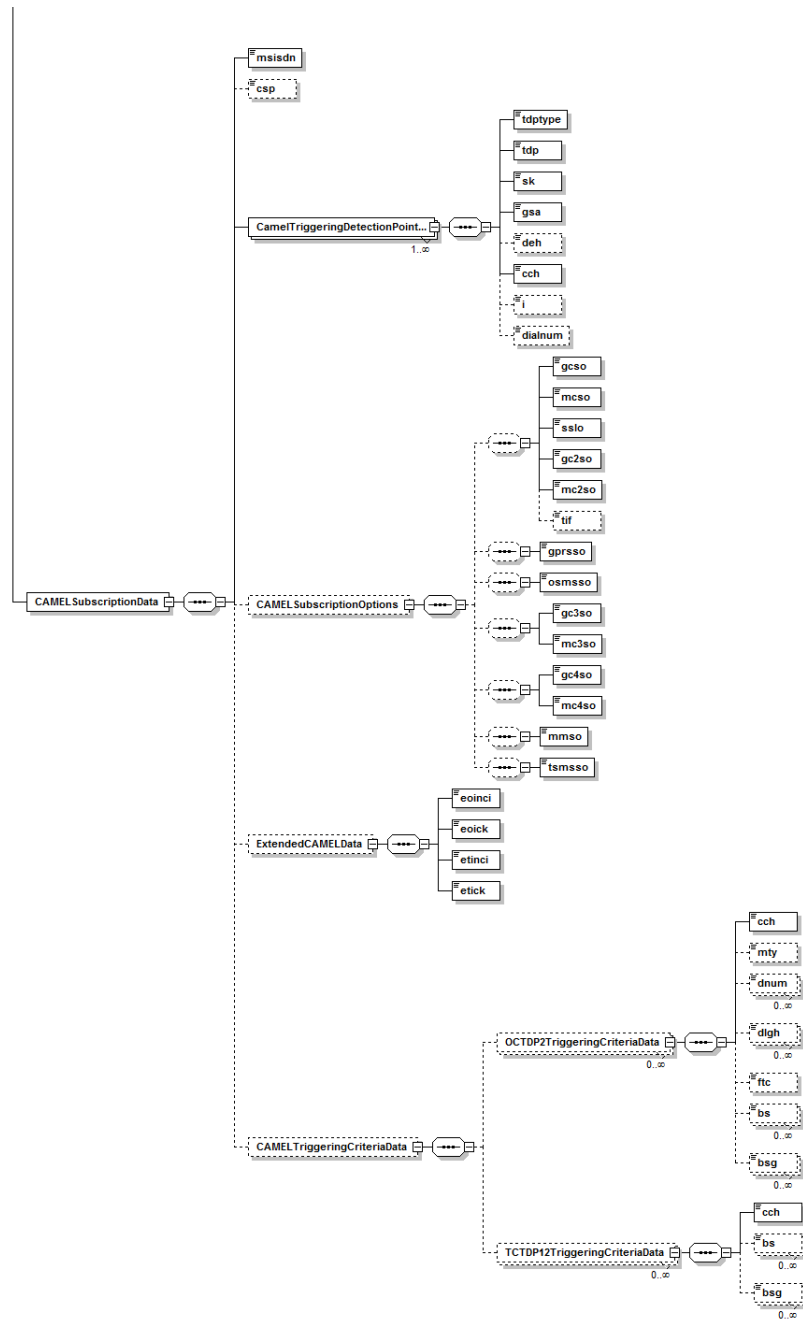


Figure 6 Parameters in Get Response CAMEL Subscription Data, Part 2

The following table covers the parameters that can be used in a GetCAMELSubscriptionData request.

Table 14 Get CAMEL Response Subscription Data Parameters

Parameter	Type	Occurrence	Description
bs	String ⁽¹⁾	Optional	Basic Service (BS)



Parameter	Type	Occurrence	Description
bsg	String ⁽¹⁾	Optional	Basic Service Group (BSG)
cch	Integer 1-4 CAMEL Phase	Optional	CAMEL capability handling
csp	Integer 1-8160	Mandatory	CAMEL Subscription Profile (CSP)
deh	Integer 0-1 0 = Transaction released in case of error in the Global System for Mobile Communication (GSM) service control function to GSM or General Packet Radio Service (GPRS) service switching function dialogue. 1 = Transaction continued in case of error in the GSM service control function to GSM or GPRS service switching function dialogue.	Optional	Default error handling
dialnum	String starting with a digit 0-4: • 0 = Unknown • 1 or 2 = Not used • 3 = National number • 4 = International number followed by -, followed by a text string 1-15 characters. Acceptable characters are 0-9, *, #, a, b, and c. Example: 0-baccab#22	Optional	Dialed number
dlgh	Integer 1-15	Optional	Destination number length
dnum	String starting with a digit 0-4 • 0 = Unknown • 1 or 2 = Not used • 3 = National number • 4 = International number followed by -, followed by a text string 1-15 characters. Acceptable characters are 0-9, *, #, a, b, and c. Example: 3-4000#	Optional	Destination number
eoick	Integer 0-999 Value 0 means not assigned.	Optional	Extended originating intelligent network category key
eoinci	Integer 0-255 Value 0 means not assigned.	Optional	Extended originating intelligent network capability indicator
etick	Integer 0-999 Value 0 means not assigned.	Optional	Extended terminating intelligent network category key



Parameter	Type	Occurrence	Description
etinci	Integer 0-255 Value 0 means not assigned.	Optional	Extended terminating intelligent network capability indicator
ftc	String F (Forwarding) or N (Not forwarding).	Optional	Forwarding triggering criteria
gcso	Integer 0-1 0 = Allow call terminating handling without CAMEL invocation when CAMEL phase 1 is not supported in the interrogating GMSC/gsmSCF. 1 = Apply ODB of all incoming calls when CAMEL phase 1 is not supported in the interrogating GMSC/gsmSCF.	Optional	GMSC gsmSCF CAMEL phase 1 support subscription option
gc2so	Integer 0-1 0 = Allow call terminating handling with CAMEL phase 1 invocation when CAMEL phase 2 is not supported in the interrogating GMSC/gsmSCF. 1 = Apply Operator Determined Barring (ODB) of all incoming calls when CAMEL phase 2 is not supported in the interrogating GMSC/gsmSCF.	Optional	Gateway Mobile Switching Center (GMSC) / Global System for Mobile Communication Service Control Function (gsmSCF) CAMEL phase 2 support subscription option
gc3so	Integer 0-1 0 = Allow call terminating handling with lower CAMEL phase invocation when CAMEL phase 3 is not supported in the interrogating GMSC/gsmSCF. 1 = Apply ODB of all incoming calls when CAMEL phase 3 is not supported in the interrogating GMSC/gsmSCF.	Optional	GMSC gsmSCF CAMEL phase 3 support subscription option
gc4so	Integer 0-1 0 = Allow call terminating handling with lower CAMEL phase invocation when CAMEL phase 4 is not supported in the interrogating GMSC/gsmSCF. 1 = Apply ODB of all incoming calls when CAMEL phase 4 is not supported in the interrogating GMSC/gsmSCF.	Optional	GMSC gsmSCF CAMEL phase 4 support subscription option
gprssso	Integer 0-1 0 = Allow mobile subscribers registration in the Serving GPRS Support Node (SGSN) without sending GPRS CAMEL phase 3 data when CAMEL phase 3 data is not allowed to be sent to the SGSN. 1 = Deny mobile subscribers registration in the SGSN when CAMEL phase 3 data is not allowed to be sent to the SGSN.	Optional	GPRS CAMEL phase 3 denied subscription option



Parameter	Type	Occurrence	Description
gsa	Digit string 3-15 digits. Each digit is 0-9.	Optional	GSM service control function address
i	Boolean {true, false} true = Terminating CAMEL subscription data for the given Trigger Detection Point (TDP) is not sent towards the GMSC when the subscriber is roaming inside the Home Public Land Mobile Network (HPMLN) false = Terminating CAMEL subscription data for the given TDP is always sent towards the GMSC	Optional	Inhibition indicator
mcs0	Integer 0-2 0 = Allow mobile subscribers registration in the serving MSC/VLR without sending CAMEL data when CAMEL phase 1 data is not allowed to be sent to the MSC/VLR. 1 = Network induced activation of supplementary service BAOC performed when CAMEL phase 1 data is not allowed to be sent to the serving MSC/VLR. 2 = Deny mobile subscribers registration in the serving MSC/VLR when CAMEL phase 1 data is not allowed to be sent to the MSC/VLR.	Optional	Mobile Switching Center (MSC) / Visitor Location Register (VLR) CAMEL phase 1 denied subscription option
mc2so	Integer 0-2 0 = Check if mobile subscribers registration in the serving MSC/VLR with CAMEL phase 1 data can be performed or register without CAMEL data when CAMEL phase 2 data is not allowed to be sent to the MSC/VLR. 1 = Network induced activation of supplementary service Barring of All Outgoing Calls (BAOC) performed when CAMEL phase 2 data is not allowed to be sent to the serving MSC/VLR. 2 = Deny mobile subscribers registration in the serving MSC/VLR when CAMEL phase 2 data is not allowed to be sent to the MSC/VLR.	Optional	MSC/VLR CAMEL phase 2 denied subscription option



Parameter	Type	Occurrence	Description
mc3so	Integer 0–2 0 = Check if mobile subscribers registration in the serving MSC/VLR with lower CAMEL phase data can be performed or register without CAMEL data when CAMEL phase 3 data is not allowed to be sent to the MSC/VLR. 1 = Network induced activation of supplementary service BAOC performed when CAMEL phase 3 data is not allowed to be sent to the serving MSC/VLR. For Visited MSC (VMSC) terminating CAMEL TDPs, value 1 has the same meaning as value 0. 2 = Deny mobile subscribers registration in the serving MSC/VLR when CAMEL phase 3 data is not allowed to be sent to the MSC/VLR.	Optional	MSC/VLR CAMEL phase 3 denied subscription option
mc4so	Integer 0–2 0 = Check if mobile subscribers registration in the serving MSC/VLR with lower CAMEL phase data can be performed or register without CAMEL data when CAMEL phase 4 data is not allowed to be sent to the MSC/VLR. 1 = Network induced activation of supplementary service BAOC performed when CAMEL phase 4 data is not allowed to be sent to the serving MSC/VLR. For VMSC terminating CAMEL TDPs, value 1 has the same meaning as value 0.. 2 = Deny mobile subscriber's registration in the serving MSC/VLR when CAMEL phase 4 data is not allowed to be sent to the MSC/VLR.	Optional	MSC/VLR CAMEL phase 4 denied subscription option
mmso	Integer 0–1 0 = Allow mobile subscribers registration in the serving MSC/VLR without sending mobility management CAMEL phase 3 data when CAMEL phase 3 data is not allowed to be sent to the MSC/VLR. 1 = Deny mobile subscribers registration in the serving MSC/VLR when CAMEL phase 3 data is not allowed to be sent to the MSC/VLR.	Optional	Mobility management CAMEL phase 3 denied subscription option
mty	String I (Inhibiting) or E (Enabling)	Optional	Match type



Parameter	Type	Occurrence	Description
osmssso	Integer 0–2 0 = Allow mobile subscribers registration in the serving node (MSC/VLR or SGSN or both) without sending originating SMS CAMEL phase 3 data when CAMEL phase 3 data is not allowed to be sent to the MSC/VLR or SGSN. 1 = Network induced service withdrawal of Teleservice Short Message MO/PP performed when CAMEL phase 3 data is not allowed to be sent to the MSC/VLR or SGSN. 2 = Deny mobile subscribers registration in the serving node (MSC/VLR or SGSN or both) when CAMEL phase 3 data is not allowed to be sent to the MSC/VLR or SGSN.	Optional	Originating Short Message Service (SMS) CAMEL phase 3 denied subscription option
sk	Integer 0–2147483647	Optional	Service key
sslo	Integer 0–1 0 = Subscriber state and location information are not sent at Send Routing Information Mobile Application Part (MAP) version 3 message response. 1 = Subscriber state and location information are sent at Send Routing Information MAP version 3 message response.	Optional	Subscriber state and location information sending CAMEL subscription option
tdp	Integer 0–255 ⁽¹⁾ The value range depends on tdptype.	Optional	Trigger Detection Point (TDP)
tdptype	String <ul style="list-style-type: none"> • DSTDP • GPRSTDP • MMTDP • OCTDP • OSMSTDP • TCTDP • TSMSTDP • VTTDP 	Optional	Type of TDP



Parameter	Type	Occurrence	Description
tif	Integer 0–1 0 = Number length, format, and conditional barrings checks are performed, when the mobile subscriber or the service provider registers a forwarded-to number. 1 = Number length, format, and conditional barrings checks are not performed, when the mobile subscriber or the service provider registers a forwarded-to number.	Optional	Translation information flag
tsmsso	Integer 0–2 0 = Allow mobile subscribers registration in the serving node (MSC/VLR or SGSN or both) without sending terminating SMS CAMEL phase 4 data, when terminating SMS CAMEL phase 4 data is not allowed to be sent to the MSC/VLR, or SGSN, or both. 1 = Allow mobile subscribers registration in the serving node (MSC/VLR or SGSN or both) without sending terminating SMS CAMEL phase 4 data, when terminating SMS CAMEL phase 4 data is not allowed to be sent to the MSC/VLR or SGSN or both. Network induced service invocation of an incoming call barring service is applied to mobile terminating short message delivery through MSC, or SGSN, or both. 2 = Deny mobile subscribers registration in the serving node (MSC/VLR or SGSN or both) when terminating SMS CAMEL phase 4 data is not allowed to be sent to the MSC/VLR, or SGSN, or both	Optional	Terminating SMS CAMEL phase 4 denied subscription option

(1) Possible values, and explanations for them, can be found in *HLR Subscriber Data Type Definitions, Reference* [4].

