

# Layered HLR Common Profile Data over CLI

## Ericsson Dynamic Activation 1

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### INTERFACE DESCRIPTION

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# 1 Introduction

This document covers Common M2M Profile Data available through the Ericsson™ Dynamic Activation (EDA) Command Line Interface (CLI).

## 1.1 Purpose and Scope

This document describes common M2M Profile management operations.

How to use these operations is covered in the document *Introduction to Generic CLI Interface Specification*, Reference [1].

## 1.2 Target Groups

The target group for this document is as follows:

- System Integrator
- Network Administrator

## 1.3 Typographic Conventions

Typographic conventions are described in *Library Overview*, Reference [2].

In addition to the writing conventions mentioned above, the following applies:

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

For information about glossary and terms throughout this document, see *Glossary of Terms and Acronyms*, Reference [3].

## 1.4 Prerequisites

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

- Basic knowledge about the Dynamic Activation Product.
- Knowledge about the Dynamic Activation CLI, see *Generic CLI Interface Specification*, Reference [1].



## 1.5 Response Types

This section covers the response types for the commands specified in this document.

All Print commands use the dynamic response specified in the document *Generic CLI Interface Specification*, Reference [1]. The Print responses include a short XML document.

The Set command returns notification on the console and errors in the response file.

The Create and Delete commands use the notification only response specified in the document *Generic CLI Interface Specification*, Reference [1].

## 1.6 Namespaces

The following namespaces are referred to in this document:

- Provisioning namespace:

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

## 1.7 Multiple Values

Some parameters can have several values. In those cases, that are 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>`.

## 2 GPRS Profile

This section covers the GPRS Profiles operations.

### 2.1 Change GPRS Profile

The HECDPPC command changes the GPRS Profile in HLRFE.

#### 2.1.1 HECDPPC Request

HECDPPC Request:

```

HECDPPC:PDPCP=pdpcp:[
    PDPID=dpid...ERASE
    PDPID=dpid[EQOSID=eqosid][PDPTY=pdpty][VPAA=vpaa]
]
[EPDPIND=epdpind][APNID=[
    apnid
    WILDCARD
]]PDPCH=1[
    pdpch
    ERASE
]++[UPDATENET];
    
```

Table 1 HECDPPC Parameters

Attribute	Type	Description
APNID	Integer 0-16383	Access Point Name (APN) identifier
EPDPIND	NO = IPv4v6 Dual Stack is not supported. YES = IPv4v6 Dual Stack is supported.	Extended PDP context type indicator
EQOSID	Integer 0-4095	Extended QoS Identifier
PDPCH	String 2-7 characters	PDP context profile



Attribute	Type	Description
PDPCP	Integer 0-8160 or String ALL.	PDP context charging characteristics
PDPID	Integer 1-50	PDP context identifier
PDPTY	String  IPV4 = Internet Protocol (IP) version 4.  IPV6 = IP version 6.  PPP = Point-to-Point Protocol (PPP).	PDP context type
VPAA	NO = APN not allowed to be used in the domain of the VPLMN.  YES = APN allowed to be used in the domain of the VPLMN.	Visited Public Land Mobile Network (VPLMN) address allowed
ERASE	-	Erase Indicator
UPDATENET	This parameter has no value.	When this UPDATENET Indicator, is set a result file is generated.

## 2.1.2 HECDPPC Response

The command `HECDPPC` responds with only a notification.

If the `UPDATENET` indicator is in the command, a response file is generated according to the schema below.





```
<?xml version="1.0" encoding="UTF-8"?>
<xs:schema xmlns:xs="http://www.w3.org/2001/XMLSchema"
  targetNamespace="http://schemas.ericsson.com/pg/hlr/13.5/"
  elementFormDefault="qualified" attributeFormDefault="qualified">
  <xs:element name="ChangeGPRSLogData" minOccurs="0">
    <xs:complexType>
      <xs:sequence>
        <xs:element name="FailedSubscriberNotifications" minOccurs="0">
          <xs:complexType>
            <xs:sequence>
              <xs:element name="Subscriber" maxOccurs="unbounded">
                <xs:complexType>
                  <xs:sequence>
                    <xs:element name="msisdn" type="xs:string" />
                    <xs:element name="FaultReason">
                      <xs:complexType>
                        <xs:sequence>
                          <xs:element name="code" type="xs:integer" />
                          <xs:element name="message" type="xs:string" />
                          <xs:element name="additionalinfo" type="xs:string"
                            minOccurs="0" />
                        </xs:sequence>
                      </xs:complexType>
                    </xs:element>
                  </xs:sequence>
                </xs:complexType>
              </xs:element>
            </xs:sequence>
          </xs:complexType>
        </xs:element>
        <xs:element name="MassiveUpdateStatistics">
          <xs:complexType>
            <xs:sequence>
              <xs:element name="starttime" type="xs:string" />
              <xs:element name="stoptime" type="xs:string" />
              <xs:element name="NumberOfChangedSubscribers" type="xs:integer" />
              <xs:element name="NumberOfFailedSubscribers" type="xs:integer" />
              <xs:element name="NumberOfRemainingSubscribers" type="xs:integer" />
            </xs:sequence>
          </xs:complexType>
        </xs:element>
      </xs:sequence>
    </xs:complexType>
  </xs:element>
</xs:schema>
```

