**3GPP TSG-CT WG1 Meeting #133e-bisC1-21xxxx**

**E-Meeting, 17-21 January 2022 (was C1-217171)**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| *CR-Form-v12.0* | | | | | | | | |
| **CHANGE REQUEST** | | | | | | | | |
|  | | | | | | | | |
|  | **24.484** | **CR** | **0192** | **rev** | **2** | **Current version:** | **17.3.0** |  |
|  | | | | | | | | |
| *For* [***HE******LP***](http://www.3gpp.org/3G_Specs/CRs.htm#_blank)*on using this form: comprehensive instructions can be found at* [*http://www.3gpp.org/Change-Requests*](http://www.3gpp.org/Change-Requests)*.* | | | | | | | | |
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| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| ***Proposed change affects:*** | UICC apps |  | ME | **X** | Radio Access Network |  | Core Network | **X** |

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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | | | | | | | | | | |
| ***Title:*** | 5G Data Network Config parameters | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Source to WG:*** | FirstNet, Nokia, Nokia Shanghai Bell | | | | | | | | | |
| ***Source to TSG:*** | C1 | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Work item code:*** | MCOver5GS | | | | |  | ***Date:*** | | | 17 January 2022 |
|  |  | | | |  | |  | | |  |
| ***Category:*** | **B** |  | | | | | ***Release:*** | | | Rel-17 |
|  | *Use one of the following categories:* ***F*** *(correction)* ***A*** *(mirror corresponding to a change in an earlier release)* ***B*** *(addition of feature),* ***C*** *(functional modification of feature)* ***D*** *(editorial modification)*  Detailed explanations of the above categories can be found in 3GPP [TR 21.900](http://www.3gpp.org/ftp/Specs/html-info/21900.htm). | | | | | | | | *Use one of the following releases: Rel-8 (Release 8) Rel-9 (Release 9) Rel-10 (Release 10) Rel-11 (Release 11) Rel-12 (Release 12)* *Rel-13 (Release 13) Rel-14 (Release 14) Rel-15 (Release 15) Rel-16 (Release 16) Rel-17 (Release 17)  Rel-18 (Release 18)* | |
|  |  | | | | | | | | | |
| ***Reason for change:*** | | The work in TS 23.289 v17.0.0 specifies that "The DNN shall be made available to the MC service UE either via UE (pre)configuration or via initial UE configuration on a per HPLMN and optionally also per VPLMN basis."  Within the EPS, access to services from the UE is provided via APNs. Within the 5GS, access to services from the UE is provided via DNs. The same mission critical services must be accessible to the UE, regardless of whether the UE is attached via EUTRAN or 5G-RAN. To facilitate this, it is expected that an operator will assign the same name to an APN (Apn-name) and to a DN (DNN) that provide access to the same set of services. Thus the APN configuration needs to be extended with the parameters that are applicable to 5GS.  For the cases that a DNN is meant to be 5GS-specific, and not to be used as an APN in EPS, a separate configuration is added. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Summary of change:*** | | 1) Data network (DN) information is configured for each DN in the HPLMN and VPLMN extending existing APN configuration.  2) Separate DNN configuration is added for cases that the info applies only to 5GS. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Consequences if not approved:*** | | The user will not have access to the needed DNs. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Clauses affected:*** | | 7.2.2.1, 7.2.2.3, 7.2.2.6, 7.2.2.7 | | | | | | | | |
|  | |  | | | | | | | | |
|  | | **Y** | **N** |  | | | |  | | |
| ***Other specs*** | |  | **X** | Other core specifications | | | | TS/TR ... CR ... | | |
| ***affected:*** | |  | **X** | Test specifications | | | | TS/TR ... CR ... | | |
| ***(show related CRs)*** | |  | **X** | O&M Specifications | | | | TS/TR ... CR ... | | |
|  | |  | | | | | | | | |
| ***Other comments:*** | |  | | | | | | | | |
|  | |  | | | | | | | | |
| ***This CR's revision history:*** | | Rev 1:   * Restructured the new elements to have a single DataNetwork-Info element under the anyExt element that is under the on-network element. Updated all affected clauses accordingly. * Added clause 7.2.1.2 to describe the relationship between an APN and a DN in the same network and having the same name (Apn-name, DNN).   Rev 2:   * Included a <DN-Info> element under each of <MCPTTPdn-Info> element, <MCVideoPdn-Info> element, <MCDataPdn-Info> element, <MCCommonCorePdn-Info> element, and <MCIdMPdn-Info> element. * Renamed the <DataNetwork-Info> element to <DataNetworks-Info>. * Restructured the contents of the <DataNetworks-Info> element. * Created an extra structural level above <DN-Info> for <PLMN-DN-Info> to separate out the inclusion of the <DN-Name> element. This allows use of <DN-Info> under the 4G PDN definitions without use of the <DN-Name> and allows use of the APN-name in the case of an APN and a DN having the same name. * Moved the optional <DN-Info> element that was incorrectly placed under the <MCPTTPdn-Info> element to a separate entry under the <MCPTT-Service-Details> element that is under the <anyExt> element that is under the <on-Network> element. The same was done for MCVideo and MCData. * Created elements <MCCommonCoreDN-Info> and <MCIdMDN-Info> under the <anyExt> element that is under the <on-network> element that can each contain a <DN-Info> element. * Updated the XML schema per the above element moves and creations. * Corrected all uses of anyURI to be xs:anyURI. * Updated clauses 7.2.2.6 and 7.2.2.7 to reflect the above changes. * Changed elements that were marked as use="required" to an attribute. | | | | | | | | |