5.3 Examples

Request Example

This section gives an example of a `GetCAMELSubscriptionData` request message, as shown in Example 8.



```

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/hlr/13.5/"
<soapenv:Header>
  <cai3:SessionId?></cai3:SessionId>
</soapenv:Header>
<soapenv:Body>
  <cai3:Get>
    <cai3:MOType>
      CAMELSubscriptionData@http://schemas.ericsson.com/pg/hlr/13.5/
    </cai3:MOType>
    <cai3:MOId>
      <ns:csp>21</ns:csp>
    </cai3:MOId>
  </cai3:Get>
</soapenv:Body>
</soapenv:Envelope><

```

Example 8 *Get CAMEL Subscription Data Request Message*

CAMEL subscription data for CAMEL subscription profile number 21 is printed.

Response Example

This section gives an example of a GetCAMELSubscriptionData response message, as shown in Example 9.

```

<S:Envelope xmlns:S="http://schemas.xmlsoap.org/soap/envelope/"
xmlns:cai3g="http://schemas.ericsson.com/cai3g1.2/">
  <S:Header>
    <cai3g:SessionId?></cai3g:SessionId>
  </S:Header>
  <S:Body>
    <ns2:GetResponse xmlns:ns2="http://schemas.ericsson.com/cai3g1.2/">
      <ns2:MOAttributes>
        <ns:GetCAMELSubscriptionData
xmlns:ns="http://schemas.ericsson.com/pg/hlr/13.5/">
          <ns:CAMELSubscriptionProfile>
            <ns:csp>21</ns:csp>
            <ns:CamelTriggeringDetectionPointData>
              <ns:tdptype>OCTDP</ns:tdptype>
              <ns:tdp>2</ns:tdp>
              <ns:sk>1234333</ns:sk>
              <ns:gsa>98765432</ns:gsa>
              <ns:deh>0</ns:deh>
              <ns:cch>2</ns:cch>
            </ns:CamelTriggeringDetectionPointData>
            <ns:CAMELSubscriptionOptions>
              <ns:gc3so>0</ns:gc3so>
              <ns:mc3so>0</ns:mc3so>
              <ns:tif>0</ns:tif>
            </ns:CAMELSubscriptionOptions>
            <ns:ExtendedCAMELData>
              <ns:eoinci>3</ns:eoinci>
              <ns:eoick>0</ns:eoick>
              <ns:etinci>0</ns:etinci>
              <ns:etick>0</ns:etick>
            </ns:ExtendedCAMELData>
          </ns:CAMELSubscriptionProfile>
        </ns:GetCAMELSubscriptionData>
      </ns2:MOAttributes>
    </ns2:GetResponse>
  </S:Body>
</S:Envelope>

```

Example 9 *Get CAMEL Subscription Data Response Message*





6 Set CAMEL Subscription Data

This section covers the CAMEL Subscription Data command `SetCAMELSubscriptionData`.

`SetCAMELSubscriptionData` changes CAMEL subscription data for a CSP.

MOType

`CAMELSubscriptionData@http://schemas.ericsson.com/pg/hlr/13.5/`

6.1 Request Data

6.1.1 Parameters

MOId

Table 15 Set CAMEL Subscription Data MOId

Parameter	Type	Occurrence	Description
csp	Integer 1-8160	Mandatory	CAMEL Subscription Profile

MOAttributes

The parameters that are used in the operation are shown in Figure 7.

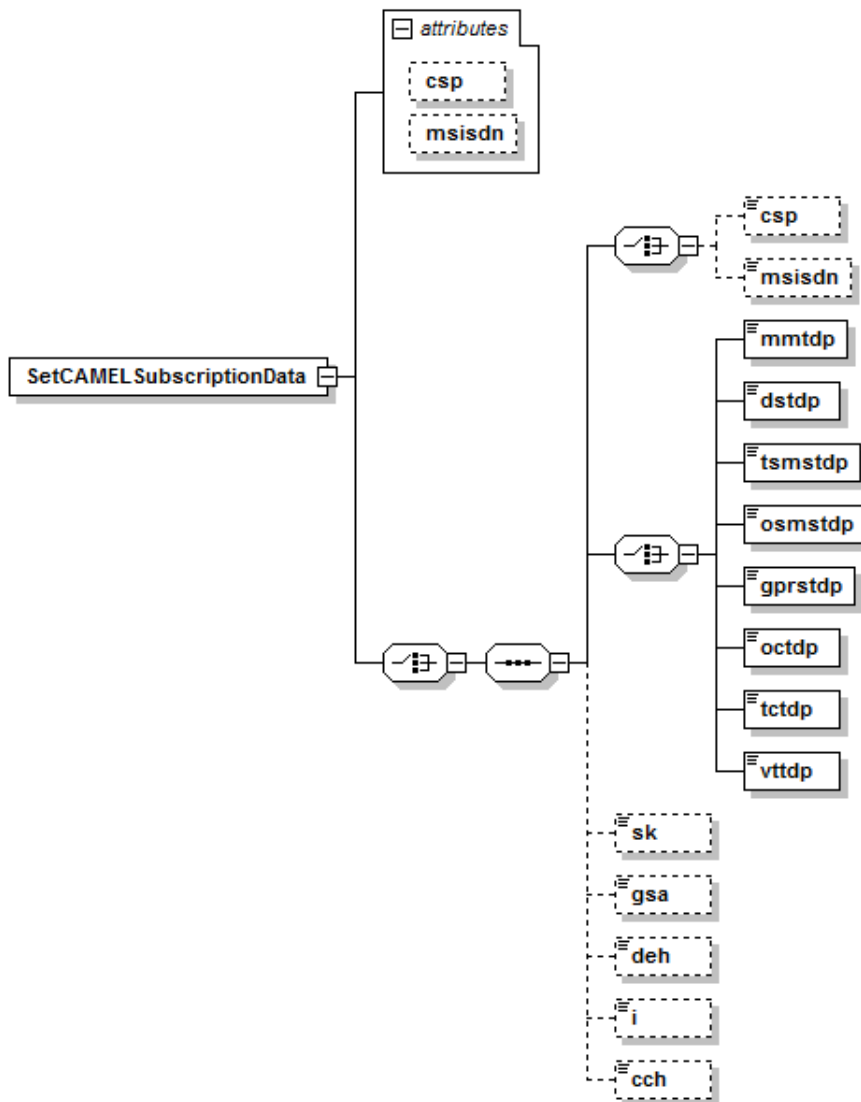


Figure 7 Parameters in Set CAMEL Subscription Data

The following table covers the parameters that can be used in a `SetCAMELSSubscriptionData` request.

Table 16 Set CAMEL Subscription Data Parameters

Parameter	Type	Occurrence	Description
cch	Integer 1-4 ⁽¹⁾ CAMEL Phase	Optional	CAMEL capability handling
csp	Integer 1-8160	Mandatory	CAMEL Subscription Profile



Parameter	Type	Occurrence	Description
deh	Integer 0-1 0 = Transaction released in case of error in the Global System for Mobile Communication (GSM) service control function to GSM or General Packet Radio Service (GPRS) service switching function dialogue. 1 = Transaction continued in case of error in the GSM service control function to GSM or GPRS service switching function dialogue.	Optional	Default error handling
dstdp	Integer 1-10	Optional	Dialled service CAMEL TDP
gprstdp	Integer 0-255 ⁽²⁾	Optional	GPRS CAMEL TDP
gsa	Digit string 3-15 digits. Each digit is 0-9.	Optional	GSM service control function address
i	Boolean {true, false}	Optional	Inhibition indicator
mmtdp	String MMTDP ⁽¹⁾	Optional	Mobility management CAMEL Trigger Detection Point (TDP)
octdp	Integer 0-255 ⁽¹⁾	Optional	Originating CAMEL TDP
osmstdp	Integer 0-255 ⁽¹⁾	Optional	Originating Short Message Service (SMS) CAMEL TDP
sk	Integer 0-2147483647	Optional	Service key
tctdp	Integer 0-255 ⁽¹⁾	Optional	Terminating CAMEL TDP
tsmstdp	Integer 0-255 ⁽¹⁾	Optional	Terminating SMS CAMEL TDP
vttdp	Integer 0-255 ⁽¹⁾	Optional	Visited Mobile Switching Center (VMSC) terminating CAMEL TDP

(1) If *mmtdp* is used, *cch* can only have value 3.

(2) See *HLR Subscriber Data Type Definitions*, Reference [4] for a specific definition.

6.2 Examples

Request Example

This section gives an example of a `SetCAMELSubscriptionData` request message, as shown in Example 10.



```
<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/hlr/13.5/">
  <soapenv:Header>
    <cai3:SessionId?></cai3:SessionId>
  </soapenv:Header>
  <soapenv:Body>
    <cai3:Set>
      <cai3:MOType>
        CAMELSubscriptionData@http://schemas.ericsson.com/pg/hlr/13.5/
      </cai3:MOType>
      <cai3:MOId>
        <ns:csp>25</ns:csp>
      </cai3:MOId>
      <cai3:MOAttributes>
        <ns:SetCAMELSubscriptionData csp="25">
          <ns:tctdp>12</ns:tctdp>
          <ns:sk>250</ns:sk>
          <ns:gsa>434566765</ns:gsa>
          <ns:i>N</ns:i>
          <ns:cch>4</ns:cch>
        </ns:SetCAMELSubscriptionData>
      </cai3:MOAttributes>
    </cai3:Set>
  </soapenv:Body>
</soapenv:Envelope>
```

Example 10 Set CAMEL Subscription Data Request Message

Service key 250 and the GSM service control function address 434566765 are associated to the terminating TDP 12, CAMEL phase 4, for the CAMEL subscription profile number 25. Terminating CAMEL subscription data is always sent to GMSC.

Response Example

This section gives an example of a SetCAMELSubscriptionData response message, as shown in Example 11.

```
<S:Envelope xmlns:S="http://schemas.xmlsoap.org/soap/envelope/"
xmlns:cai3g="http://schemas.ericsson.com/cai3g1.2/">
  <S:Header>
    <cai3g:SessionId?></cai3g:SessionId>
  </S:Header>
  <S:Body>
    <ns2:SetResponse xmlns:ns2="http://schemas.ericsson.com/cai3g1.2/" />
  </S:Body>
</S:Envelope>
```

Example 11 Set CAMEL Subscription Data Response Message



7 Delete CAMEL Subscription Data

This section covers the CAMEL Subscription Data command `DeleteCAMELSubscriptionData`.

`DeleteCAMELSubscriptionData` ends CAMEL subscription data for a CSP.

MOType

`CAMELSubscriptionData@http://schemas.ericsson.com/pg/hlr/13.5/`

7.1 Request Data

7.1.1 Parameters

MOId

Note: Optional parameters are `cch` and one of `mmtdp`, `dstdp`, `tsmstdp`, `osmstdp`, `grpstdp`, `octdp`, `tctdp`, and `vttdp`.

Table 17 Delete CAMEL Subscription Data Parameters

Parameter	Type	Occurrence	Description
<code>cch</code>	Integer 1–4 CAMEL Phase	Optional	CAMEL capability handling
<code>csp</code>	Integer 1–8160	Mandatory	CAMEL Subscription Profile
<code>dstdp</code>	Integer 1–10 ⁽¹⁾ or String ALL	Optional	Dialled service CAMEL Trigger Detection Point (TDP)
<code>grpstdp</code>	Integer 0–255 ⁽²⁾ or String ALL	Optional	GPRS CAMEL TDP
<code>mmtdp</code>	Integer 0–255 ⁽¹⁾⁽¹⁾ or String ALL	Optional	Mobility management CAMEL TDP
<code>octdp</code>	Integer 0–255 ⁽¹⁾⁽¹⁾ or String ALL	Optional	Originating CAMEL TDP



Parameter	Type	Occurrence	Description
osmstdp	Integer 0-255 ⁽¹⁾⁽¹⁾ or String ALL	Optional	Originating Short Message Service (SMS) CAMEL TDP
tctdp	Integer 0-255 ⁽¹⁾⁽¹⁾ or String ALL	Optional	Terminating CAMEL TDP
tsmstdp	Integer 0-255 ⁽¹⁾⁽¹⁾ or String ALL	Optional	Terminating SMS CAMEL TDP
vtt dp	Integer 0-255 ⁽¹⁾⁽¹⁾ or String ALL	Optional	Visited Mobile Switching Center (VMSC) terminating CAMEL TDP

(1) This parameter can have multiple values, see Section 1.8 on page 3.

(2) See HLR Subscriber Data Type Definitions, Reference [4] for a specific definition.

MOAttributes

N/A

7.2

Examples

Request Example

This section gives an example of a DeleteCAMELSubscriptionData request message, as shown in Example 12.

```
<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/hlr/13.5/">
  <soapenv:Header>
    <cai3:SessionId?></cai3:SessionId>
  </soapenv:Header>
  <soapenv:Body>
    <cai3:Delete>
      <cai3:MOType>
        CAMELSubscriptionData@http://schemas.ericsson.com/pg/hlr/13.5/
      </cai3:MOType>
      <cai3:MOId>
        <ns:csp>25</ns:csp>
        <ns:cch>2</ns:cch>
        <ns:octdp>ALL</ns:octdp>
        <ns:tctdp>12</ns:tctdp>
      </cai3:MOId>
    </cai3:Delete>
  </soapenv:Body>
</soapenv:Envelope>
```

Example 12 Delete CAMEL Subscription Data Request Message

All originating CAMEL phase 2 subscription data and terminating CAMEL phase 2 subscription data with TDP 12 are removed for the CAMEL subscription profile number 25.



Response Example

This section gives an example of a DeleteCAMELSubscriptionData response message, as shown in Example 13.

```
<S:Envelope xmlns:S="http://schemas.xmlsoap.org/soap/envelope/"
xmlns:cai3g="http://schemas.ericsson.com/cai3g1.2/">
  <S:Header>
    <cai3g:SessionId?></cai3g:SessionId>
  </S:Header>
  <S:Body>
    <ns2:DeleteResponse xmlns:ns2="http://schemas.ericsson.com/cai3g1.2/">
      <ns2:MOId>
        <MO-NS:csp xmlns:MO-NS="http://schemas.ericsson.com/pg/hlr/13.5/">25</MO-NS:csp>
        <MO-NS:cch xmlns:MO-NS="http://schemas.ericsson.com/pg/hlr/13.5/">2</MO-NS:cch>
        <MO-NS:octdp xmlns:MO-NS="http://schemas.ericsson.com/pg/hlr/13.5/">ALL</MO-NS:octdp>
        <MO-NS:tctdp xmlns:MO-NS="http://schemas.ericsson.com/pg/hlr/13.5/">12</MO-NS:tctdp>
      </ns2:MOId>
    </ns2:DeleteResponse>
  </S:Body>
</S:Envelope>
```

Example 13 Delete CAMEL Subscription Data Response Message





8 Set CAMEL Extended Information

This section covers the CAMEL Extended Information command `SetCAMELExtendedInformation`.