**Note:** Error codes printed in the `FaultReason` element are related to the update of data for a single subscriber. These errors do not stop the massive update. If an error stops the massive update, that error code is returned in the generic XML structure, which is outside the previous schema.

The generic XML structure for file responses is specified in document Introduction to *Generic CLI Interface Specification*, Reference [1].

## 2.2 Print GPRS Profile

Command Description:

HECDPPP:PDPCP=pdpcp;



## 2.2.1 HECDPPP Request

The following table explains the attributes that can be used in an HECDPPP request.

*Table 2 HECDPPP Parameters*

Attribute	Type	Description
PDPCP	Integer 0-8160	PDP Context Profile (PDPCP) identifier.

## 2.2.2 HECDPPP Response

The HECDPPP response is an XML structure written directly in the CLI. The following is the XML schema used.

```
<?xml version="1.0" encoding="UTF-8"?>
<xs:schema xmlns:xs="http://www.w3.org/2001/XMLSchema"
  targetNamespace="http://schemas.ericsson.com/hlr/13.5/"
  elementFormDefault="qualified" attributeFormDefault="qualified">
  <xs:element name="PDPCContextData">
    <xs:complexType>
      <xs:sequence>
        <xs:element name="pdpcp" type="pdpcpType" />
        <xs:element name="PDPContext" maxOccurs="unbounded">
          <xs:complexType>
            <xs:sequence>
              <xs:element name="pdpid" type="pdpidType" />
              <xs:element name="apnid" type="apnidType" minOccurs="0" />
              <xs:element name="eqosid" type="eqosidType" />
              <xs:element name="vpaa" type="vpaaType" />
              <xs:element name="pdpch" type="pdpchType" minOccurs="0" />
              <xs:element name="pdpty" type="pdptyType" />
              <xs:element name="epdpind" type="epdpindType" minOccurs="0" />
            </xs:sequence>
          </xs:complexType>
        </xs:element>
      </xs:sequence>
    </xs:complexType>
  </xs:element>
</xs:schema>
```

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

The following table covers the attributes that can be received in an HECDPPP response.

*Table 3 Attributes*

Attribute	Type	Description
apnid	Integer 0-16383	Access Point Name (APN) identifier
epdpind	Boolean	Extended PDP context type indicator
eqosid	Integer 0-4095	Extended QoS Identifier



Attribute	Type	Description
pdpch	String	2-7 characters
pdpch		PDP context profile
pdpcc	Integer	0-8160 or String ALL.
pdpcc		PDP context charging characteristics
pdpid	Integer	1-50
pdpid		PDP context identifier
pdpt	String	
pdpt		PDP context type
pdpt		<ul style="list-style-type: none"><li>• IPV4</li><li>• PPP</li><li>• IPV6</li></ul>
vpaa	Boolean	
vpaa		Visited Public Land Mobile Network (VPLMN) address allowed





## 3 GSM Service Control Function Profile

This section covers gsmSCF profile operations.

### 3.1 Initiate GSM Service Control Function Profile

The HECDGPI command initiates a gsmSCF profile.

#### 3.1.1 HECDGPI Request

Command Description:

```
HECDGPI:GSAP=gsapNumber[,GSA=gsa...];
```

The following table explains the attributes that can be used in an HECDGPI request.

*Table 4 Attributes*

Attribute	Type	Description
GSAP	Digit string 1-255	gsmSCF profile identity
GSA	Text string. Each value contains 3-15 Digits Maximum number of GSA is 100.	A set of gsmSCF addresses to be added

#### 3.1.2 HECDGPI Response

The HECDGPI command responds with only a notification.

### 3.2 Print GSM Service Control Function Profile

The HECDGPP command prints gsmSCF profile data from the Centralized User Database (CUDB).

#### 3.2.1 HECDGPP Request

Command Description:

```
HECDGPP:GSAP=gsapNumber;
```

The following table explains the attributes that can be used in an HECDGPP request.