**\* \* \* \* \* FIRST CHANGE \* \* \* \* \***

#### 7.2.2.1 Structure

The MCS UE initial configuration document structure is specified in this clause.

The <mcptt-UE- initial-configuration> document:

1) shall include a "domain" attribute;

2) may include a <mcptt-UE-id> element;

3) may include a <name> element;

4) may include a <Default-user-profile> element;

5) may include an <on-network> element;

6) may include an <off-network> element; and

7) may include any other attribute for the purposes of extensibility.

The <Default-user-profile> element shall contain:

1) a "User-ID" attribute; and

2) a "user-profile-index" attribute.

The <on-network> element:

1) shall contain a <Timers> element containing:

a) a <T100> element;

b) a <T101> element;

c) a <T103> element;

d) a <T104> element;

e) a <T132> element; and

f) may include any other element for the purposes of extensibility;

2) shall contain an <HPLMN> element containing:

a) a "PLMN" attribute;

b) a <service> element; and

c) a list of <VPLMN> elements;

3) shall contain an <App-Server-Info> element containing:

a) an <idms-auth-endpoint> element;

b) an <idms-token-endpoint> element;

c) a <http-proxy> element;

d) a <gms> element;

e) a <cms> element;

f) a <kms> element; and

g) a <tls-tunnel-auth-method> element containing:

i) a <mutual-authentication> element;

ii) optionally a <x509> element; and

iii) optionally a <key> element; and

h) may include any other element for the purposes of extensibility

4) shall contain a <GMS-URI> element;

5) shall contain a <group-creation-XUI> element;

6) shall contain a <GMS-XCAP-root-URI> element;

7) shall contain a <CMS-XCAP-root-URI> element;

8) shall contain an <integrity-protection-enabled> element;

9) shall contain a <confidentiality-protection-enabled> element;

10) if the MCPTT service is supported, shall contain an <anyExt> element containing an <MCPTT-Service-Details> element, containing:

a) one <IPv6-Required> element;

b) one <Server-URI> element; and

c) one anyExt element containing:

i) an <MCPTTPdn-Info> element containing:

A) an <Apn-Name> element;

B) optionally a <Pap-parameters> element containing:

I) a <user-name> element; and

II) a <password> element;

C) optionally a <Chap-parameters> element containing:

I) a <user-name> element; and

II) a <password> element; and

ii) optionally a <DN-Info> element;

MCPTTDN-Info11) if the MCVideo service is supported, shall contain an <anyExt> element containing an <MCVideo-Service-Details> element, containing:

a) one <IPv6-Required> element;

b) one <Server-URI> element; and

c) one anyExt element containing:

i) an <MCVideoPdn-Info> element containing:

A) an <Apn-Name> element;

B) optionally a <Pap-parameters> element containing:

I) a <user-name> element; and

II) a <password> element; and

C) optionally a <Chap-parameters> element containing:

I) a <user-name> element; and

II) a <password> element; and

ii) optionally a <DN-Info> element;12) if the MCData service is supported, shall contain an <anyExt> element containing an <MCData-Service-Details> element, containing:

a) one <IPv6-Required> element;

b) one <Server-URI> element; and

c) one anyExt element containing:

i) an <MCDataPdn-Info> element containing:

A) an <Apn-Name> element;

B) optionally a <Pap-parameters> element containing:

I) a <user-name> element; and

II) a <password> element; and

C) optionally a <Chap-parameters> element containing:

I) a <user-name> element; and

II) a <password> element; and

ii) optionally a <DN-Info> element;13) may contain an <anyExt> element which may contain:

a) an <MCCommonCorePdn-Info> element containing:

i) an <Apn-Name> element;

ii) optionally a <Pap-parameters> element containing:

A) a <user-name> element; and

B) a <password> element;

iii) optionally a <Chap-parameters> element containing:

A) a <user-name> element; and

B) a <password> element;and

optionally an <MCCommonCoreDN-Info> element containing a <DN-Info> element;

b) an <MCIdMPdn-Info> element containing:

a) an <Apn-Name> element;

b) optionally a <Pap-parameters> element containing:

i) a <user-name> element; and

ii) a <password> element; and

c) optionally a <Chap-parameters> element containing:

i) a <user-name> element; and

ii) a <password> element; and

optionally an <MCIdMDN-Info> element containing a <DN-Info> element;

15) may contain an <anyExt> element containing an <HPLMN-DataNetworks-Info> element containing:

a) a <PLMN-ID> attribute; and

b) a <PLMN-DN-Info> element;

16) may contain an <anyExt> element containing zero or more <VPLMN-DataNetworks-Info> elements each containing:

a) a <PLMN-ID>attribute; and

b) a <PLMN-DN-Info> element; and17) may include any other element for the purposes of extensibility.