`SetCAMELExtendedInformation` changes the CAMEL subscription options as well as extended CAMEL data for a CSP with CAMEL subscription data defined.

MOType

`CAMELExtendedInformation@http://schemas.ericsson.com/pg/hlr/13.5/`

8.1 Request Data

8.1.1 Parameters

MOId

Table 18 Set CAMEL Extended Information MOId

Parameter	Type	Occurrence	Description
csp	Integer 1-8160	Mandatory	CAMEL Subscription Profile (CSP)

MOAttributes

The parameters that are used in the operation are shown in Figure 8.

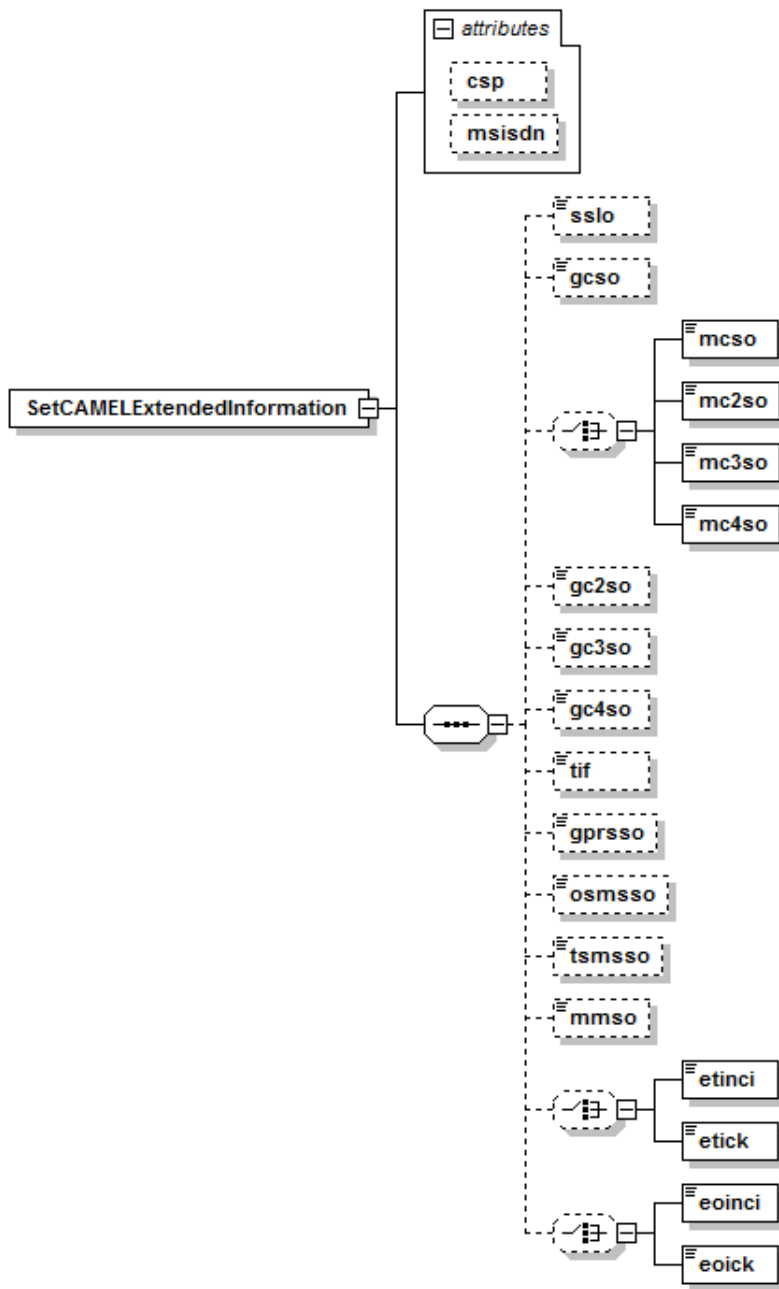


Figure 8 Parameters in Set CAMEL Extended Information

The following table covers the parameters that can be used in a SetCAMELExtendedInformation request.

Table 19 Set CAMEL Extended Information Parameters

Parameter	Type	Occurrence	Description
csp	Integer 1-8160	Mandatory	CAMEL Subscription Profile (CSP)



Parameter	Type	Occurrence	Description
eoick	Integer 0–999 Value 0 means not assigned.	Optional	Extended originating intelligent network category key
eoinci	Integer 0–255 Value 0 means not assigned.	Optional	Extended originating intelligent network capability indicator
etick	Integer 0–999 Value 0 means not assigned.	Optional	Extended terminating intelligent network category key
etinci	Integer 0–255 Value 0 means not assigned.	Optional	Extended terminating intelligent network capability indicator
gcso	Integer 0–1 0 = Allow call terminating handling without CAMEL invocation when CAMEL phase 1 is not supported in the interrogating GMSC/gsmSCF. 1 = Apply ODB of all incoming calls when CAMEL phase 1 is not supported in the interrogating GMSC/gsmSCF.	Optional	GMSC gsmSCF CAMEL phase 1 support subscription option
gc2so	Integer 0–1 0 = Allow call terminating handling with CAMEL phase 1 invocation when CAMEL phase 2 is not supported in the interrogating GMSC/gsmSCF. 1 = Apply Operator Determined Barring (ODB) of all incoming calls when CAMEL phase 2 is not supported in the interrogating GMSC/gsmSCF.	Optional	GMSC gsmSCF CAMEL phase 2 support subscription option
gc3so	Integer 0–1 0 = Allow call terminating handling with lower CAMEL phase invocation when CAMEL phase 3 is not supported in the interrogating GMSC/gsmSCF. 1 = Apply ODB of all incoming calls when CAMEL phase 3 is not supported in the interrogating GMSC/gsmSCF.	Optional	GMSC gsmSCF CAMEL phase 3 support subscription option
gc4so	Integer 0–1 0 = Allow call terminating handling with lower CAMEL phase invocation when CAMEL phase 4 is not supported in the interrogating GMSC/gsmSCF. 1 = Apply ODB of all incoming calls when CAMEL phase 4 is not supported in the interrogating GMSC/gsmSCF.	Optional	GMSC gsmSCF CAMEL phase 4 support subscription option



Parameter	Type	Occurrence	Description
gprssso	Integer 0–1 0 = Allow mobile subscribers registration in the Serving GPRS Support Node (SGSN) without sending GPRS CAMEL phase 3 data when CAMEL phase 3 data is not allowed to be sent to the SGSN. 1 = Deny mobile subscribers registration in the SGSN when CAMEL phase 3 data is not allowed to be sent to the SGSN.	Optional	GPRS CAMEL phase 3 denied subscription option
mcsso	Integer 0–2 0 = Allow mobile subscribers registration in the serving MSC/VLR without sending CAMEL data when CAMEL phase 1 data is not allowed to be sent to the MSC/VLR. 1 = Network induced activation of supplementary service BAOC performed when CAMEL phase 1 data is not allowed to be sent to the serving MSC/VLR. 2 = Deny mobile subscribers registration in the serving MSC/VLR when CAMEL phase 1 data is not allowed to be sent to the MSC/VLR.	Optional	MSC/VLR CAMEL phase 1 denied subscription option
mc2so	Integer 0–2 0 = Check if mobile subscribers registration in the serving MSC/VLR with CAMEL phase 1 data can be performed or register without CAMEL data when CAMEL phase 2 data is not allowed to be sent to the MSC/VLR. 1 = Network induced activation of supplementary service Barring of All Outgoing Calls (BAOC) performed when CAMEL phase 2 data is not allowed to be sent to the serving MSC/VLR. 2 = Deny mobile subscribers registration in the serving MSC/VLR when CAMEL phase 2 data is not allowed to be sent to the MSC/VLR.	Optional	MSC/VLR CAMEL phase 2 denied subscription option



Parameter	Type	Occurrence	Description
mc3so	Integer 0–2 0 = Check if mobile subscribers registration in the serving MSC/VLR with lower CAMEL phase data can be performed or register without CAMEL data when CAMEL phase 3 data is not allowed to be sent to the MSC/VLR. 1 = Network induced activation of supplementary service BAOC performed when CAMEL phase 3 data is not allowed to be sent to the serving MSC/VLR. For Visited MSC (VMSC) terminating CAMEL TDPs, value 1 has the same meaning as value 0. 2 = Deny mobile subscribers registration in the serving MSC/VLR when CAMEL phase 3 data is not allowed to be sent to the MSC/VLR.	Optional	MSC/VLR CAMEL phase 3 denied subscription option
mc4so	Integer 0–2 0 = Check if mobile subscribers registration in the serving MSC/VLR with lower CAMEL phase data can be performed or register without CAMEL data when CAMEL phase 4 data is not allowed to be sent to the MSC/VLR. 1 = Network induced activation of supplementary service BAOC performed when CAMEL phase 4 data is not allowed to be sent to the serving MSC/VLR. For VMSC terminating CAMEL TDPs, value 1 has the same meaning as value 0.. 2 = Deny mobile subscribers registration in the serving MSC/VLR when CAMEL phase 4 data is not allowed to be sent to the MSC/VLR.	Optional	MSC/VLR CAMEL phase 4 denied subscription option
mmso	Integer 0–1 0 = Allow mobile subscribers registration in the serving MSC/VLR without sending mobility management CAMEL phase 3 data when CAMEL phase 3 data is not allowed to be sent to the MSC/VLR. 1 = Deny mobile subscribers registration in the serving MSC/VLR when CAMEL phase 3 data is not allowed to be sent to the MSC/VLR.	Optional	Mobility management CAMEL phase 3 denied subscription option



Parameter	Type	Occurrence	Description
osmss0	Integer 0-2 0 = Allow mobile subscribers registration in the serving node (MSC/VLR or SGSN or both) without sending originating SMS CAMEL phase 3 data when CAMEL phase 3 data is not allowed to be sent to the MSC/VLR or SGSN. 1 = Network induced service withdrawal of Teleservice Short Message MO/PP performed when CAMEL phase 3 data is not allowed to be sent to the MSC/VLR or SGSN. 2 = Deny mobile subscribers registration in the serving node (MSC/VLR or SGSN or both) when CAMEL phase 3 data is not allowed to be sent to the MSC/VLR or SGSN.	Optional	Originating Short Message Service (SMS) CAMEL phase 3 denied subscription option
sslo	Integer 0-1 0 = Subscriber state and location information are not sent at Send Routing Information Mobile Application Part (MAP) version 3 message response. 1 = Subscriber state and location information are sent at Send Routing Information MAP version 3 message response.	Optional	Subscriber state and location information sending CAMEL subscription option



Parameter	Type	Occurrence	Description
tif	Integer 0–1 0 = Number length, format, and conditional barrings checks are performed, when the mobile subscriber or the service provider registers a forwarded-to number. 1 = Number length, format, and conditional barrings checks are not performed, when the mobile subscriber or the service provider registers a forwarded-to number.	Optional	Translation information flag
tsmsso	Integer 0–2 0 = Allow mobile subscribers registration in the serving node (MSC/VLR or SGSN or both) without sending terminating SMS CAMEL phase 4 data, when terminating SMS CAMEL phase 4 data is not allowed to be sent to the MSC/VLR, or SGSN, or both. 1 = Allow mobile subscribers registration in the serving node (MSC/VLR or SGSN or both) without sending terminating SMS CAMEL phase 4 data, when terminating SMS CAMEL phase 4 data is not allowed to be sent to the MSC/VLR or SGSN or both. Network induced service invocation of an incoming call barring service is applied to mobile terminating short message delivery through MSC, or SGSN, or both. 2 = Deny mobile subscribers registration in the serving node (MSC/VLR or SGSN or both) when terminating SMS CAMEL phase 4 data is not allowed to be sent to the MSC/VLR, or SGSN, or both	Optional	Terminating SMS CAMEL phase 4 denied subscription option

8.2 Examples

Request Example

This section gives an example of a `SetCAMELExtendedInformation` request message, as shown in Example 14.



```

<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/hlr/13.5/">
  <soapenv:Header>
    <cai3:SessionId?></cai3:SessionId>
  </soapenv:Header>
  <soapenv:Body>
    <cai3:Set>
      <cai3:MOType>
        CAMELExtendedInformation@http://schemas.ericsson.com/pg/hlr/13.5/
      </cai3:MOType>
      <cai3:MOId>
        <ns:csp>3</ns:csp>
      </cai3:MOId>
      <cai3:MOAttributes>
        <ns:SetCAMELExtendedInformation csp="3">
          <ns:mc3so>0</ns:mc3so>
          <ns:gc3so>0</ns:gc3so>
          <ns:tif>0</ns:tif>
        </ns:SetCAMELExtendedInformation>
      </cai3:MOAttributes>
    </cai3:Set>
  </soapenv:Body>
</soapenv:Envelope>

```

Example 14 Set CAMEL Extended Information Request Message

A check if registration with lower CAMEL phase is performed or register without CAMEL data when CAMEL phase 3 data is not allowed to be sent to the MSC/VLR. Call terminating handling with lower CAMEL phase invocation when CAMEL phase 3 is not supported in the interrogating GMSC/gsmSCF, is applied. When the subscriber or the service provider registers a forwarded-to number, number length, format, and conditional barring checks are performed on the forwarded-to number. All these actions are performed for CAMEL subscription profile number 3.