*Table 5 Attributes*

Attribute	Type	Description
GSAP	Digit string 1-255	gsmSCF profile identity

### 3.2.2 HECDGPP Response

The HECDGPP response is an XML structure written directly in the CLI. The following is the XML schema used.

```
<?xml version="1.0" encoding="UTF-8"?>
<xsd:schema xmlns:xsd="http://www.w3.org/2001/XMLSchema"
  xmlns:pg="http://schemas.ericsson.com/pg/hlr/13.5/"
  targetNamespace="http://schemas.ericsson.com/pg/hlr/13.5/"
  elementFormDefault="qualified" attributeFormDefault="qualified">
  <xsd:element name="gsmSCFProfileData">
    <xsd:complexType>
      <xsd:sequence>
        <xsd:element name="gsmSCFProfile" minOccurs="0">
          <xsd:complexType>
            <xsd:sequence>
              <xsd:element name="gsap" type="xsd:integer" />
              <xsd:element name="gsa" type="xsd:string" maxOccurs="unbounded"/>
            </xsd:sequence>
          </xsd:complexType>
        </xsd:element>
      </xsd:sequence>
    </xsd:complexType>
  </xsd:element>
</xsd:schema>
```

The following table covers the attributes that can be received in an HECDGPP response.

*Table 6*

Attribute	Type	Description
GSAP	Digit string 1-255	gsmSCF profile identity
GSA	Text string. Each value contains 3-15 digits.  Maximum number of GSA attributes is 100.	A set of gsmSCF addresses

## 3.3 Change GSM Service Control Function Profile

The command HECDGPC adds or deletes GSAs for an already defined GSAP in CUDB.

### 3.3.1 HECDGPC Request

Command Description:

```
HECDGPC:GSAP=gsapNumber,GSA=gsa...[,ERASE];
```



The following table explains the attributes that can be used in an HECDGPC request.

*Table 7 Attributes*

Attribute	Type	Description
GSAP	Digit string 1-255	gsmSCF profile identity
GSA	Text string. Each value contains 3-15 digits. Maximum number of GSA attributes is 100.	A set of gsmSCF addresses to be added or deleted
ERASE	This parameter has no value.	If ERASE is given, the GSA is removed from the GSAP. If ERASE is not given, the GSA is added to the GSAP.

### 3.3.2 HECDGPC Response

The HECDGPC command responds with only a notification.

## 3.4 End GSM Service Control Function

The HECDGPE command ends a gsmSCF profile which is already defined in the CUDB.

**Note:** The command is accepted only if the gsmSCF profile is not tied to any subscriber.

### 3.4.1 HECDGPE Request

Command Description:

HECDGPE:GSAP=gsapNumber;

The following table explains the attributes that can be used in an HECDGPE request.

*Table 8 Attributes*

Attribute	Type	Description
GSAP	Digit string 1-255	gsmSCF profile identity

### 3.4.2 HECDGPE Response

The HECDGPE command responds with only a notification.







## 4 M2M Profile

This section covers M2M Profile operations.

### 4.1 Initiate M2M Profile

The `HECDM2I` command initiates M2M Profile.

#### 4.1.1 HECDM2I Request

Command Description:

```
HECDM2I:M2MPID=m2mpid,DMI=dmi,NNAME=nname,NTYPE=ntype[,URL=url][,IPTYPE=iptype,
IP=ip[,M2MIPPORT=m2mipport]][,NMSISDN=nmsisdn];
```

#### Example of a HECDM2I command

```
HECDM2I:M2MPID=1234,DMI=STA,NNAME=SERVER123,NTYPE=2;
```

This CLI command creates an M2M profile with identifier 1234 to use network application server name SERVER123, network application server type 2.

The following table explains the attributes that can be used in a HECDM2I request.

*Table 9 Command Attributes*

Attribute	Type	Description
M2MPID	Integer 1-65535	M2M profile identifier
DMI	String STA = Static device String. DYN = Dynamic device	Device mobility information
NNAME	Text string, 1-15 characters	Network application server name
NTYPE	Integer 0-127	Network application server type
URL	Text string, 2-63 characters It can consist of both lower- and uppercase letters.	Uniform Resource Locator
IPTYPE	String IPV4 = IP Version 4 IPV6 = IP Version 6	IP Type



Attribute	Type	Description
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:hex 6: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.	IP Address  This parameter allows either an IP version 4 or 6 address.
M2MIPPORT	Integer 0-65535	IP Port
NMSIDN	Digit string 5-15 digits, each digit 0-9.	Network application server MSISDN

#### 4.1.2 HECDM2I Response

The command HECDM2I responds with only a notification.

## 4.2 Print M2M Profile

The HECDM2P command prints M2M Profile.