The <PLMN-DN-Info> shall contain:

1) a <DN-Name> attribute; and

2) a <DN-Info> element.

The <DN-Info> element shall contain:

1) a <DN-AAA-Server> attribute; and

2) a <DN-PDU-sessiontype> element.

The <off-network> element:

1) shall contain a <Timers> element containing:

a) a <TFG1> element;

b) a <TFG2> element;

c) a <TFG3> element;

d) a <TFG4> element;

e) a <TFG5> element.

f) a <TFG11> element;

g) a <TFG12> element;

h) a <TFG13> element;

i) a <TFG14> element;

j) a <TFP1> element;

k) a <TFP2> element;

l) a <TFP3> element;

m) a <TFP4> element;

n) a <TFP5> element;

o) a <TFP6> element;

p) a <TFP7> element;

q) a <TFB1> element;

r) a <TFB2> element;

s) a <TFB3> element;

t) a <T201> element;

u) a <T203> element;

v) a <T204> element;

w) a <T205> element;

x) a <T230> element;

y) a <T233> element;

z) a <TFE1> element;

za) a <TFE2> element; and

zb) may include any other element for the purposes of extensibility;

2) shall contain a <Counters> element containing:

a) a <CFP1> element;

b) a <CFP3> element;

c) a <CFP4> element;

d) a <CFP6> element;

e) a <CFG11> element.

f) a <CFG12> element;

g) a <C201> element;

h) a <C204> element;

i) a <C205> element; and

j) may include any other element for the purposes of extensibility; and

3) may include any other element for the purposes of extensibility.

The <VPLMN> element shall contain:

1) a "PLMN" attribute; and

2) a <service> element.

The <service> element of the <HPLMN> element and the <VPLMN> element shall contain:

1) an <MCPTT-to-con-ref> element;

2) an <MC-common-core-to-con-ref> element; and

3) an <MC-ID-to-con-ref> element.

The <mcptt-UE-id> element:

1) may contain a list of <Instance-ID-URN> elements; and

2) may contain a list of <IMEI-range> elements.

The <IMEI-range> element:

1) shall contain a <TAC> element;

2) may contain a list of <SNR> elements; and

3) may contain <SNR-range> element.

The <SNR-range> element:

1) shall contain a <Low-SNR> element; and

2) shall contain a <High-SNR> element.

**\* \* \* \* \* NEXT CHANGE \* \* \* \* \***

#### 7.2.2.3 XML Schema

<?xml version="1.0" encoding="UTF-8"?>

<xs:schema xmlns:mcpttiup="urn:3gpp:mcptt:mcpttUEinitConfig:1.0"

xmlns:xs="http://www.w3.org/2001/XMLSchema"

targetNamespace="urn:3gpp:mcptt:mcpttUEinitConfig:1.0"

elementFormDefault="qualified" attributeFormDefault="unqualified">

<xs:import namespace="http://www.w3.org/XML/1998/namespace"