Response Example

This section gives an example of a SetCAMELExtendedInformation response message, as shown in Example 15.

```

<S:Envelope xmlns:S="http://schemas.xmlsoap.org/soap/envelope/"
  xmlns:cai3g="http://schemas.ericsson.com/cai3g1.2/">
  <S:Header>
    <cai3g:SessionId?></cai3g:SessionId>
  </S:Header>
  <S:Body>
    <ns2:SetResponse xmlns:ns2="http://schemas.ericsson.com/cai3g1.2/" />
  </S:Body>
</S:Envelope>

```

Example 15 Set CAMEL Extended Information Response Message



9 Create CAMEL Triggering Criteria

This section covers the CAMEL Triggering Criteria command `CreateCAMELTriggeringCriteria`.

`CreateCAMELTriggeringCriteria` initiates CAMEL triggering criteria for a CSP.

MOType

`CAMELTriggeringCriteria@http://schemas.ericsson.com/pg/hlr/13.5/`

9.1 Request Data

9.1.1 Parameters

MOId

Table 20 Create CAMEL Triggering Criteria MOId

Parameter	Type	Occurrence	Description
csp	Integer 1-8160	Mandatory	AMEL Subscription Profile (CSP)

MOAttributes

The parameters that are used in the operation are shown in Figure 9.

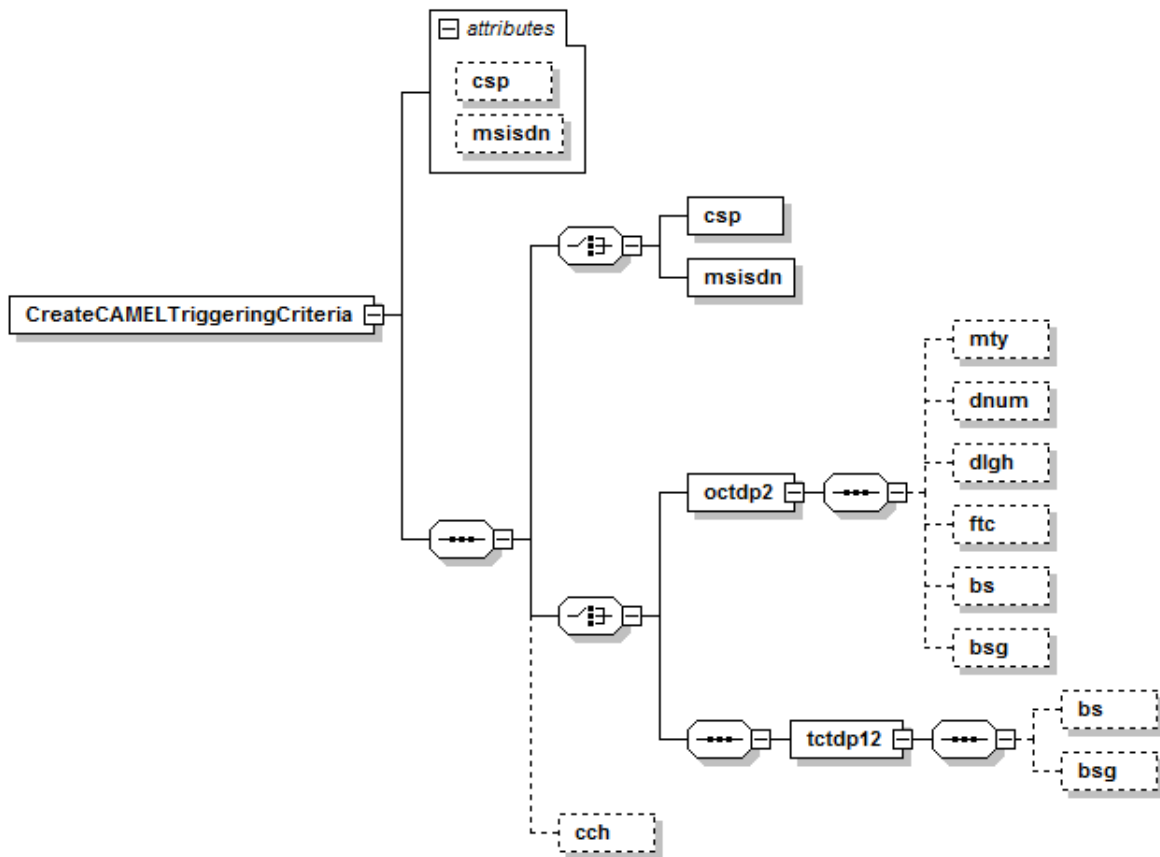


Figure 9 Parameters in Create CAMEL Triggering Criteria

The following table covers the parameters that can be used in a CreateCAMELTriggeringCriteria request.

Table 21 Create CAMEL Triggering Criteria Parameters

Parameter	Type	Occurrence	Description
bs	String ⁽¹⁾⁽²⁾	Optional	BS
bsg	String ⁽¹⁾⁽²⁾	Optional	BSG
cch	Integer 1-4 CAMEL Phase	Optional	CAMEL capability handling
csp	Integer 1-8160	Mandatory	CAMEL Subscription Profile (CSP)



Parameter	Type	Occurrence	Description
dnum	String starting with a digit 0-4 <ul style="list-style-type: none"> 0 = Unknown 1 or 2 = Not used 3 = National number 4 = International number followed by -, followed by a text string 1-15 characters. Acceptable characters are 0-9, *, #, a, b, and c. Example: 1-25a*99 ⁽²⁾	Optional	Destination number
dlgh	Integer 1-15 ⁽²⁾	Optional	Destination number length
ftc	String F (Forwarding) or N (Not forwarding)	Optional	Forwarding triggering criteria
mtty	String I (Inhibiting) or E (Enabling)	Optional	Match type

(1) Possible values, and explanations for them, can be found in *HLR Subscriber Data Type Definitions, Reference [4]*.

(2) This parameter can have multiple values, see Section 1.8 on page 3.

9.2 Examples

Request Example

This section gives an example of a `CreateCAMELTriggeringCriteria` request message, as shown in Example 16.



```

<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/hlr/13.5/">
  <soapenv:Header>
    <cai3:SessionId?></cai3:SessionId>
  </soapenv:Header>
  <soapenv:Body>
    <cai3:Create>
      <cai3:MOType>
        CAMELTriggeringCriteria@http://schemas.ericsson.com/pg/hlr/13.5/
      </cai3:MOType>
      <cai3:MOId>
        <ns:csp?></ns:csp>
      </cai3:MOId>
      <cai3:MOAttributes>
        <ns:CreateCAMELTriggeringCriteria
          csp="12">
          <ns:csp>12</ns:csp>
          <ns:octdp2>
            <ns:mty>I</ns:mty>
            <ns:dnum>0-&quot;*21*678902000#&quot;</ns:dnum>
            <ns:dlgh>3&amp;4&amp;5</ns:dlgh>
          </ns:octdp2>
        </ns:CreateCAMELTriggeringCriteria>
      </cai3:MOAttributes>
    </cai3:Create>
  </soapenv:Body>
</soapenv:Envelope>

```

Example 16 *Create CAMELTriggering Criteria Request Message*

Triggering criteria for CAMEL subscription profile number 12 is initiated for originating CAMEL phase 3 TDP “Collected Info” with match type 'Inhibiting', destination number series *21*678902000# with unknown nature of address, and destination number lengths 3, 4 or 5.

Response Example

This section gives an example of a CreateCAMELTriggeringCriteria response message, as shown in Example 17.

```

<S:Envelope xmlns:S="http://schemas.xmlsoap.org/soap/envelope/"
  xmlns:cai3g="http://schemas.ericsson.com/cai3gl.2/">
  <S:Header>
    <cai3g:SessionId?></cai3g:SessionId>
  </S:Header>
  <S:Body>
    <ns2:CreateResponse xmlns:ns2="http://schemas.ericsson.com/cai3gl.2/">
      <ns2:MOId>
        <ns:csp xmlns:ns="http://schemas.ericsson.com/pg/hlr/13.5/">12</ns:csp>
      </ns2:MOId>
    </ns2:CreateResponse>
  </S:Body>
</S:Envelope>

```

Example 17 *Create CAMEL Triggering Criteria Response Message*



10 Delete CAMEL Triggering Criteria

This section covers the CAMEL Triggering Criteria command `DeleteCAMELTriggeringCriteria`.

`DeleteCAMELTriggeringCriteria` ends CAMEL triggering criteria defined for a CSP.

MOType

`CAMELTriggeringCriteria@http://schemas.ericsson.com/pg/hlr/13.5/`

10.1 Request Data

10.1.1 Parameters

MOId

Optional parameters are `dnum`, `dlgh`, `ftc`, `bs`, and `bsg`.

Table 22 Delete CAMEL Triggering Criteria Parameters

Parameter	Type	Occurrence	Description
<code>bs</code>	String ⁽¹⁾ or String ALL	Optional	BS
<code>bsg</code>	String ⁽¹⁾ or String ALL	Optional	BSG
<code>cch</code>	Integer 1-4 CAMEL Phase	Optional	CAMEL capability handling
<code>criteriaTDP</code>	Values: OCTDP2 TCTDP12	Optional	
<code>csp</code>	Integer 1-8160	Mandatory	CAMEL Subscription Profile (CSP)



Parameter	Type	Occurrence	Description
dnum	String starting with a digit 0-4 <ul style="list-style-type: none">0 = Unknown1 or 2 = Not used3 = National number4 = International number followed by -, followed by a text string 1-15 characters. Acceptable characters are 0-9, *, #, a, b, and c. Example: 4-199*cab It is also possible to use the string ALL.	Optional	Destination number
dlgh	Integer 1-15 or String ALL	Optional	Destination number length
ftc	String F (Forwarding) or N (Not forwarding)	Optional	Forwarding triggering criteria

(1) See *HLR Subscriber Data Type Definitions*, Reference [4] for a specific definition.

MOAttributes

N/A

10.2 Examples

Request Example

This section gives an example of a DeleteCAMELTriggeringCriteria request message, as shown in Example 18.

```
<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/hlr/13.5/">
  <soapenv:Header>
    <cai3:SessionId?></cai3:SessionId>
  </soapenv:Header>
  <soapenv:Body>
    <cai3:Delete>
      <cai3:MOType>
        CAMELTriggeringCriteria@http://schemas.ericsson.com/pg/hlr/13.5/
      </cai3:MOType>
      <cai3:MOId>
        <ns:csp>127</ns:csp>
        <ns:cch>3</ns:cch>
      </cai3:MOId>
    </cai3:Delete>
  </soapenv:Body>
</soapenv:Envelope>
```

Example 18 Delete CAMEL Triggering Criteria Request Message



All CAMEL phase 3 triggering criteria are deleted for CAMEL subscription profile number 127.

Response Example

This section gives an example of a DeleteCAMELTriggeringCriteria response message, as shown in Example 19.

```
<S:Envelope xmlns:S="http://schemas.xmlsoap.org/soap/envelope/"
xmlns:cai3g="http://schemas.ericsson.com/cai3g1.2/">
  <S:Header>
    <cai3g:SessionId?></cai3g:SessionId>
  </S:Header>
  <S:Body>
    <ns2:DeleteResponse xmlns:ns2="http://schemas.ericsson.com/cai3g1.2/">
      <ns2:MOId>
        <MO-NS:csp xmlns:MO-NS="http://schemas.ericsson.com/pg/hlr/13.5/">127</MO-NS:csp>
        <MO-NS:cch xmlns:MO-NS="http://schemas.ericsson.com/pg/hlr/13.5/">3</MO-NS:cch>
      </ns2:MOId>
    </ns2:DeleteResponse>
  </S:Body>
</S:Envelope>
```

Example 19 Delete CAMEL Triggering Criteria Response Message





11 Get PDP Context Profile

This section covers the PDP Context Profile command `GetPDPContextProfile`.

`GetPDPContextProfile` returns the Packet Data Protocol (PDP) contexts data of a PDP context profile within the UDC.

MOType

`PDPContextProfile@http://schemas.ericsson.com/pg/hlr/13.5/`

11.1 Request Data

11.1.1 Parameters

MOId

Table 23 Get PDP Context Profile MOId

Parameter	Type	Occurrence	Description
pdpcp	Integer 1-8160 or String ALL	Mandatory	PDP context profile

11.2 Response Data

11.2.1 Parameters

MOId

Table 24 Get Response PDP Context Profile MOId

Parameter	Type	Occurrence	Description
pdpcp	Integer 1-8160	Mandatory	PDP context profile

MOAttributes

The parameters that are used in the operation are shown in Figure 10.

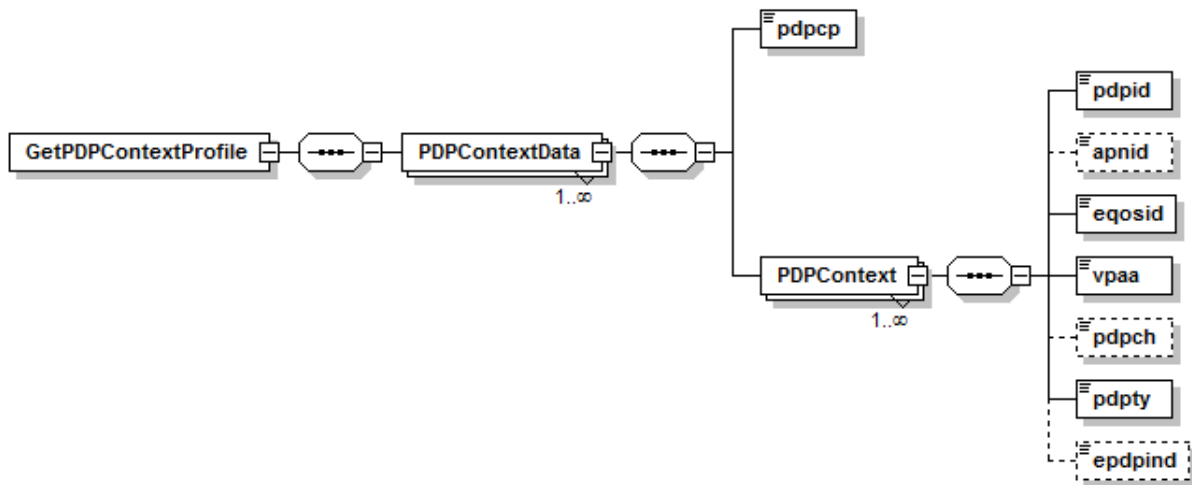


Figure 10 Parameters in Get Response PDP Context Profile

The following table covers the parameters that can be used in a `GetPDPCContextProfile` request.