#### 4.2.1 HECDM2P Request

Command Description:

```
HECDM2P:M2MPID=m2mpid;
```

##### Example of a HECDM2P command

```
HECDM2P:M2MPID=1;
```

The following table explains the attributes that can be used in a HECDM2P request.

*Table 10 Command Attributes*

Attribute	Type	Description
M2MPID	Integer 1-65535 or string ALL, which print all profiles	M2M profile identifier



## 4.2.2

## HECDM2P Response

The HECDM2P response is an XML structure written directly in the CLI. The following is the XML schema used.

```
<?xml version="1.0" encoding="UTF-8"?>
<xs:schema xmlns:xs="http://www.w3.org/2001/XMLSchema"
  targetNamespace="http://schemas.ericsson.com/pg/hlr/13.5/"
  elementFormDefault="qualified" attributeFormDefault="unqualified">
  <xs:element name="M2MProfileData">
    <xs:complexType>
      <xs:sequence>
        <xs:element name="M2MProfile" minOccurs="0" maxOccurs="unbounded">
          <xs:complexType>
            <xs:sequence>
              <xs:element name="m2mpid" type="xs:integer" />
              <xs:element name="dmi" type="xs:string" />
              <xs:element name="nname" type="xs:string" />
              <xs:element name="ntype" type="xs:integer" />
              <xs:element name="url" type="xs:string" minOccurs="0" />
              <xs:element name="ip" type="xs:string" minOccurs="0" />
              <xs:element name="m2mipport" type="xs:integer" minOccurs="0" />
              <xs:element name="nmsisdn" type="xs:string" minOccurs="0" />
            </xs:sequence>
          </xs:complexType>
        </xs:element>
      </xs:sequence>
    </xs:complexType>
  </xs:element>
</xs:schema>
```

The following table covers the attributes that can be received in the HECDM2P response.

**Table 11** *Response Attributes*

Attribute	Type	Description
M2MPID	Integer 1-65535 String ALL = Print all profiles	M2M profile identifier
DMI	String STA = Static device DYN = Dynamic device	Device mobility information
NNAME	Text string, 1-15 characters	Network application server name
NTYPE	Integer 0-127	Network application server type
URL	Text string, 2-63 characters It can consist of both lower- and uppercase letters.	Uniform Resource Locator



Attribute	Type	Description
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:hex 6: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.	IP Address  This parameter allows either an IP version 4 or 6 address.
M2MIPPORT	Integer 0-65535	IP Port
NMSISDN	Digit string 5-15 digits, each digit 0-9	Network application server MSISDN

## 4.3 Change M2M Profile

The HECDM2C command performs a change of an M2M profile.

### 4.3.1 HECDM2C Request

Command Description:

```
HECDM2C:M2MPID=m2mpid[,DMI=dmi][,NNAME=nname][,NTYPE=ntype][URL=url][,IP=ip[,  
IPTYPE=iptype[,M2MIPPORT=m2mipport]]][,NMSISDN=nmsisdn];
```

#### Example of a HECDM2C command

```
HECDM2C:M2MPID=12,DMI=STA,NNAME="SERVER123",NTYPE=2,  
URL="http://www.thecompany.com/";
```

This CLI command changes the M2M profile with identifier 12 to use network application server name "SERVER123", network application server type 2 and URL "WWW.THECOMPANY.COM".

The following table explains the attributes that can be used in a HECDM2C request.

*Table 12 Command Attributes*

Attribute	Type	Description
DMI	Text string  DYN = Dynamic  STA = Static	Device mobility information



Attribute	Type	Description
IP	<p>IP version 4 address:</p> <p>Text string 7-15 characters;</p> <p>oc1.oc2.oc3.oc4 where each oc&lt;n&gt; is integer 0-255</p> <p>IP version 6 address:</p> <p>Text string 2-39 characters;</p> <p>hex1:hex2:hex3:hex4:hex5:hex6:hex7:hex8 where each hex&lt;n&gt; is hexadecimal 0-FFFF.</p> <p>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.</p> <p>ERASE = Erase IP address</p>	<p>IP Address</p> <p>This parameter allows either an Internet Protocol (IP) version 4 or an IP version 6 address.</p>
M2MIPPORT	Integer 0-65535	IP Port
IPTYPE	<p>Text String</p> <p>IPV4 = IP Version 4</p> <p>IPV6 = IP Version 6</p>	IP Type
M2MPID	Integer 1-65535	Machine to Machine profile identifier
NMSISDN	<p>Number (MSISDN)</p> <p>Defined as international E.164</p> <p>Digit string 5-15. Each digit is 0-9.</p> <p>ERASE = Erase network application server MSISDN</p>	Network application server MSISDN
NNAME	Text string, 1-15 characters	Network application server name
NTYPE	Integer 0-127	Network application server type
URL	<p>Text string 2-41 characters</p> <p>It can consist of both lower- and uppercase letters.</p> <p>ERASE = Erase URL</p>	Uniform Resource Locator