schemaLocation="http://www.w3.org/2001/xml.xsd"/>

<xs:element name="mcptt-UE-initial-configuration">

<xs:complexType>

<xs:choice minOccurs="0" maxOccurs="unbounded">

<xs:element name="mcptt-UE-id" type="mcpttiup:MCPTTUEIDType"/>

<xs:element name="name" type="mcpttiup:NameType"/>

<xs:element name="Default-user-profile" type="mcpttiup:UserProfileType"/>

<xs:element name="on-network" type="mcpttiup:On-networkType"/>

<xs:element name="off-network" type="mcpttiup:Off-networkType"/>

<xs:element name="anyExt" type="mcpttiup:anyExtType"/>

<xs:any namespace="##other" processContents="lax"/>

</xs:choice>

<xs:attribute name="domain" type="xs:anyURI" use="required"/>

<xs:attribute name="XUI-URI" type="xs:anyURI"/>

<xs:attribute name="Instance-ID-URN" type="xs:anyURI"/>

<xs:anyAttribute namespace="##any" processContents="lax"/>

</xs:complexType>

</xs:element>

<xs:complexType name="NameType">

<xs:simpleContent>

<xs:extension base="xs:token">

<xs:attribute ref="xml:lang"/>

<xs:attributeGroup ref="mcpttiup:IndexType"/>

</xs:extension>

</xs:simpleContent>

</xs:complexType>

<xs:complexType name="MCPTTUEIDType">

<xs:choice minOccurs="0" maxOccurs="unbounded">

<xs:element name="Instance-ID-URN" type="xs:anyURI"/>

<xs:element name="IMEI-range" type="mcpttiup:IMEI-rangeType"/>

<xs:element name="anyExt" type="mcpttiup:anyExtType" minOccurs="0"/>

<xs:any namespace="##other" processContents="lax"/>

</xs:choice>

<xs:attributeGroup ref="mcpttiup:IndexType"/>

<xs:anyAttribute namespace="##any" processContents="lax"/>

</xs:complexType>

<xs:complexType name="IMEI-rangeType">

<xs:sequence>

<xs:element name="TAC" type="mcpttiup:tacType"/>

<xs:choice minOccurs="0" maxOccurs="unbounded">

<xs:element name="SNR" type="mcpttiup:snrType"/>

<xs:element name="SNR-range" type="mcpttiup:SNR-rangeType"/>

</xs:choice>

<xs:element name="anyExt" type="mcpttiup:anyExtType" minOccurs="0"/>

<xs:any namespace="##other" processContents="lax" minOccurs="0" maxOccurs="unbounded"/>

</xs:sequence>

<xs:attributeGroup ref="mcpttiup:IndexType"/>

<xs:anyAttribute namespace="##any" processContents="lax"/>

</xs:complexType>

<xs:complexType name="SNR-rangeType">

<xs:sequence>

<xs:element name="Low-SNR" type="mcpttiup:snrType"/>

<xs:element name="High-SNR" type="mcpttiup:snrType"/>

<xs:element name="anyExt" type="mcpttiup:anyExtType" minOccurs="0"/>

<xs:any namespace="##other" processContents="lax" minOccurs="0" maxOccurs="unbounded"/>

</xs:sequence>

<xs:attributeGroup ref="mcpttiup:IndexType"/>

<xs:anyAttribute namespace="##any" processContents="lax"/>

</xs:complexType>

<xs:simpleType name="tac-baseType">

<xs:restriction base="xs:decimal">

<xs:totalDigits value="8"/>

</xs:restriction>

</xs:simpleType>

<xs:complexType name="tacType">

<xs:simpleContent>

<xs:extension base="mcpttiup:tac-baseType">

<xs:attributeGroup ref="mcpttiup:IndexType"/>

<xs:anyAttribute namespace="##any" processContents="lax"/>

</xs:extension>

</xs:simpleContent>

</xs:complexType>

<xs:simpleType name="snr-baseType">

<xs:restriction base="xs:decimal">

<xs:totalDigits value="6"/>

</xs:restriction>

</xs:simpleType>

<xs:complexType name="snrType">

<xs:simpleContent>

<xs:extension base="mcpttiup:snr-baseType">

<xs:attributeGroup ref="mcpttiup:IndexType"/>

<xs:anyAttribute namespace="##any" processContents="lax"/>

</xs:extension>

</xs:simpleContent>

</xs:complexType>

<xs:complexType name="UserProfileType">

<xs:attribute name="User-ID" type="xs:anyURI" use="required"/>

<xs:attribute name="user-profile-index" type="xs:unsignedByte" use="required"/>

<xs:attributeGroup ref="mcpttiup:IndexType"/>

<xs:anyAttribute namespace="##any" processContents="lax"/>

</xs:complexType>

<xs:complexType name="VPLMNType">

<xs:sequence>

<xs:element name="service" type="mcpttiup:ServiceType"/>

</xs:sequence>

<xs:attribute name="PLMN" type="xs:string" use="required"/>

<xs:anyAttribute namespace="##any" processContents="lax"/>

</xs:complexType>

<xs:complexType name="ServiceType">

<xs:sequence>

<xs:element name="MCPTT-to-con-ref" type="xs:string"/>

<xs:element name="MC-common-core-to-con-ref" type="xs:string"/>

<xs:element name="MC-ID-to-con-ref" type="xs:string"/>

<xs:element name="anyExt" type="mcpttiup:anyExtType" minOccurs="0"/>

<xs:any namespace="##other" processContents="lax" minOccurs="0" maxOccurs="unbounded"/>

</xs:sequence>

</xs:complexType>

<!-- These elements can be added under the anyExt element of the service element -->

<xs:element name="HPLMN-DataNetworks-Info" type="mcpttiup:PLMNDataNetworksInfoType"/>

<xs:element name="VPLMN-DataNetworks-Info" type="mcpttiup:PLMNDataNetworksInfoType"/>

<xs:complexType name="PLMNDataNetworksInfoType">

<xs:sequence>

<xs:element name="PLMN-DN-Info" type="mcpttiup:PLMNDNInfoType" minOccurs="1"/>

<xs:element name="anyExt" type="mcpttiup:anyExtType" minOccurs="0"/>

<xs:any namespace="##other" processContents="lax" minOccurs="0" maxOccurs="unbounded"/>

</xs:sequence>

<xs:attribute name="PLMN-ID" type="xs:string" use="required"/>

</xs:complexType>

<xs:complexType name="PLMNDNInfoType">

<xs:sequence>

<xs:element name="DN-Info" type="mcpttiup:DNInfoType"/>

<xs:element name="anyExt" type="mcpttiup:anyExtType" minOccurs="0"/>

<xs:any namespace="##other" processContents="lax" minOccurs="0" maxOccurs="unbounded"/>