Table 25 Get Response PDP Context Profile Parameters

Parameter	Type	Occurrence	Description
apnid	Integer 0-16383	Optional	Access Point Name (APN) identifier
epdpind	Boolean {true, false}	Optional	Extended PDP context type indicator
eqosid	Integer 0-4095	Optional	Extended Quality of Service (QoS) identifier
pdpch	String 2-7 characters	Optional	PDP context charging characteristics (1)
pdpcp	Integer 1-8160	Mandatory	PDP context profile
pdpid	Integer 1-50	Optional	PDP context identifier
pdpty	One of the following strings: <ul style="list-style-type: none"> • IPV4 • PPP • IPV6 	Optional	PDP context type
vpaa	Boolean {true, false}	Optional	Visited Public Land Mobile Network (VPLMN) address allowed

(1) The PDPCH attribute is printed only if the PDP context charging characteristics validity indicator (PDPCHVID) identifies it as a valid PDP context charging characteristics.



11.3 Examples

Request Example

This section gives an example of a GetPDPContextProfile request message, as shown in Example 20.

```
<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/hlr/13.5/">
  <soapenv:Header>
    <cai3:SessionId?></cai3:SessionId>
  </soapenv:Header>
  <soapenv:Body>
    <cai3:Get>
      <cai3:MOType>
        PDPContextProfile@http://schemas.ericsson.com/pg/hlr/13.5/
      </cai3:MOType>
      <cai3:MOId>
        <ns:pdpcp>1</ns:pdpcp>
      </cai3:MOId>
    </cai3:Get>
  </soapenv:Body>
</soapenv:Envelope>
```

Example 20 Get PDP Context Profile Request Message

PDP context data within PDP context profiles 1 is printed.

Response Example

This section gives an example of a GetPDPContextProfile response message, as shown in Example 21.

```
<S:Envelope xmlns:S="http://schemas.xmlsoap.org/soap/envelope/"
  xmlns:cai3g="http://schemas.ericsson.com/cai3g1.2/">
  <S:Header>
    <cai3g:SessionId?></cai3g:SessionId>
  </S:Header>
  <S:Body>
    <ns2:GetResponse xmlns:ns2="http://schemas.ericsson.com/cai3g1.2/">
      <ns2:MOAttributes>
        <ns:GetPDPContextProfile
          xmlns:ns="http://schemas.ericsson.com/pg/hlr/13.5/">
          <ns:PDPContextData>
            <ns:pdpcp>11</ns:pdpcp>
            <ns:PDPContext>
              <ns:pdpid>1</ns:pdpid>
              <ns:apnid>2</ns:apnid>
              <ns:egosid>13</ns:egosid>
              <ns:vpaa>true</ns:vpaa>
              <ns:pdpty>IPV4</ns:pdpty>
            </ns:PDPContext>
          </ns:PDPContextData>
        </ns:GetPDPContextProfile>
      </ns2:MOAttributes>
    </ns2:GetResponse>
  </S:Body>
</S:Envelope>
```

Example 21 Get PDP Context Profile Response Message





12 Set PDP Context Profile

This section covers the PDP Context Profile command `SetPDPContextProfile`.

`SetPDPContextProfile` changes PDP context profile data. The command allows initiating a PDP context in a PDP context profile, to change some or all the data of a PDP context in a PDP context profile, or to remove PDP contexts in a PDP context profile.

MOType

`PDPContextProfile@http://schemas.ericsson.com/pg/hlr/13.5/`

12.1 Request Data

12.1.1 Parameters

MOId

Table 26 Set PDP Context Profile MOId

Parameter	Type	Occurrence	Description
pdpcp	Integer 1-8160	Mandatory	PDP context profile

MOAttributes

The parameters that are used in the operation are shown in Figure 11.

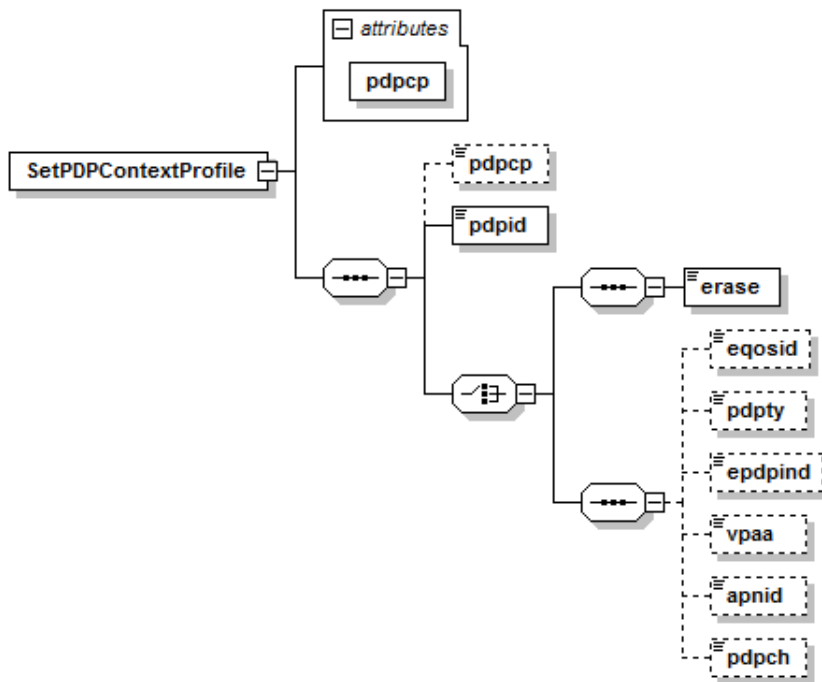


Figure 11 Parameters in Set PDP Context Profile

The following table covers the parameters that can be used in a SetPDPContextProfile request.

Table 27 Set PDP Context Profile Parameters

Parameter	Type	Occurrence	Description
apnid	Integer 0-16383 or String WILDCARD	Optional	Access Point Name (APN) identifier
epdpind	Boolean {true, false}	Optional	Extended PDP context type indicator
eqosid	Integer 0-4095	Optional	Extended Quality of Service (QoS) identifier
erase	Boolean {true, false}	Optional	Erase indicator
pdpch	Expressed as $\langle pdppi \rangle$ - $\langle pdpgb \rangle$ where $\langle pdpgb \rangle$ is optional. $\langle pdppi \rangle$ is an integer 0-15. $\langle pdpgb \rangle$ is an integer 0-4095. The default value of this parameter is 0. The value of this parameter can also be the string ERASE.	Optional	PDP context charging characteristics $\langle pdppi \rangle$ is a PDP context charging characteristics profile index. $\langle pdpgb \rangle$ is a PDP context charging characteristics profile GPRS support node behavior index. This is an application system-dependent parameter.
pdpcp	Integer 1-8160	Mandatory	PDP context profile
pdpid	Integer 1-50 ⁽¹⁾	Optional	PDP context identifier



Parameter	Type	Occurrence	Description
pdpty	One of the following strings: <ul style="list-style-type: none"> • IPV4 • PPP • IPV6 	Optional	PDP context type
vpaa	Boolean {true, false}	Optional	Visited Public Land Mobile Network (VPLMN) address allowed

(1) This parameter can have multiple values, see Section 1.8 on page 3.

12.2 Examples

Request Example

This section gives an example of a SetPDPContextProfile request message, as shown in Example 22.

```
<soapenv:Envelope xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/"
  xmlns:cai3="http://schemas.ericsson.com/cai3gl1.2/"
  xmlns:ns="http://schemas.ericsson.com/pg/hlr/13.5/">
  <soapenv:Header>
    <cai3:SessionId?></cai3:SessionId>
  </soapenv:Header>
  <soapenv:Body>
    <cai3:Set>
      <cai3:MOType>
        PDPContextProfile@http://schemas.ericsson.com/pg/hlr/13.5/
      </cai3:MOType>
      <cai3:MOId>
        <ns:pdpcp>100</ns:pdpcp>
      </cai3:MOId>
      <cai3:MOAttributes>
        <ns:SetPDPContextProfile pdpcp="100">
          <ns:pdpid>10</ns:pdpid>
          <ns:pdpty>PPP</ns:pdpty>
          <ns:vpaa>true</ns:vpaa>
        </ns:SetPDPContextProfile>
      </cai3:MOAttributes>
    </cai3:Set>
  </soapenv:Body>
</soapenv:Envelope>
```

Example 22 Set PDP Context Profile Request Message

HGPPC:PDPCP=100, PDPID=10, PDPTY=PPP, VPAA=YES;

Response Example

This section gives an example of a SetPDPContextProfile response message, as shown in Example 23.



```
<S:Envelope xmlns:S="http://schemas.xmlsoap.org/soap/envelope/"
xmlns:cai3g="http://schemas.ericsson.com/cai3g1.2/">
  <S:Header>
    <cai3g:SessionId?></cai3g:SessionId>
  </S:Header>
  <S:Body>
    <ns2:SetResponse xmlns:ns2="http://schemas.ericsson.com/cai3g1.2/" />
  </S:Body>
</S:Envelope>
```

Example 23 Set PDP Context Profile Response Message



13 Create M2M Service Profile

This section covers M2M service profile operation `CreateM2MServiceProfile`.

`CreateM2MServiceProfile` initiates the M2M service profile (M2MSP).

MOType

M2MServiceProfile@<http://schemas.ericsson.com/pg/hlr/13.5/>

13.1 Request Data

13.1.1 Parameters

MOId

Table 28 Create M2M Service Profile MOId

Parameter	Type	Occurrence	Description
m2msp	Integer 1-65535	Mandatory	M2M service profile

MOAttributes

The parameters that are used in the operation are shown in Figure 12.

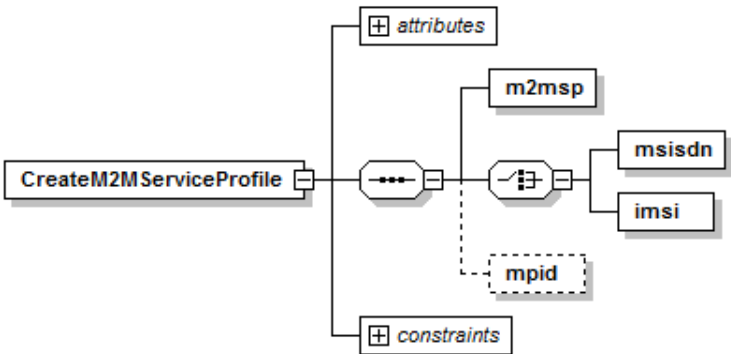


Figure 12 Parameters in Create M2M Service Profile

The following table covers the parameters that can be used in a `CreateM2MServiceProfile` request.

Table 29 Create M2M Service Profile Parameters

Parameter	Type	Occurrence	Description
m2msp	Integer 1-65535	Mandatory	M2M service profile



Parameter	Type	Occurrence	Description
msisdn	Digit string 5–15 digits. Each digit is in the range 0–9.	Mandatory ⁽¹⁾	Mobile Subscriber ISDN Number of the dummy subscription
imsi	Digit string 5–15 digits. Each digit is in the range 0–9.	Mandatory ⁽¹⁾	International Mobile Subscriber Identity of the dummy subscription
m2mpid	Integer 1–65535	Optional	M2M profile identifier

(1) Either *imsi* or *msisdn* must be used.

13.2 Examples

Request Example

This section gives an example of a `CreateM2MServiceProfile` request message, as shown in Example 24.

```
<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/hlr/13.5/">
  <soapenv:Header>
    <cai3:SessionId>b49b8879ec3f4d3d8181a63f541fe610</cai3:SessionId>
  </soapenv:Header>
  <soapenv:Body>
    <cai3:Create>
      <cai3:MOType>M2MServiceProfile@http://schemas.ericsson.com/pg/hlr/13.5/</cai3:MOType>
      <cai3:MOId>
        <ns:m2msp>7011</ns:m2msp>
      </cai3:MOId>
      <cai3:MOAttributes>
        <ns:CreateM2MServiceProfile m2msp="7011">
          <ns:m2msp>7011</ns:m2msp>
          <ns:msisdn>046123123123</ns:msisdn>
        </ns:CreateM2MServiceProfile>
      </cai3:MOAttributes>
    </cai3:Create>
  </soapenv:Body>
</soapenv:Envelope>
```

Example 24 Create M2M Service Profile Request Message

Response Example

This section gives an example of a `CreateM2MServiceProfile` response message, as shown in Example 25.

```
<S:Envelope xmlns:S="http://schemas.xmlsoap.org/soap/envelope/"
  xmlns:cai3g="http://schemas.ericsson.com/cai3g1.2/">
  <S:Header>
    <cai3g:SessionId>b49b8879ec3f4d3d8181a63f541fe610</cai3g:SessionId>
  </S:Header>
  <S:Body>
    <ns2:CreateResponse xmlns:ns2="http://schemas.ericsson.com/cai3g1.2/">
      <ns2:MOId>
        <ns:m2msp xmlns:ns="http://schemas.ericsson.com/pg/hlr/13.5/">7011</ns:m2msp>
      </ns2:MOId>
    </ns2:CreateResponse>
  </S:Body>
</S:Envelope>
```

Example 25 Create M2M Service Profile Response Message



14 Get M2M Service Profile

This section covers M2M service profile operation `GetM2MServiceProfile`.

`GetM2MServiceProfile` prints the M2M service profile (M2MSP).

MOType

`M2MServiceProfile@http://schemas.ericsson.com/pg/hlr/13.5/`

14.1 Request Data

14.1.1 Parameters

MOId

Table 30 Get M2M Service Profile MOId

Parameter	Type	Occurrence	Description
m2msp	Integer 1-65535	Mandatory	M2M service profile

14.2 Response Data

MOAttributes

The parameters that are used in the operation are shown in Figure 13.