### 4.3.2 HECDM2C Response

The HECDM2C response is an XML structure written to file. The following is the XML schema used.



```
<?xml version="1.0" encoding="UTF-8"?>
<xs:schema xmlns:xs="http://www.w3.org/2001/XMLSchema"
targetNamespace="http://schemas.ericsson.com/pg/hlr/13.5/"
elementFormDefault="qualified" attributeFormDefault="unqualified">
  <xs:element name="ChangeM2MProfileLogData" minOccurs="0">
    <xs:element name="FailedSubscriberUpdates" minOccurs="0">
      <xs:complexType>
        <xs:sequence>
          <xs:element name="Subscriber" maxOccurs="unbounded">
            <xs:complexType>
              <xs:sequence>
                <xs:element name="msisdn" type="xs:string" />
                <xs:element name="imsi" type="xs:string" />
                <xs:element name="FaultReason">
                  <xs:complexType>
                    <xs:sequence>
                      <xs:element name="code" type="xs:integer" />
                      <xs:element name="message" type="xs:string" />
                      <xs:element name="additionalInfo" type="xs:string" minOccurs="0" />
                    </xs:sequence>
                  </xs:complexType>
                </xs:element>
              </xs:sequence>
            </xs:complexType>
          </xs:element>
        </xs:sequence>
      </xs:complexType>
    </xs:element>
  </xs:sequence>
</xs:element>
  <xs:element name="MassiveUpdateStatistics">
    <xs:complexType>
      <xs:sequence>
        <xs:element name="starttime" type="xs:string" />
        <xs:element name="stoptime" type="xs:string" />
        <xs:element name="NumberOfChangedSubscribers" type="xs:integer" />
        <xs:element name="NumberOfFailedSubscribers" type="xs:integer" />
        <xs:element name="NumberOfRemainingSubscribers" type="xs:integer" />
      </xs:sequence>
    </xs:complexType>
  </xs:element>
</xs:element>
</xs:schema>
```

The following table covers the attributes that can be received in the HECDM2C response.

**Note:** Error codes printed in the `FaultReason` element are related to the update of data for a single subscriber. These errors do not stop the massive update.

If an error stops the massive update, that error code is returned in the generic XML structure. The generic XML structure for file responses is specified in *Generic CLI Interface Specification, Reference [1]*.

**Table 13** Response Attributes

Attribute	Type	Description
additionalInfo	Text string	Additional information about the error
code	Integer	The error code
imsi	Digit string, 6-15 digits. Each digit is 0-9.	International Mobile Subscriber Identity
message	Text string	The error message
msisdn	Digit string, 5-15 digits	Mobile Station ISDN or ISDN number
NumberOfChangedSubscribers	Text string	Number of successfully updated subscribers



Attribute	Type	Description
NumberOfFailedSubscribers	Text string	Number of subscribers where the change failed
NumberOfRemainingSubscribers	Text string	Number of subscribers remaining when the cancel was executed
starttime	Text string	The start time for the massive change
stoptime	Text string	The stop time for the massive change

## 4.4 End M2M Profile

The `HECDM2E` command ends M2M Profile.

### 4.4.1 HECDM2E Request

Command Description:

```
HECDM2E:M2MPID=m2mpid;
```

#### Example of a HECDM2E command

```
HECDM2E:M2MPID=42;
```

This CLI command ends the M2M profile with M2M profile identifier (M2MPID) 42 if the following conditions are met:

- M2MPID 42 is defined.
- M2MPID 42 is not used by any MS subscriber or LMU subscriber.

The following table explains the attributes that can be used in a `HECDM2E` request.

*Table 14 Command Attributes*

Attribute	Type	Description
M2MPID	Integer 1-65535	M2M profile identifier

### 4.4.2 HECDM2E Response

The `HECDM2E` request is a command with notification only, direct client response. For more information, see section *Notification only* in *Generic CLI Interface Specification*, Reference [1].







## 5 M2M Service Profile

This section covers M2M service profile operations.

### 5.1 Print M2M Service Profile

The `HECDMPP` command prints M2M Service Profile.

#### 5.1.1 HECDMPP Request

Command Description:

```
HECDMPP:M2MSP=ALL;
```

#### Example of a HECDMPP Command

This following CLI command prints all M2M service profiles.

```
HECDMPP:M2MSP=ALL;
```

The following table explains the attributes that can be used in a `HECDMPP` request.