</xs:sequence>

<xs:attribute name="DN-Name" type="xs:anyURI" use="required"/>

</xs:complexType>

<xs:complexType name="DNInfoType">

<xs:sequence>

<xs:element name="DN-PDU-Sessiontype" type="mcpttiup:PDUSessionType"/>

<xs:element name="anyExt" type="mcpttiup:anyExtType" minOccurs="0"/>

<xs:any namespace="##other" processContents="lax" minOccurs="0" maxOccurs="unbounded"/>

</xs:sequence>

<xs:attribute name="DN-AAA-Server" type="xs:anyURI" use="required"/>

</xs:complexType>

<xs:simpleType name="PDUSessionType">

<xs:restriction base="xs:string">

<xs:enumeration value="IPv4"/>

<xs:enumeration value="IPv6"/>

<xs:enumeration value="IPv4v6"/>

<xs:enumeration value="Ethernet"/>

<xs:enumeration value="Unstructured"/>

</xs:restriction>

</xs:simpleType>

<xs:complexType name="AuthMethodType">

<xs:sequence>

<xs:element name="mutual-authentication" type="xs:boolean"/>

<xs:element name="x509" type="xs:string" minOccurs="0"/>

<xs:element name="key" type="xs:string" minOccurs="0"/>

<xs:element name="anyExt" type="mcpttiup:anyExtType" minOccurs="0"/>

<xs:any namespace="##other" processContents="lax" minOccurs="0" maxOccurs="unbounded"/>

</xs:sequence>

</xs:complexType>

<xs:complexType name="On-networkType">

<xs:sequence>

<xs:element name="Timers">

<xs:complexType>

<xs:sequence>

<xs:element name="T100" type="xs:unsignedByte"/>

<xs:element name="T101" type="xs:unsignedByte"/>

<xs:element name="T103" type="xs:unsignedByte"/>

<xs:element name="T104" type="xs:unsignedByte"/>

<xs:element name="T132" type="xs:unsignedByte"/>

<xs:element name="anyExt" type="mcpttiup:anyExtType" minOccurs="0"/>

<xs:any namespace="##other" processContents="lax" minOccurs="0" maxOccurs="unbounded"/>

</xs:sequence>

</xs:complexType>

</xs:element>

<xs:element name="HPLMN">

<xs:complexType>

<xs:sequence>

<xs:element name="service" type="mcpttiup:ServiceType"/>

<xs:element name="VPLMN" type="mcpttiup:VPLMNType" minOccurs="0" maxOccurs="unbounded"/>

</xs:sequence>

<xs:attribute name="PLMN" type="xs:string" use="required"/>

</xs:complexType>

</xs:element>

<xs:element name="App-Server-Info">

<xs:complexType>

<xs:sequence>

<xs:element name="idms-auth-endpoint" type="xs:anyURI"/>

<xs:element name="idms-token-endpoint" type="xs:anyURI"/>

<xs:element name="http-proxy" type="xs:anyURI"/>

<xs:element name="gms" type="xs:anyURI"/>

<xs:element name="cms" type="xs:anyURI"/>

<xs:element name="kms" type="xs:anyURI"/>

<xs:element name="tls-tunnel-auth-method" type="mcpttiup:AuthMethodType"/>

<xs:element name="anyExt" type="mcpttiup:anyExtType" minOccurs="0"/>

<xs:any namespace="##other" processContents="lax" minOccurs="0" maxOccurs="unbounded"/>

</xs:sequence>

</xs:complexType>

</xs:element>

<xs:element name="GMS-URI" type="xs:anyURI"/>

<xs:element name="group-creation-XUI" type="xs:anyURI"/>

<xs:element name="GMS-XCAP-root-URI" type="xs:anyURI"/>

<xs:element name="CMS-XCAP-root-URI" type="xs:anyURI"/>

<xs:element name="integrity-protection-enabled" type="xs:boolean"/>

<xs:element name="confidentiality-protection-enabled" type="xs:boolean"/>

<xs:element name="anyExt" type="mcpttiup:anyExtType" minOccurs="0"/>

<xs:any namespace="##other" processContents="lax" minOccurs="0" maxOccurs="unbounded"/>

</xs:sequence>

<xs:attributeGroup ref="mcpttiup:IndexType"/>

<xs:anyAttribute namespace="##any" processContents="lax"/>

</xs:complexType>

<!-- These elements can be added under the anyExt element of the On-networkType element -->