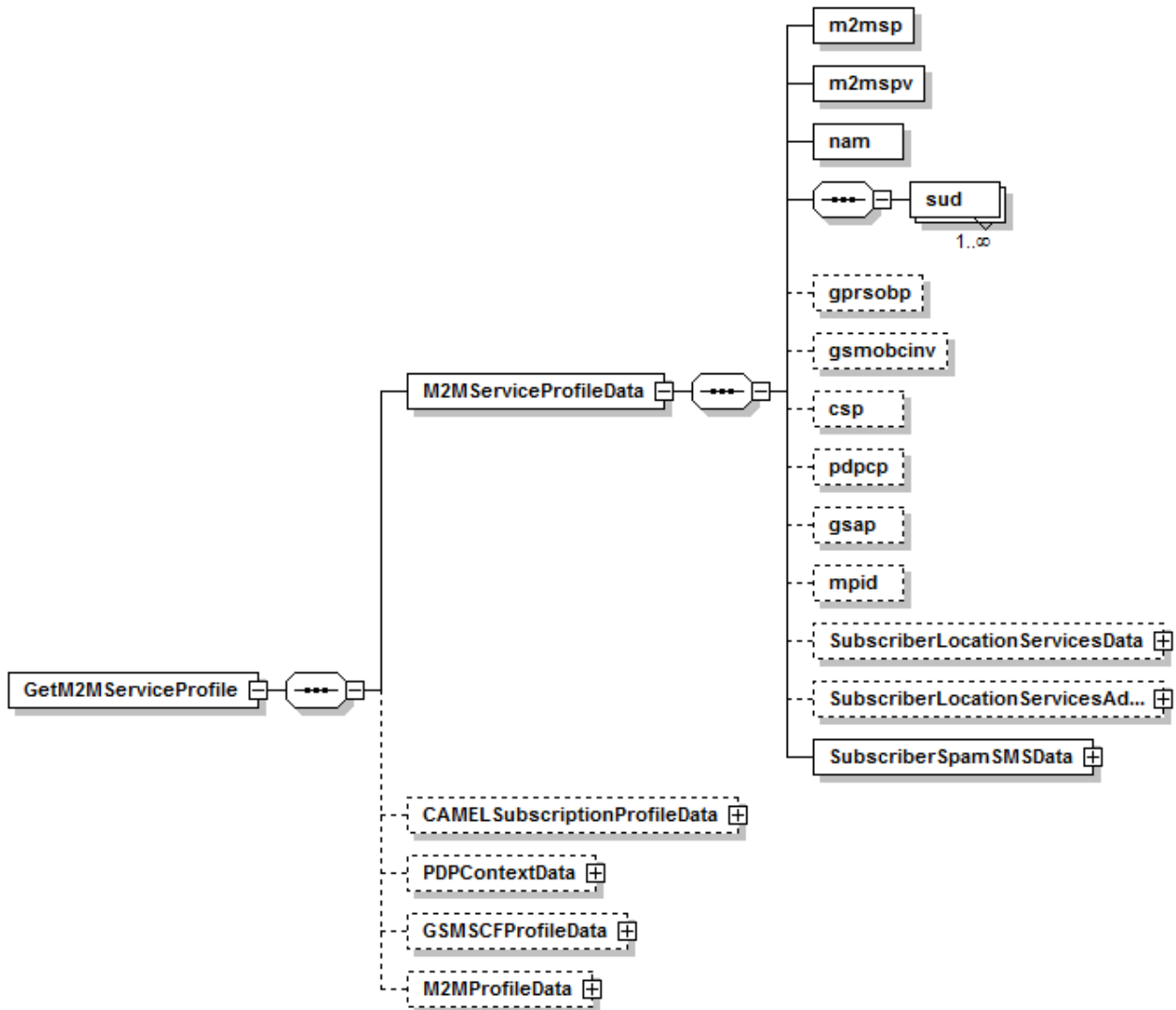


Figure 13 Parameters in Get Response M2M Service Profile

Table 31 Get Response M2M Service Profile Parameters

Attribute	Type	Occurrence	Description
m2msp	Integer 1-65535	Mandatory	M2M service profile
m2mspv	Integer 1-255	Mandatory	M2M service profile version
nam	Integer 0-2: <ul style="list-style-type: none"> 0 = both non GPRS and GPRS subscriber 1 = non GPRS subscriber 2 = GPRS subscriber 	Mandatory	Network access mode



Attribute	Type	Occurrence	Description
gprsobp	Integer 1-3 <ul style="list-style-type: none"> 1 = Barring of all packed oriented services. 2 = Barring packed oriented services from access point that are within the home PLMN while the subscriber is roaming in a visited PLMN. 3 = Barring packed oriented services from access point that are within the roamed visited PLMN. 	Optional	Operator Determined Barring of Packet Oriented Services
gsmobcinv	Integer 1-4 <ul style="list-style-type: none"> 1 = Barring of invocation of ECT. 2 = Barring of invocation of Call Transfer where at least one of the two calls is a call charged to the served subscriber. 3 = Barring of invocation of Call Transfer where at least one of the two calls is a call charged to the served subscriber at international rates. 4 = Barring of invocation of Call Transfer where at least one of the two calls is a call charged to the served subscriber at inter-zonal rates. 	Optional	Operator Determined Barring of invocation of Call Transfer
sud	String ⁽¹⁾	Mandatory	Subscriber Data
csp	Integer 1-8160	Optional	CAMEL Subscription Profile (CSP)
pdpcp	Integer 1-8160	Optional	PDP context profile
gsap	Digit string 1-255	Optional	GSM service control function profile identity
m2mpid	Integer 1-65535	Optional	M2M profile identifier
SubscriberLocationServicesData	See Table 32	Optional	Subscriber Location Services Data
SubscriberLocationServicesAddressData	See Table 33	Optional	Subscriber Location Services Address Data
SubscriberSpamSMSData	See Table 34	Mandatory	Subscriber Spam SMS Data

(1) See HLR Subscriber Data Type Definitions, Reference [4], for a specific definition.

Table 32 *Subscriber Location Services Data Parameters*

Parameter	Type	Occurrence	Description
crel	Boolean with value <code>true</code>	Optional	Call/session related Location Services (LCS) privacy class
cunrl	Boolean with value <code>true</code>	Optional	Call session unrelated LCS privacy class
eadd	Digit string 3-15 digits. Each digit is 0-9.	Optional	External address
gres	Boolean { <code>true</code> , <code>false</code> } <code>true</code> = Any GMLC in the home country <code>false</code> = Only GMLCs defined in subscriber GMLC address list	Optional	Restriction on the Gateway Mobile Location Center (GMLC)
intid	Integer 0-4 ⁽¹⁾	Optional	Internal identity
mocl	One of the following strings ⁽¹⁾ : <ul style="list-style-type: none">• ASL• BSL• TTP	Optional	LCS mobile origination class
notf	Integer 0-4	Optional	Location request restriction related to the notification to the mobile subscriber If the parameter is omitted, the default value 0 are used.
plmno	Boolean with value <code>true</code>	Optional	Public Land Mobile Network (PLMN) operator LCS privacy class
servt	Integer 0-20 or 67-127 ⁽¹⁾	Optional	Service type
univ	Boolean with value <code>true</code>	Optional	Universal LCS privacy class

(1) This parameter can have multiple values, see Section 1.8 on page 3.

Table 33 *Subscriber Location Services Address Data Parameters*

Parameter	Type	Occurrence	Description
gmlcadd	Digit string 3-15 digits. Each digit is 0-9.	Optional	Gateway Mobile Location Center (GMLC) address
gmlcid	Integer 0-255	Optional	Gateway Mobile Location Center (GMLC) address identifier
hgmlcadd	IPv4 or IPv6 address	Optional	Home GMLC address
hgmlcid	Integer 0-255	Optional	Home GMLC address identifier
ppradd	IPv4 or IPv6 address	Optional	Privacy profile register address
pprid	Integer 0-255	Optional	Privacy profile register address identifier



Table 34 *Subscriber Spam SMS Data Parameters*

Parameter	Type	Occurrence	Description
scadds	Digit string 1-15 digits. Each digit is 0-9	Optional	Spam control for MT-SMS activation status.
smspam	String ACTIVE or NACTIVE	Mandatory	Spam control for MT-SMS activation status.

Table 35 *CAMEL Subscription Profile Data Parameters*

Parameter	Type	Occurrence	Description
bs	String ⁽¹⁾	Optional	Basic Service (BS)
bsg	String ⁽¹⁾	Optional	Basic Service Group (BSG)
cch	Integer 1-4 CAMEL Phase	Optional	CAMEL capability handling
csp	Integer 1-8160	Mandatory	CAMEL Subscription Profile (CSP)
deh	Integer 0-1 0 = Transaction released in case of error in the Global System for Mobile Communication (GSM) service control function to GSM or General Packet Radio Service (GPRS) service switching function dialogue. 1 = Transaction continued in case of error in the GSM service control function to GSM or GPRS service switching function dialogue.	Optional	Default error handling
dialnum	String starting with a digit 0-4: <ul style="list-style-type: none"> 0 = Unknown 1 or 2 = Not used 3 = National number 4 = International number followed by -, followed by a text string 1-15 characters. Acceptable characters are 0-9, *, #, a, b, and c Example: 2-abc2#	Optional	Dialed number
dlgh	Integer 1-15	Optional	Destination number length



Parameter	Type	Occurrence	Description
dnum	String starting with a digit 0-4 <ul style="list-style-type: none">0 = Unknown1 or 2 = Not used3 = National number4 = International number followed by -, followed by a text string 1-15 characters. Acceptable characters are 0-9, *, #, a, b, and c. Example: 3-4000#	Optional	Destination number
eoick	Integer 0-999 Value 0 means not assigned.	Optional	Extended originating intelligent network category key
eoinci	Integer 0-255 Value 0 means not assigned.	Optional	Extended originating intelligent network capability indicator
etick	Integer 0-999 Value 0 means not assigned.	Optional	Extended terminating intelligent network category key
etinci	Integer 0-255 Value 0 means not assigned.	Optional	Extended terminating intelligent network capability indicator
ftc	String F (Forwarding) or N (Not forwarding).	Optional	Forwarding triggering criteria
gcso	Integer 0-1 0 = Allow call terminating handling without CAMEL invocation when CAMEL phase 1 is not supported in the interrogating GMSC/gsmSCF. 1 = Apply ODB of all incoming calls when CAMEL phase 1 is not supported in the interrogating GMSC/gsmSCF.	Optional	GMSC gsmSCF CAMEL phase 1 support subscription option



Parameter	Type	Occurrence	Description
gc2so	Integer 0-1 0 = Allow call terminating handling with CAMEL phase 1 invocation when CAMEL phase 2 is not supported in the interrogating GMSC/gsmSCF. 1 = Apply Operator Determined Barring (ODB) of all incoming calls when CAMEL phase 2 is not supported in the interrogating GMSC/gsmSCF.	Optional	Gateway Mobile Switching Center (GMSC) / Global System for Mobile Communication Service Control Function (gsmSCF) CAMEL phase 2 support subscription option
gc3so	Integer 0-1 0 = Allow call terminating handling with lower CAMEL phase invocation when CAMEL phase 3 is not supported in the interrogating GMSC/gsmSCF. 1 = Apply ODB of all incoming calls when CAMEL phase 3 is not supported in the interrogating GMSC/gsmSCF.	Optional	GMSC gsmSCF CAMEL phase 3 support subscription option
gc4so	Integer 0-1 0 = Allow call terminating handling with lower CAMEL phase invocation when CAMEL phase 4 is not supported in the interrogating GMSC/gsmSCF. 1 = Apply ODB of all incoming calls when CAMEL phase 4 is not supported in the interrogating GMSC/gsmSCF.	Optional	GMSC gsmSCF CAMEL phase 4 support subscription option
gprso	Integer 0-1 0 = Allow mobile subscribers registration in the Serving GPRS Support Node (SGSN) without sending GPRS CAMEL phase 3 data when CAMEL phase 3 data is not allowed to be sent to the SGSN. 1 = Deny mobile subscribers registration in the SGSN when CAMEL phase 3 data is not allowed to be sent to the SGSN.	Optional	GPRS CAMEL phase 3 denied subscription option
gsa	Digit string 3-15 digits. Each digit is 0-9.	Optional	GSM service control function address



Parameter	Type	Occurrence	Description
i	Boolean {true, false} true = Terminating CAMEL subscription data for the given Trigger Detection Point (TDP) is not sent towards the GMSC when the subscriber is roaming inside the Home Public Land Mobile Network (HPMLN) false = Terminating CAMEL subscription data for the given TDP is always sent towards the GMSC	Optional	Inhibition indicator
mcs0	Integer 0-2 0 = Allow mobile subscribers registration in the serving MSC/VLR without sending CAMEL data when CAMEL phase 1 data is not allowed to be sent to the MSC/VLR. 1 = Network induced activation of supplementary service BAOC performed when CAMEL phase 1 data is not allowed to be sent to the serving MSC/VLR. 2 = Deny mobile subscribers registration in the serving MSC/VLR when CAMEL phase 1 data is not allowed to be sent to the MSC/VLR.	Optional	Mobile Switching Center (MSC) / Visitor Location Register (VLR) CAMEL phase 1 denied subscription option
mc2so	Integer 0-2 0 = Check if mobile subscribers registration in the serving MSC/VLR with CAMEL phase 1 data can be performed or register without CAMEL data when CAMEL phase 2 data is not allowed to be sent to the MSC/VLR. 1 = Network induced activation of supplementary service Barring of All Outgoing Calls (BAOC) performed when CAMEL phase 2 data is not allowed to be sent to the serving MSC/VLR. 2 = Deny mobile subscribers registration in the serving MSC/VLR when CAMEL phase 2 data is not allowed to be sent to the MSC/VLR.	Optional	MSC/VLR CAMEL phase 2 denied subscription option