*Table 15 Command Attributes*

Attribute	Type	Description
M2MSP	String - ALL.	M2M service profile identifier

#### 5.1.2 HECDMPP Response

The command `HECDMPP` responds with a file response.

For more information, see section **Command with File Response** in the *Generic CLI Interface Specification*, Reference [1].

The `HECDMPP` response is an XML structure written to file. The following is the XML schema used:



```
<xs:element name="M2MServiceProfilesData">
  <xs:complexType>
    <xs:sequence>
      <xs:element name="M2MServiceProfile" minOccurs="0" maxOccurs="unbounded">
        <xs:complexType>
          <xs:sequence>
            <xs:choice>
              <xs:element name="ResponseData">
                <xs:complexType>
                  <xs:sequence>
                    <xs:element name="M2MServiceProfileData">
                      <xs:complexType>
                        <xs:sequence>
                          <xs:element name="m2msp" type="m2mspType" />
                          <xs:element name="m2mspv" type="m2mspvType" />
                          <xs:element name="nam" type="namType" />
                          <xs:sequence>
                            <xs:element name="sud" type="sudType" maxOccurs="unbounded" />
                          </xs:sequence>
                          <xs:element name="gprsobp" type="gprsobpType" minOccurs="0" />
                          <xs:element name="gsmobcinv" type="gsmobcinvType" minOccurs="0" />
                          <xs:element name="csp" type="cspType" minOccurs="0" />
                          <xs:element name="pdpcp" type="pdpcpType" minOccurs="0" />
                          <xs:element name="gsap" type="gsapType" minOccurs="0" />
                          <xs:element name="m2mpid" type="m2mpidType" minOccurs="0" />
                          <xs:element name="SubscriberLocationServicesData" minOccurs="0">
                            <xs:complexType>
                              <xs:sequence>
                                <xs:element name="PrivacyLCSCClassData" minOccurs="0">
                                  <xs:complexType>
                                    <xs:sequence>
                                      <xs:element name="UniversalLocationServices" type="univType"
                                        minOccurs="0" />
                                      <xs:element name="CallRelatedLocationServices" minOccurs="0">
                                        <xs:complexType>
                                          <xs:sequence>
                                            <xs:element name="notif" type="notifType" />
                                            <xs:element name="ExternalAddress" minOccurs="0" maxOccurs="unbounded">
                                              <xs:complexType>
                                                <xs:sequence>
                                                  <xs:element name="eadd" type="eaddType" />
                                                  <xs:element name="gres" type="gresType" minOccurs="0" />
                                                  <xs:element name="notif" type="notifType" />
                                                </xs:sequence>
                                              </xs:complexType>
                                            </xs:element>
                                          </xs:sequence>
                                        </xs:complexType>
                                      </xs:element>
                                    </xs:sequence>
                                  </xs:complexType>
                                </xs:element>
                                <xs:element name="CallUnrelatedLocationServices" minOccurs="0">
                                  <xs:complexType>
                                    <xs:sequence>
                                      <xs:element name="notif" type="notifType" />
                                      <xs:element name="ExternalAddress" minOccurs="0" maxOccurs="unbounded">
                                        <xs:complexType>
                                          <xs:sequence>
                                            <xs:element name="eadd" type="eaddType" />
                                            <xs:element name="gres" type="gresType" minOccurs="0" />
                                            <xs:element name="notif" type="notifType" />
                                          </xs:sequence>
                                        </xs:complexType>
                                      </xs:element>
                                    </xs:sequence>
                                  </xs:complexType>
                                </xs:element>
                                <xs:element name="PLMNOperatorLocationServices" minOccurs="0">
                                  <xs:complexType>
                                    <xs:sequence>
                                      <xs:element name="intid" type="intidType" minOccurs="0"
                                        maxOccurs="unbounded" />
                                    </xs:sequence>
                                  </xs:complexType>
                                </xs:element>
                                <xs:element name="PrivacyServiceTypeData" minOccurs="0">
                                  <xs:complexType>
                                    <xs:sequence>
                                      <xs:element name="PrivacyServiceType" maxOccurs="unbounded">
                                        <xs:complexType>
                                          <xs:sequence>
                                            <xs:element name="servt" type="servtType" />
                                            <xs:element name="gres" type="gresType" minOccurs="0" />
                                            <xs:element name="notif" type="notifType" />
                                          </xs:sequence>
                                        </xs:complexType>
                                      </xs:element>
                                    </xs:sequence>
                                  </xs:complexType>
                                </xs:element>
                              </xs:sequence>
                            </xs:complexType>
                          </xs:element>
                        </xs:sequence>
                      </xs:complexType>
                    </xs:element>
                  </xs:sequence>
                </xs:complexType>
              </xs:choice>
            </xs:sequence>
          </xs:complexType>
        </xs:element>
      </xs:sequence>
    </xs:complexType>
  </xs:element>
</xs:sequence>
</xs:complexType>
</xs:element>
```



The following tables cover the attributes that can be received in the HECDMPP response.