<xs:element name="MCPTT-Service-Details" type="mcpttiup:Service-DetailsType"/>

<xs:element name="MCVideo-Service-Details" type="mcpttiup:Service-DetailsType"/>

<xs:element name="MCData-Service-Details" type="mcpttiup:Service-DetailsType"/>

<xs:element name="MCCommonCorePdn-Info" type="mcpttiup:Pdn-InfoType"/>

<xs:element name="MCCommonCoreDN-Info" type="mcpttiup:PLMNDNInfoType"/>

<xs:element name="MCIdMPdn-Info" type="mcpttiup:Pdn-InfoType"/>

<xs:element name="MCIdMDN-Info" type="mcpttiup:PLMNDNInfoType"/>

<!-- These elements can be added under the anyExt element of the MCPTT-Service-Details element -->

<xs:element name="MCPTTPdn-Info" type="mcpttiup:Pdn-InfoType"/>

<xs:element name="MCPTTDN-Info" type="mcpttiup:PLMNDNInfoType"/>

<!-- These elements can be added under the anyExt element of the MCVideo-Service-Details element -->

<xs:element name="MCVideoPdn-Info" type="mcpttiup:Pdn-InfoType"/>

<xs:element name="MCVideoDN-Info" type="mcpttiup:PLMNDNInfoType"/>

<!-- These elements can be added under the anyExt element of the MCData-Service-Details element -->

<xs:element name="MCDataPdn-Info" type="mcpttiup:Pdn-InfoType"/>

<xs:element name="MCDataDN-Info" type="mcpttiup:PLMNDNInfoType"/>

<xs:complexType name="Service-DetailsType">

<xs:sequence>

<xs:element name="IPv6-Required" type="xs:boolean"/>

<xs:element name="Server-URI" type="xs:anyURI"/>

<xs:element name="anyExt" type="mcpttiup:anyExtType" minOccurs="0"/>

</xs:sequence>

</xs:complexType>

<xs:complexType name="Off-networkType">

<xs:sequence>

<xs:element name="Timers">

<xs:complexType>

<xs:sequence>

<xs:element name="TFG1" type="xs:unsignedShort"/>

<xs:element name="TFG2" type="xs:unsignedShort"/>

<xs:element name="TFG3" type="xs:unsignedShort"/>

<xs:element name="TFG4" type="xs:unsignedByte"/>

<xs:element name="TFG5" type="xs:unsignedByte"/>

<xs:element name="TFG11" type="xs:unsignedShort"/>

<xs:element name="TFG12" type="xs:unsignedShort"/>

<xs:element name="TFG13" type="xs:unsignedByte"/>

<xs:element name="TFG14" type="xs:unsignedByte"/>

<xs:element name="TFP1" type="xs:unsignedShort"/>

<xs:element name="TFP2" type="xs:unsignedByte"/>

<xs:element name="TFP3" type="xs:unsignedShort"/>

<xs:element name="TFP4" type="xs:unsignedShort"/>

<xs:element name="TFP5" type="xs:unsignedShort"/>

<xs:element name="TFP6" type="xs:unsignedShort"/>

<xs:element name="TFP7" type="xs:unsignedByte"/>

<xs:element name="TFB1" type="xs:unsignedShort"/>

<xs:element name="TFB2" type="xs:unsignedByte"/>

<xs:element name="TFB3" type="xs:unsignedByte"/>

<xs:element name="T201" type="xs:unsignedShort"/>

<xs:element name="T203" type="xs:unsignedByte"/>

<xs:element name="T204" type="xs:unsignedByte"/>

<xs:element name="T205" type="xs:unsignedByte"/>

<xs:element name="T230" type="xs:unsignedByte"/>

<xs:element name="T233" type="xs:unsignedByte"/>

<xs:element name="TFE1" type="xs:unsignedShort"/>

<xs:element name="TFE2" type="xs:unsignedByte"/>

<xs:element name="anyExt" type="mcpttiup:anyExtType" minOccurs="0"/>

<xs:any namespace="##other" processContents="lax" minOccurs="0" maxOccurs="unbounded"/>

</xs:sequence>

</xs:complexType>

</xs:element>

<xs:element name="Counters">

<xs:complexType>

<xs:sequence>

<xs:element name="CFP1" type="xs:unsignedByte"/>

<xs:element name="CFP3" type="xs:unsignedByte"/>

<xs:element name="CFP4" type="xs:unsignedByte"/>

<xs:element name="CFP6" type="xs:unsignedByte"/>

<xs:element name="CFG11" type="xs:unsignedByte"/>

<xs:element name="CFG12" type="xs:unsignedByte"/>

<xs:element name="C201" type="xs:unsignedByte"/>

<xs:element name="C204" type="xs:unsignedByte"/>

<xs:element name="C205" type="xs:unsignedByte"/>

<xs:element name="anyExt" type="mcpttiup:anyExtType" minOccurs="0"/>

<xs:any namespace="##other" processContents="lax" minOccurs="0" maxOccurs="unbounded"/>

</xs:sequence>

</xs:complexType>

</xs:element>

<xs:element name="anyExt" type="mcpttiup:anyExtType" minOccurs="0"/>

<xs:any namespace="##other" processContents="lax" minOccurs="0" maxOccurs="unbounded"/>