Parameter	Type	Occurrence	Description
mc3so	<p>Integer 0–2</p> <p>0 = Check if mobile subscribers registration in the serving MSC/VLR with lower CAMEL phase data can be performed or register without CAMEL data when CAMEL phase 3 data is not allowed to be sent to the MSC/VLR.</p> <p>1 = Network induced activation of supplementary service BAOC performed when CAMEL phase 3 data is not allowed to be sent to the serving MSC/VLR. For Visited MSC (VMSC) terminating CAMEL TDPs, value 1 has the same meaning as value 0.</p> <p>2 = Deny mobile subscribers registration in the serving MSC/VLR when CAMEL phase 3 data is not allowed to be sent to the MSC/VLR.</p>	Optional	MSC/VLR CAMEL phase 3 denied subscription option
mc4so	<p>Integer 0–2</p> <p>0 = Check if mobile subscribers registration in the serving MSC/VLR with lower CAMEL phase data can be performed or register without CAMEL data when CAMEL phase 4 data is not allowed to be sent to the MSC/VLR.</p> <p>1 = Network induced activation of supplementary service BAOC performed when CAMEL phase 4 data is not allowed to be sent to the serving MSC/VLR. For VMSC terminating CAMEL TDPs, value 1 has the same meaning as value 0..</p> <p>2 = Deny mobile subscribers registration in the serving MSC/VLR when CAMEL phase 4 data is not allowed to be sent to the MSC/VLR.</p>	Optional	MSC/VLR CAMEL phase 4 denied subscription option



Parameter	Type	Occurrence	Description
mmsc	Integer 0–1 0 = Allow mobile subscribers registration in the serving MSC/VLR without sending mobility management CAMEL phase 3 data when CAMEL phase 3 data is not allowed to be sent to the MSC/VLR. 1 = Deny mobile subscribers registration in the serving MSC/VLR when CAMEL phase 3 data is not allowed to be sent to the MSC/VLR.	Optional	Mobility management CAMEL phase 3 denied subscription option
msisdn	Digit string 5–15 digits. Each digit is 0–9.	Mandatory	Mobile Subscriber ISDN Number (MSISDN)
mtv	String I (Inhibiting) or E (Enabling)	Optional	Match type
osmss	Integer 0–2 0 = Allow mobile subscribers registration in the serving node (MSC/VLR or SGSN or both) without sending originating SMS CAMEL phase 3 data when CAMEL phase 3 data is not allowed to be sent to the MSC/VLR or SGSN. 1 = Network induced service withdrawal of Teleservice Short Message MO/PP performed when CAMEL phase 3 data is not allowed to be sent to the MSC/VLR or SGSN. 2 = Deny mobile subscribers registration in the serving node (MSC/VLR or SGSN or both) when CAMEL phase 3 data is not allowed to be sent to the MSC/VLR or SGSN.	Optional	Originating Short Message Service (SMS) CAMEL phase 3 denied subscription option
sk	Integer 0–2147483647	Optional	Service key
sslo	Integer 0–1 0 = Subscriber state and location information are not sent at Send Routing Information Mobile Application Part (MAP) version 3 message response. 1 = Subscriber state and location information are sent at Send Routing Information MAP version 3 message response.	Optional	Subscriber state and location information sending CAMEL subscription option



Parameter	Type	Occurrence	Description
tdp	Integer 0-255 ⁽¹⁾ The value range depends on tdptype.	Optional	Trigger Detection Point (TDP)
tdptype	String <ul style="list-style-type: none">• DSTDP• GPRSTDP• MMTDP• OCTDP• OSMSTDP• TCTDP• TSMSTDP• VTDP	Optional	Type of TDP



Parameter	Type	Occurrence	Description
tif	Integer 0–1 0 = Number length, format, and conditional barrings checks are performed, when the mobile subscriber or the service provider registers a forwarded-to number. 1 = Number length, format, and conditional barrings checks are not performed, when the mobile subscriber or the service provider registers a forwarded-to number.	Optional	Translation information flag
tsmsso	Integer 0–2 0 = Allow mobile subscribers registration in the serving node (MSC/VLR or SGSN or both) without sending terminating SMS CAMEL phase 4 data, when terminating SMS CAMEL phase 4 data is not allowed to be sent to the MSC/VLR, or SGSN, or both. 1 = Allow mobile subscribers registration in the serving node (MSC/VLR or SGSN or both) without sending terminating SMS CAMEL phase 4 data, when terminating SMS CAMEL phase 4 data is not allowed to be sent to the MSC/VLR or SGSN or both. Network induced service invocation of an incoming call barring service is applied to mobile terminating short message delivery through MSC, or SGSN, or both. 2 = Deny mobile subscribers registration in the serving node (MSC/VLR or SGSN or both) when terminating SMS CAMEL phase 4 data is not allowed to be sent to the MSC/VLR, or SGSN, or both	Optional	Terminating SMS CAMEL phase 4 denied subscription option

(1) See *HLR Subscriber Data Type Definitions*, Reference [4], for a specific definition.

Table 36 PDP Context Data Parameters

Parameter	Type	Occurrence	Description
apnid	Integer 0–16383	Optional	Access Point Name (APN) identifier



Parameter	Type	Occurrence	Description
epdpind	Boolean {true, false}	Optional	Extended PDP context type indicator
eqosid	Integer 0-4095	Mandatory	Extended Quality of Service (QoS) identifier
pdpch	String 1-7 characters	Optional	PDP context charging characteristics ⁽¹⁾
pdpcp	Integer 1-8160	Optional	PDP context profile
pdpid	Integer 1-50	Optional	PDP context identifier
pdpty	One of the following strings: <ul style="list-style-type: none"> • IPV4 • PPP • IPV6 	Mandatory	PDP context type
vpaa	Boolean {true, false} true = the mobile subscriber is allowed to use the APN in the domain of the VPLMN false = the mobile subscriber is not allowed to use the APN in the domain of the VPLMN	Mandatory	Visited Public Land Mobile Network (VPLMN) address allowed

(1) The *PDPCH* attribute is printed only if the PDP context charging characteristics validity indicator (*PDPCHVID*) identifies it as a valid PDP context charging characteristics.

Table 37 GSMSCF Profile Data Parameters

Parameter	Type	Occurrence	Description
gsap	Digit string 1-255	Mandatory	GSM service control function profile identity
gsa	Digit string 3-15 digits. Each digit is 0-9. Maximum number of GSA is 100.	Mandatory	GSM service control function address

Table 38 M2M Profile Data Parameters

Attribute	Type	Occurrence	Description
m2mpid	Integer 1-65535	Mandatory	M2M profile identifier
dmi	String STA: Static device String DYN: Dynamic device	Mandatory	Device mobility information
nname	Text string, 1-15 characters	Mandatory	Network application server name
ntype	Integer 0-127	Mandatory	Network application server type



Attribute	Type	Occurrence	Description
url	Text string, 2-63 characters It can consist of both lower- and uppercase letters.	Optional	Uniform Resource Locator
ipype	String IPV4: IP Version 4 String IPV6: IP Version 6	Optional	IP Type
ip	IP version 4 address: Text string 7-15 characters; oc1.oc2.oc3.oc4 where each oc<n> is integer 0-255 IP version 6 address: Text string 2-39 characters; hex1:hex2:hex3:hex4:hex5:hex6:hex7:hex8 where each hex<n> is hexadecimal 0-FFFF. Consecutive hex words with zero value can be replaced by ::, for example, fe80::200:f8ff:3:67cf means hex2, hex3 and hex4 are all zero.	Optional	IP Address This parameter allows either an IP version 4 or 6 address.
m2mipport	Integer 0-65535	Optional	IP Port
nmsisdn	Digit string 5-15 digits, each digit 0-9	Optional	Network application server MSISDN

14.3 Examples

Request Example

This section gives an example of a `GetM2MServiceProfile` request message, as shown in Example 26.



```
<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/hlr/13.5/">
  <soapenv:Header>
    <cai3:SessionId>02e7840dd3c54c38bc1efef3a7f0a4aa</cai3:SessionId>
  </soapenv:Header>
  <soapenv:Body>
    <cai3:Get>
      <cai3:MOType>M2MServiceProfile@http://schemas.ericsson.com/pg/hlr/13.5/</cai3:MOType>
      <cai3:MOId>
        <ns:m2msp>7011</ns:m2msp>
      </cai3:MOId>
    </cai3:Get>
  </soapenv:Body>
</soapenv:Envelope>
```

Example 26 *Get M2M Service Profile Request Message*

M2M Service Profile is printed.

Response Example

This section gives an example of a GetM2MServiceProfile response message, as shown in Example 27.



```
<S:Envelope xmlns:S="http://schemas.xmlsoap.org/soap/envelope/"
xmlns:cai3g="http://schemas.ericsson.com/cai3gl.2/">
  <S:Header>
    <cai3g:SessionId>9f074172ca454f6d88200a0640889fcc</cai3g:SessionId>
  </S:Header>
  <S:Body>
    <ns2:GetResponse xmlns:ns2="http://schemas.ericsson.com/cai3gl.2/">
      <ns2:MOAttributes>
        <ns:GetM2MServiceProfile xmlns:ns="http://schemas.ericsson.com/pg/hlr/13.5/">
          <ns:M2MServiceProfileData>
            <ns:m2msp>7011</ns:m2msp>
            <ns:m2mspv>1</ns:m2mspv>
            <ns:nam>1</ns:nam>
            <ns:sud>CAT-10</ns:sud>
            <ns:sud>DBSG-1</ns:sud>
            <ns:sud>OFA-0</ns:sud>
            <ns:sud>SCHAR-0-0</ns:sud>
            <ns:csp>111</ns:csp>
            <ns:pdpcp>111</ns:pdpcp>
            <ns:gsap>111</ns:gsap>
            <ns:SubscriberLocationServicesData>
              <ns:PrivacyLCSClassData/>
            </ns:SubscriberLocationServicesData>
            <ns:SubscriberLocationServicesAddressData>
              <ns:ResponseData/>
            </ns:SubscriberLocationServicesAddressData>
            <ns:SubscriberSpamSMSData>
              <ns:smspam>NACTIVE</ns:smspam>
            </ns:SubscriberSpamSMSData>
          </ns:M2MServiceProfileData>
          <ns:CAMELSubscriptionProfileData>
            <ns:csp>111</ns:csp>
            <ns:CAMELSubscriptionOptions>
              <ns:gcso>0</ns:gcso>
              <ns:mcso>0</ns:mcso>
              <ns:sslo>0</ns:sslo>
              <ns:gc2so>0</ns:gc2so>
              <ns:mc2so>0</ns:mc2so>
              <ns:tif>0</ns:tif>
              <ns:gprssso>0</ns:gprssso>
              <ns:osmssso>0</ns:osmssso>
              <ns:gc3so>0</ns:gc3so>
              <ns:mc3so>0</ns:mc3so>
              <ns:gc4so>0</ns:gc4so>
              <ns:mc4so>0</ns:mc4so>
              <ns:mmso>0</ns:mmso>
              <ns:tsmssso>0</ns:tsmssso>
            </ns:CAMELSubscriptionOptions>
          </ns:CAMELSubscriptionProfileData>
          <ns:PDPContextData>
            <ns:pdpcp>111</ns:pdpcp>
            <ns:PDPContext>
              <ns:pdpid>1</ns:pdpid>
              <ns:eqosid>0</ns:eqosid>
              <ns:vpaa>false</ns:vpaa>
              <ns:pdpty>IPV4</ns:pdpty>
              <ns:epdpind>false</ns:epdpind>
            </ns:PDPContext>
          </ns:PDPContextData>
          <ns:GSMSCFProfileData>
            <ns:gsap>111</ns:gsap>
          </ns:GSMSCFProfileData>
        </ns:GetM2MServiceProfile>
      </ns2:MOAttributes>
    </ns2:GetResponse>
  </S:Body>
</S:Envelope>
```

Example 27 *Get M2M Service Profile Response Message*



15 Faults and Errors

The generic structure for fault responses is covered in *Generic CAI3G Interface 1.2*, Reference [2]. That document also covers the generic fault codes, which are applicable to all CAI3G operations.

This section covers the subordinate CAI3G errors. They can appear in the `errorcode` element in the error message.

Only HLR Common Profile Data specific error codes are described in this section. These error codes are included in the Fault type `PGFault`.

For generic error codes, and information about the different Fault types, see *CAI3G Implementation*, Reference [6].

15.1 Subordinate HLR Error Codes

The following table covers subordinate error codes for HLR Common Profile Data commands over the CAI3G interface.

Table 39 Subordinate HLR Common Profile Data Error Codes

Error Code	Error Message	MO	Operation
10015	SUBSCRIBER DATA NOT RECOGNIZED	Subscriber Profile	S
10031	SUBSCRIBER DATA INCLUDED MORE THAN ONCE	Subscriber Profile	S
10032	SUBSCRIBER DATA NOT APPLICABLE	Subscriber Profile	S
10043	BASIC SERVICE GROUP NOT RECOGNIZED	Customer Application for Mobile Network Enhanced Logic (CAMEL) Triggering Criteria	C/D
10056	BS NOT SUPPORTED	CAMEL Triggering Criteria	C/D
10075	FUNCTIONALITY NOT SUPPORTED BY THIS EXCHANGE	CAMEL Subscription Data	C/S/D
		CAMEL Extended Information	S
		CAMEL Triggering Criteria	C/D
		PDP Context Profile	S
		M2M Service Profile	G
10117	COLLECTIVE BASIC SERVICE GROUP NOT ALLOWED	CAMEL Triggering Criteria	C/D
10175	GSA NOT DEFINED	CAMEL Subscription Data	C/S
10176	NEW SUBSCRIBER DATA VALUE INCOMPATIBLE	Subscriber Profile	S