**Table 16** *Attributes for M2M Service Profile*

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"> <li>0 = both non GPRS and GPRS subscriber</li> <li>1 = non GPRS subscriber</li> <li>2 = GPRS subscriber</li> </ul>	Mandatory	Network access mode
gprsobp	Integer 1-3 <ul style="list-style-type: none"> <li>1 = Barring of all packed oriented services.</li> <li>2 = Barring packed oriented services from access point that are within the home PLMN while the subscriber is roaming in a visited PLMN.</li> <li>3 = Barring packed oriented services from access point that are within the roamed visited PLMN.</li> </ul>	Optional	Operator Determined Barring of Packet Oriented Services
gsmobcinv	Integer 1-4 <ul style="list-style-type: none"> <li>1 = Barring of invocation of ECT.</li> <li>2 = Barring of invocation of Call Transfer where at least one of the two calls is a call charged to the served subscriber.</li> <li>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.</li> <li>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.</li> </ul>	Optional	Operator Determined Barring of invocation of Call Transfer
sud	String <sup>(1)</sup>	Mandatory	Subscriber Data
csp	Integer 1-8160	Optional	CAMEL Subscription Profile (CSP)
pdpcp	Integer 0-8160 0 = No PDP context profile assigned 1-8160 = PDP context profile	Mandatory	PDP context profile
gsap	Digit string 1-255	Optional	GSM service control function profile identity
m2mpid	Integer 1-65535	Optional	M2M profile identifier

(1) See *HLR Subscriber Data Type Definitions, Reference [5]* for a specific definition.

**Table 17** *Attributes for Subscriber Location Services*

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> = 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 <sup>(1)</sup>	Optional	Internal identity
mocl	One of the following strings <sup>(1)</sup> : <ul style="list-style-type: none"><li>• ASL</li><li>• BSL</li><li>• TTP</li></ul>	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 <sup>(1)</sup>	Optional	Service type
univ	Boolean with value <code>true</code>	Optional	Universal LCS privacy class

(1) This parameter can have multiple values, see Section 1.7 on page 2.

**Table 18** *Attributes for Subscriber Location Services Address*

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 19** *Attributes for Subscriber Spam SMS*

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 20** *Attributes for CAMEL Subscription Profile*

Parameter	Type	Occurrence	Description
bs	String Possible values, and explanations for them, can be found in <i>HLR Subscriber Data Type Definitions</i> , Reference [5].	Optional	Basic Service (BS)
bsg	String Possible values, and explanations for them, can be found in <i>HLR Subscriber Data Type Definitions</i> , Reference [5]	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 <sup>(1)</sup> , 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 <sup>(1)</sup> , 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



Parameter	Type	Occurrence	Description
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
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



Parameter	Type	Occurrence	Description
gprss	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
i	Boolean  true = Terminating CAMEL subscription data for the given Trigger Detection Point (TDP) are not sent towards the GMSC when the subscriber is roaming inside the Home Public Land Mobile Network (HPLMN)  false = Terminating CAMEL subscription data for the given TDP always is sent towards the GMSC	Optional	Inhibition indicator
mcs	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
mc2s	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
msisdn	Digit string 5–15 digits. Each digit is 0–9.	Mandatory	Mobile Subscriber ISDN Number (MSISDN)
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  The value range depends on <i>tdptype</i> . See <i>HLR Subscriber Data Type Definitions</i> , Reference [5].	Optional	Trigger Detection Point (TDP)
tdptype	String  <ul style="list-style-type: none"> <li>• DSTDP</li> <li>• GPRSTDP</li> <li>• MMTDP</li> <li>• OCTDP</li> <li>• OSMSTDP</li> <li>• TCTDP</li> <li>• TSMSTDP</li> <li>• VTDP</li> </ul>	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) 0 means Unknown, 1 or 2 means Not used, 3 means National number, and 4 means International number.