</xs:sequence>

<xs:attributeGroup ref="mcpttiup:IndexType"/>

<xs:anyAttribute namespace="##any" processContents="lax"/>

</xs:complexType>

<xs:attributeGroup name="IndexType">

<xs:attribute name="index" type="xs:token"/>

</xs:attributeGroup>

<xs:complexType name="Pdn-InfoType">

<xs:sequence>

<xs:element name="Apn-Name" type="xs:string"/>

<xs:element name="Pap-parameters" minOccurs="0">

<xs:complexType>

<xs:sequence>

<xs:element name="user-name" type="xs:string"/>

<xs:element name="password" type="xs:string"/>

</xs:sequence>

</xs:complexType>

</xs:element>

<xs:element name="Chap-parameters" minOccurs="0">

<xs:complexType>

<xs:sequence>

<xs:element name="user-name" type="xs:string"/>

<xs:element name="password" type="xs:string"/>

</xs:sequence>

</xs:complexType>

</xs:element>

</xs:sequence>

</xs:complexType>

<xs:complexType name="anyExtType">

<xs:sequence>

<xs:any namespace="##any" processContents="lax" minOccurs="0" maxOccurs="unbounded"/>

</xs:sequence>

</xs:complexType>

</xs:schema>

**\* \* \* \* \* NEXT CHANGE \* \* \* \* \***

#### 7.2.2.6 Validation Constraints

If the AUID value of the document URI or node URI in the Request-URI is other than that specified in clause 7.2.2.2, then the configuration management server shall return an HTTP 409 (Conflict) response including the XCAP error element <constraint-failure>. If included, the "phrase" attribute should be set to "invalid application id used".

If the XUI value of the document URI or node URI in the Request-URI does not match the XUI of the MCPTT UE initial configuration document URI, the configuration management server shall return an HTTP 409 (Conflict) response including the XCAP error element <constraint-failure>. If included, the "phrase" attribute should be set to "invalid XUI".

The MCS UE initial configuration document shall conform to the XML Schema described in clause 7.2.2.3.

The <mcptt-UE-initial-configuration> element is the root element of the XML document. The <mcptt-UE-initial-configuration> element can contain sub-elements.

The <mcptt-UE-initial-configuration> element may contain one <on-network> element and may contain one <off-network> element. The <mcptt-UE-initial-configuration> element shall contain at least one of either <on-network> or <off-network>.

If the <mcptt-UE-initial-configuration> element does not conform to one of the three choices above, then the configuration management server shall return an HTTP 409 (Conflict) response including the XCAP error element <constraint-failure>. If included, the "phrase" attribute should be set to "semantic error".

If the "domain" attribute does not contain a syntactically correct domain name, then the configuration management server shall return an HTTP 409 (Conflict) response including the XCAP error element <constraint-failure>. If included, the "phrase" attribute should be set to "syntactically incorrect domain name".

If the "domain" attribute contains an unknown domain name, then the configuration management server shall return an HTTP 409 (Conflict) response including the XCAP error element <constraint-failure>. If included, the "phrase" attribute should be set to "unknown domain name".

If an <Instance-ID-URN> element of the <mcptt-UE-id> element does not conform to a valid Instance ID as specified in 3GPP TS 23.003 [16], then the configuration management server shall return an HTTP 409 (Conflict) response including the XCAP error element <constraint-failure>. If included, the "phrase" attribute should be set to "syntactically incorrect Instance ID URN" and contain the non-conformant <Instance-ID-URN> element.

If the <TAC> element of an <IMEI-range> element does not conform to a valid 8 digit Type Allocation Code as specified in 3GPP TS 23.003 [16], then the configuration management server shall return an HTTP 409 (Conflict) response including the XCAP error element <constraint-failure>. If included, the "phrase" attribute should be set to "syntactically incorrect Type Allocation Code" and contain the non-conformant <TAC> element.

If a <SNR> element of an <IMEI--range> element does not conform to a valid 6 digit Serial Number as specified in 3GPP TS 23.003 [16], then the configuration management server shall return an HTTP 409 (Conflict) response including the XCAP error element <constraint-failure>. If included, the "phrase" attribute should be set to "syntactically incorrect Serial Number" and contain the non-conformant <SNR> element.

If a <Low-SNR> element or a <High-SNR> element of a <SNR-range> element does not conform to a valid 6 digit Serial Number as specified in 3GPP TS 23.003 [16], then the configuration management server shall return an HTTP 409 (Conflict) response including the XCAP error element <constraint-failure>. If included, the "phrase" attribute should be set to "syntactically incorrect Serial Number range" and contain the non-conformant <Low-SNR> or <High-SNR> element.

If the "User-ID" attribute of the <Default-user-profile> element does not conform to a valid URI as specified in IETF RFC 3986 [21], then the configuration management server shall return an HTTP 409 (Conflict) response including the XCAP error element <constraint-failure>. If included, the "phrase" attribute should be set to "syntactically incorrect User ID URI".