Error Code	Error Message	MO	Operation
10183	PARAMETER NOT SUPPORTED BY THIS EXCHANGE	CAMEL Subscription Data	C/S/D
		CAMEL Extended Information	S
		PDP Context Profile	S
10187	UPDATING CAMEL SUBSCRIPTION DATA IN PROGRESS	CAMEL Subscription Data	C/S/D
		CAMEL Extended Information	S
		CAMEL Triggering Criteria	C/D
10188	CAMEL SUBSCRIPTION DATA NOT DEFINED	CAMEL Subscription Data	D
		CAMEL Extended Information	S
10189	PARAMETER VALUE NOT SUPPORTED BY THIS EXCHANGE	Subscriber Profile	S
		CAMEL Subscription Profile	D
10190	TCTDP NOT DEFINED	CAMEL Subscription Data	S/D
		CAMEL Triggering Criteria	C/D
10191	OCTDP NOT DEFINED	CAMEL Subscription Data	S/D
		CAMEL Triggering Criteria	C/D
10192	TOO MANY TCTDP SPECIFIED	CAMEL Subscription Data	D
10193	TCTDP VALUE NOT ALLOWED	CAMEL Subscription Data	C/S/D
10194	OCTDP VALUE NOT ALLOWED	CAMEL Subscription Data	C/S/D
10195	TCTDP ALREADY DEFINED	CAMEL Subscription Data	C
10196	OCTDP ALREADY DEFINED	CAMEL Subscription Data	C
10197	MAXIMUM NUMBER OF TCTDP REACHED	CAMEL Subscription Data	C
10198	MAXIMUM NUMBER OF OCTDP REACHED	CAMEL Subscription Data	C
10202	TOO MANY OCTDP SPECIFIED	CAMEL Subscription Data	D
10203	NO ORIGINATING CAMEL SUBSCRIPTION DEFINED	CAMEL Extended Information	S
10204	NO TERMINATING CAMEL SUBSCRIPTION DEFINED	CAMEL Extended Information	S
10207	BS2G FOR BS2F NOT DEFINED IN THE PROFILE	Subscriber Profile	S
10208	BS3G FOR BS3F NOT DEFINED IN THE PROFILE	Subscriber Profile	S
10211	APN NOT DEFINED	PDP Context Profile	S
10216	PDP CONTEXT ALREADY DEFINED	PDP Context Profile	S
10217	PDP CONTEXT WITH NON SUBSCRIBED APN ALREADY DEFINED	PDP Context Profile	S



Error Code	Error Message	MO	Operation
10219	PDP CONTEXT IDENTIFIER INCLUDED MORE THAN ONCE	PDP Context Profile	S
10221	SUBSCRIBER DATA INCOMPATIBLE WITH STORED SUBSCRIBER DATA	Subscriber Profile	S
10222	PDP CONTEXT NOT DEFINED	PDP Context Profile	S
10260	STORAGE SHORTAGE IN ORIGINATING CAMEL PHASE 2 DATA FILE	CAMEL Subscription Data	C
10261	STORAGE SHORTAGE IN TERMINATING CAMEL PHASE 2 DATA FILE	CAMEL Subscription Data	C
10263	LAST OCTDP REMOVAL NOT ALLOWED	CAMEL Subscription Data	D
10267	STORAGE SHORTAGE IN ORIGINATING CAMEL PHASE 1 DATA FILE	CAMEL Subscription Data	C
10268	STORAGE SHORTAGE IN TERMINATING CAMEL PHASE 1 DATA FILE	CAMEL Subscription Data	C
10271	STORAGE SHORTAGE IN GPRS CAMEL PHASE 3 DATA FILE	CAMEL Subscription Data	C
10272	GPRSTDP ALREADY DEFINED	CAMEL Subscription Data	C
10273	MAXIMUM NUMBER OF GPRSTDP REACHED	CAMEL Subscription Data	C
10274	I NOT APPLICABLE FOR THIS TYPE OF TDP	CAMEL Subscription Data	S
10275	CCH VALUE NOT ALLOWED FOR THIS TYPE OF TDP	CAMEL Subscription Data	C/S/D
10276	GPRSTDP VALUE NOT ALLOWED	CAMEL Subscription Data	C/S/D
10277	GPRSTDP NOT DEFINED	CAMEL Subscription Data	S/D
10278	TOO MANY GPRSTDP SPECIFIED	CAMEL Subscription Data	D
10304	STORAGE SHORTAGE IN ORIGINATING SMS CAMEL DATA FILE	CAMEL Subscription Data	C
10305	OSMSTDP ALREADY DEFINED	CAMEL Subscription Data	C
10306	MAXIMUM NUMBER OF OSMSTDP REACHED	CAMEL Subscription Data	C
10307	OSMSTDP VALUE NOT ALLOWED	CAMEL Subscription Data	C/S/D
10308	OSMSTDP NOT DEFINED	CAMEL Subscription Data	S/D
10309	TOO MANY OSMSTDP SPECIFIED	CAMEL Subscription Data	D



Error Code	Error Message	MO	Operation
10314	EXTENDED QOS NOT DEFINED	PDP Context Profile	S
10315	PDP TYPE INCOMPATIBLE WITH EXTENDED QOS	PDP Context Profile	S
10325	TSMSTDP VALUE NOT ALLOWED	CAMEL Subscription Data	C/S/D
10326	TSMSTDP ALREADY DEFINED	CAMEL Subscription Data	C
10327	MAXIMUM NUMBER OF TSMSTDP REACHED	CAMEL Subscription Data	C
10328	STORAGE SHORTAGE IN TERMINATING SMS CAMEL DATA FILE	CAMEL Subscription Data	C
10329	TOO MANY TSMSTDP SPECIFIED	CAMEL Subscription Data	D
10330	TSMSTDP NOT DEFINED	CAMEL Subscription Data	S/D
10331	SERVICE KEY ALREADY DEFINED	CAMEL Subscription Data	C
10332	MMTDP VALUE NOT ALLOWED	CAMEL Subscription Data	C/D
10333	MMTDP ALREADY DEFINED	CAMEL Subscription Data	C
10334	MAXIMUM NUMBER OF MMTDP REACHED	CAMEL Subscription Data	C
10335	STORAGE SHORTAGE IN MOBILITY MANAGEMENT CAMEL DATA FILE	CAMEL Subscription Data	C
10336	GSA NOT SPECIFIED	CAMEL Subscription Data	C
10337	SERVICE KEY NOT SPECIFIED	CAMEL Subscription Data	C
10338	GSA ALREADY DEFINED	CAMEL Subscription Data	C
10339	MMTDP NOT DEFINED	CAMEL Subscription Data	D
10340	DIALNUM ALREADY DEFINED	CAMEL Subscription Data	C
10341	TOO MANY MMTDP SPECIFIED	CAMEL Subscription Data	C/D
10342	DSTDP ALREADY DEFINED	CAMEL Subscription Data	C
10344	STORAGE SHORTAGE IN DIALLED SERVICES CAMEL DATA FILE	CAMEL Subscription Data	C
10345	DSTDP NOT DEFINED	CAMEL Subscription Data	S/D
10349	MATCH TYPE NOT DEFINED	CAMEL Triggering Criteria	C
10350	MATCH TYPE ALREADY DEFINED	CAMEL Triggering Criteria	C
10351	TOO MANY DESTINATION NUMBERS GIVEN IN COMMAND	CAMEL Triggering Criteria	C



Error Code	Error Message	MO	Operation
10352	DESTINATION NUMBER ALREADY GIVEN IN COMMAND	CAMEL Triggering Criteria	C
10353	DESTINATION NUMBER ALREADY DEFINED	CAMEL Triggering Criteria	C
10354	MAXIMUM NUMBER OF DESTINATION NUMBERS REACHED	CAMEL Triggering Criteria	C
10355	TOO MANY DESTINATION NUMBER LENGTHS GIVEN IN COMMAND	CAMEL Triggering Criteria	C
10356	DESTINATION NUMBER LENGTH ALREADY GIVEN IN COMMAND	CAMEL Triggering Criteria	C
10357	DESTINATION NUMBER LENGTH ALREADY DEFINED	CAMEL Triggering Criteria	C
10358	MAXIMUM NUMBER OF DESTINATION NUMBER LENGTHS REACHED	CAMEL Triggering Criteria	C
10359	TOO MANY TRIGGERING BASIC SERVICES GIVEN IN COMMAND	CAMEL Triggering Criteria	C
10360	TRIGGERING BASIC SERVICE ALREADY GIVEN IN COMMAND	CAMEL Triggering Criteria	C
10361	TRIGGERING BASIC SERVICE ALREADY DEFINED	CAMEL Triggering Criteria	C
10362	TRIGGERING BASIC SERVICE NOT ALLOWED	CAMEL Triggering Criteria	C/D
10363	MAXIMUM NUMBER OF TRIGGERING BASIC SERVICES REACHED	CAMEL Triggering Criteria	C
10364	STORAGE SHORTAGE IN CAMEL TCTDP12 CRITERIA DATA FILE	CAMEL Triggering Criteria	C
10365	STORAGE SHORTAGE IN CAMEL OCTDP2 CRITERIA DATA FILE	CAMEL Triggering Criteria	C
10366	FORWARDING TRIGGERING CRITERIA ALREADY DEFINED	CAMEL Triggering Criteria	C
10367	DEH NOT APPLICABLE FOR THIS TYPE OF TDP	CAMEL Subscription Data	S
10368	TRIGGERING CRITERIA DATA NOT DEFINED	CAMEL Triggering Criteria	D
10369	DESTINATION NUMBER NOT DEFINED	CAMEL Triggering Criteria	D
10370	DESTINATION NUMBER LENGTH NOT DEFINED	CAMEL Triggering Criteria	D
10371	FORWARDING TRIGGERING CRITERIA NOT DEFINED	CAMEL Triggering Criteria	D



Error Code	Error Message	MO	Operation
10372	NO TRIGGERING BASIC SERVICE DEFINED	CAMEL Triggering Criteria	D
10373	BS NOT DEFINED AS TRIGGERING BASIC SERVICE	CAMEL Triggering Criteria	D
10374	BSG NOT DEFINED AS TRIGGERING BASIC SERVICE	CAMEL Triggering Criteria	D
10391	CCH VALUE NOT ALLOWED FOR THIS TDP VALUE	CAMEL Subscription Data	C/S/D
10392	VTTDP ALREADY DEFINED	CAMEL Subscription Data	C
10393	VTTDP VALUE NOT ALLOWED	CAMEL Subscription Data	C/S/D
10394	STORAGE SHORTAGE IN ORIGINATING CAMEL PHASE 3 DATA FILE	CAMEL Subscription Data	C
10395	STORAGE SHORTAGE IN TERMINATING CAMEL PHASE 3 DATA FILE	CAMEL Subscription Data	C
10396	STORAGE SHORTAGE IN VMSC TERMINATING CAMEL PHASE 3 DATA FILE	CAMEL Subscription Data	C
10397	VTTDP NOT DEFINED	CAMEL Subscription Data	S/D
10398	TOO MANY VTTDP SPECIFIED	CAMEL Subscription Data	D
10399	MAXIMUM NUMBER OF VTTDP REACHED	CAMEL Subscription Data	C
10400	TRIGGER DETECTION POINT INCLUDED MORE THAN ONCE	CAMEL Subscription Data	C/D
10411	NO MMTDP DEFINED	CAMEL Subscription Data	S
10413	NO VALID ORIGINATING CAMEL SUBSCRIPTION DEFINED	CAMEL Extended Information	S
10417	NO DESTINATION NUMBER DEFINED	CAMEL Triggering Criteria	D
10418	NO DESTINATION NUMBER LENGTH DEFINED	CAMEL Triggering Criteria	D
10439	LAST PDP CONTEXT REMOVAL NOT ALLOWED	PDP Context Profile	S
10441	UPDATING OF PDP CONTEXT PROFILE IN PROGRESS	PDP Context Profile	S
10442	EXTENDED QOS NOT SPECIFIED	PDP Context Profile	S
10443	CHARGING CHARACTERISTICS ERASURE NOT ALLOWED	PDP Context Profile	S
10485	STORAGE SHORTAGE IN ORIGINATING CAMEL PHASE 4 DATA FILE	CAMEL Subscription Data	C



Error Code	Error Message	MO	Operation
10486	STORAGE SHORTAGE IN TERMINATING CAMEL PHASE 4 DATA FILE	CAMEL Subscription Data	C
10487	STORAGE SHORTAGE IN VMSC TERMINATING CAMEL PHASE 4 DATA FILE	CAMEL Subscription Data	C
10534	CENTRALIZED USER DATABASE NOT REACHABLE	CAMEL Subscription Data	C/S/D
		CAMEL Extended Information	S
		CAMEL Triggering Criteria	C/D
		PDP Context Profile	S
10535	RESOURCE LIMITATION	CAMEL Subscription Data	C/S/D
		CAMEL Extended Information	S
		CAMEL Triggering Criteria	C/D
		PDP Context Profile	S
10542	PROFILE DOES NOT EXIST IN CENTRALIZED USER DATABASE	CAMEL Subscription Data	C/G/S/D
		CAMEL Extended Information	S
		CAMEL Triggering Criteria	C/D
		PDP Context Profile	S/G
10581	M2M PROFILE NOT DEFINED	M2M Service Profile	C/G
10810	M2M SERVICE PROFILE NOT DEFINED	M2M Service Profile	G
10811	M2M SERVICE PROFILE ALREADY DEFINED	M2M Service Profile	C
10818	M2M DUMMY SUBSCRIPTION NOT DEFINED	M2M Service Profile	C

15.2 CAI3G Error Message Example

The following, shown in Example 28, is an example of a CAI3G error message.



```
<S:Envelope xmlns:S="http://schemas.xmlsoap.org/soap/envelope/"
  xmlns:cai3g="http://schemas.ericsson.com/cai3g1.2/">
  <S:Header>
    <cai3g:SessionId>f632b0b8f1b740328d89aa53528c184c</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>10032</errorcode>
              <errormessage>SUBSCRIBER DATA NOT APPLICABLE</errormessage>
              <errordetails>- [Processed by PG Node: vmx1771]</errordetails>
            </PGFault:PGFault>
          </details>
        </Cai3gFault:Cai3gFault>
      </detail>
    </ns2:Fault>
  </S:Body>
</S:Envelope>
```

Example 28 CAI3G Error Message



16 Appendix - HLR Classic and HLR-FE Layered Incompatibilities

For information about incompatibilities between HLR Classic and HLR-FE Layered, see applicable UDC documentation. For changes between different releases of Dynamic Activation, see *Network Impact Report*, Reference [5].





Reference List

Ericsson Documents

- [1] *Glossary of Terms and Acronyms*, 0033-CSH 109 628 Uen
- [2] *Generic CAI3G Interface 1.2 Specification*, 2/155 19-FAY 302 00 03 Uen
- [3] *Library Overview*, 18/1553-CSH 109 628 Uen
- [4] *HLR Subscriber Data Type Definitions*, 1/198 18-CSH 109 628 Uen
- [5] *Network Impact Report*, 109 48-CSH 109 628 Uen
- [6] *CAI3G Implementation*, 26/155 19-CSH 109 628 Uen