Table 21 Attributes for PDP Context

Parameter	Type	Occurrence	Description
apnid	Integer 0–16383	Optional	Access Point Name (APN) identifier
epdpind	Boolean	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 <sup>(1)</sup>
pdpcp	Integer 0–8160  0 = No PDP context profile assigned 1–8160 = PDP context profile	Optional	PDP context profile
pdpid	Integer 1–50	Optional	PDP context identifier



Parameter	Type	Occurrence	Description
pdpty	One of the following strings: <ul style="list-style-type: none"> <li>• IPV4</li> <li>• PPP</li> <li>• IPV6</li> </ul>	Mandatory	PDP context type
vpaa	Boolean 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 22** Attributes for GSMSCF Profile

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

**Table 23** Attributes for M2M Profile

Attribute	Type	Occurrence	Description
m2mpid	Integer 1-65535	Mandatory	M2M profile identifier
dmi	String <i>STA</i> : Static device String <i>DYN</i> : 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
url	Text string, 2-63 characters It can consist of both lower- and uppercase letters.	Optional	Uniform Resource Locator
iptype	String <i>IPV4</i> : IP Version 4 String <i>IPV6</i> : IP Version 6	Optional	IP Type



Attribute	Type	Occurrence	Description
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

## 5.2 End M2M Service Profile

The HECDMPE command ends M2M service profile.

### 5.2.1 HECDMPE Request

Command Description:

```
HECDMPE:M2MSP=m2msp;
```

#### Example of a HECDMPE command

```
HECDMPE:M2MSP=42;
```

**Note:** If alias or service profile does not exist, PG considers it as deleted and continue.

The following table explains the attributes that can be used in a HECDMPE request.

*Table 24 Command Attributes*

Attribute	Type	Description
M2MSP	Integer 1-65535	M2M service profile identifier.



## 5.2.2 HECDMPE Response

The HECDMPE request is a command with notification only, direct client response. For more information, see section *Notification only* in *Generic CLI Interface Specification*, Reference [1].





## 6 Faults or Errors

The CLI error codes can appear both directly in the prompt, and in the result files. Besides the generic and common error codes, the CLI commands can also return some more specific error codes.

### 6.1 General CLI Errors

The following table covers Dynamic Activation internal error codes. They can appear in any CLI responses.

*Table 25 General Dynamic Activation Internal Error Codes*

Error Code	Error Message
1001	Invalid resource.
1002	Invalid XPath.
1003	Unrecognized namespace. No data view associated.
1004	Access denied. Invalid principal or credentials.
1005	Not authorized to perform current operation on selected data view.
1006	Invalid parameter.
1007	The XPath failed to match any data in the processed XML.
1008	Failed to provision data.
1009	Unsupported operation.
1093	Could not process request due to limit of max number of concurrent ongoing CLI transactions reached.
1095	Communication error while interacting with a Network Element.
1096	Timeout expired during wait for answer from Network Element.
1097	Failure during processing of the request.
1098	Could not process request due to resource limitation.
1099	System error.
1100	Execution was canceled.
1101	External error.
1102	Internal error.
1103	License error.
2002	Unreasonable value.
10015	Subscriber data not recognized.



## 6.2 Command Mapped Errors

This section covers UDC HLR/AUC Activation Interface errors that are mapped towards certain commands. They are listed in the following table along with the commands that can return them.

*Table 26 Command Mapped Errors*

Error Code	Error Message	Command
2001	FORMAT ERROR	All CLI commands

## 6.3 HLR Errors

This section covers HLR errors that can be sent through UDC HLR Activation Interface. The error codes can only appear in certain commands. The following table lists the HLR error codes for CLI.

*Table 27 HLR Error Codes*

Error Code	Error Message	Command
10075	FUNCTIONALITY NOT SUPPORTED BY THIS EXCHANGE	HECDM2I
		HECDM2C
		HECDMPP
10183	PARAMETER NOT SUPPORTED BY THIS EXCHANGE	HECDMPP
10478	LCS ADDRESS NOT DEFINED	HECDMPP
10578	M2M PROFILE ALREADY DEFINED	HECDM2I
10581	M2M PROFILE NOT DEFINED	HECDM2C
		HECDM2P
10582	M2M PROFILE IN USE	HECDM2E
10585	IP ADDRESS INCOMPATIBLE WITH IP TYPE	HECDM2I
		HECDM2C
10810	M2M service profile not defined.	HECDMPP
10812	M2M service profile in use.	HECDMPE





## 7 Appendix - HLR Classic and HLR-FE Layered Incompatibilities

For information about incompatibilities between UDB R13.0/13.2 and UDC 11B Layered Configuration, see Reference [4].





## Reference List

### Ericsson Documents

- [1] *Generic CLI Interface Specification*, 15/155 19-CSH 109 628 Uen
- [2] *Library Overview*, 18/1553-CSH 109 628 Uen
- [3] *Glossary of Terms and Acronyms*, 0033-CSH 109 628 Uen
- [4] *User Data Register (UDR) 11B, Network Impact Report from UDB R13.0/13.2 to UDR 11B Layered Configuration*, 2/10948-FGC1011354 Uen
- [5] *HLR Subscriber Data Type Definitions*, 1/198 18-CSH 109 628 Uen