If the "User-ID" attribute of the <Default-user-profile> element does not contain an "XUI-URI" attribute of an MCS user profile configuration document, then the configuration management server shall return an HTTP 409 (Conflict) response including the XCAP error element <constraint-failure>. If included, the "phrase" attribute should be set to "No MCS User Profile configuration document exists for the user identified by the User ID URI".

If the "user-profile-index" attribute of the <Default-user-profile> element does not contain an "user-profile-index" attribute of a MCPTT user profile configuration document, then the configuration management server shall return an HTTP 409 (Conflict) response including the XCAP error element <constraint-failure>. If included, the "phrase" attribute should be set to "The user profile index does not identify an MCS User Profile configuration document identified of the user identified by the User ID URI ".

NOTE: If the MCS administrator includes a <Default-user-profile> element in the MCS UE initial configuration document, at least one instance of an MCS user profile configuration document needs to first be created on the configuration management server, containing the "XUI-URI" attribute and "user-profile-index" attribute that are included in the <Default-user-profile> element.

If any of the following elements of the <Timers> element of the <on-network> element do not conform to the range of values specified below:

a) the <T100> element contains an integer value between 0 and 255;

b) the <T101> element contains an integer value between 0 and 255;

c) the <T103> element contains an integer value between 0 and 255;

d) the <T104> element contains an integer value between 0 and 255;

e) the <T132> element contains an integer value between 0 and 255,

then the configuration management server shall return an HTTP 409 (Conflict) response including the XCAP error element <constraint-failure>. If included, the "phrase" attribute should be set to "syntactically incorrect timer value" and also contain the identity of the non-conformant timer (e.g. "T101").

If the <idms-auth-endpoint> element of the <App-Server-Info> element does not conform to a valid URI as specified in IETF RFC 3986 [21], then the configuration management server shall return an HTTP 409 (Conflict) response including the XCAP error element <constraint-failure>. If included, the "phrase" attribute should be set to "syntactically incorrect identity management server URI".

If the <idms-token-endpoint> element of the <App-Server-Info> element does not conform to a valid URI as specified in IETF RFC 3986 [21], then the configuration management server shall return an HTTP 409 (Conflict) response including the XCAP error element <constraint-failure>. If included, the "phrase" attribute should be set to "syntactically incorrect identity management server URI".

If the <gms> element of the <App-Server-Info> element does not conform to a valid URI as specified in IETF RFC 3986 [21], then the configuration management server shall return an HTTP 409 (Conflict) response including the XCAP error element <constraint-failure>. If included, the "phrase" attribute should be set to "syntactically incorrect group management server URI".

If the <tls-tunnel-auth-method> element of the <mutual-authentication-element> of the <App-Server-Info> element is set to "true" and neither the <x509> element nor the <key> element of the <mutual-authentication-element> of the <App-Server-Info> element are present, then the configuration management server shall return an HTTP 409 (Conflict) response including the XCAP error element <constraint-failure>. If included, the "phrase" attribute should be set to "mutual authentication enabled without a X.509 certificate or pre-shared key".

If the <tls-tunnel-auth-method> element of the <mutual-authentication-element> of the <App-Server-Info> element is set to "true" and both the <x509> element and the <key> element of the <mutual-authentication-element> of the <App-Server-Info> element are present, then the configuration management server shall return an HTTP 409 (Conflict) response including the XCAP error element <constraint-failure>. If included, the "phrase" attribute should be set to "mutual authentication enabled with both a X.509 certificate and a pre-shared key".

If the <cms> element of the <App-Server-Info> element does not conform to a valid URI as specified in IETF RFC 3986 [21], then the configuration management server shall return an HTTP 409 (Conflict) response including the XCAP error element <constraint-failure>. If included, the "phrase" attribute should be set to "syntactically incorrect configuration management server URI".

If the <kms> element of the <App-Server-Info> element does not conform to a valid URI as specified in IETF RFC 3986 [21], then the configuration management server shall return an HTTP 409 (Conflict) response including the XCAP error element <constraint-failure>. If included, the "phrase" attribute should be set to "syntactically incorrect key management server URI".

If the <GMS-URI> element of the <on-network> element does not conform to a valid URI as specified in IETF RFC 3986 [21], then the configuration management server shall return an HTTP 409 (Conflict) response including the XCAP error element <constraint-failure>. If included, the "phrase" attribute should be set to "syntactically incorrect GMS-URI".

If the <group-creation-XUI> element of the <on-network> element does not conform to a valid URI as specified in IETF RFC 3986 [21], then the configuration management server shall return an HTTP 409 (Conflict) response including the XCAP error element <constraint-failure>. If included, the "phrase" attribute should be set to "syntactically incorrect group creation XUI".

If the <GMS-XCAP-root-URI> element of the <on-network> element does not conform to a valid URI as specified in IETF RFC 3986 [21], then the configuration management server shall return an HTTP 409 (Conflict) response including the XCAP error element <constraint-failure>. If included, the "phrase" attribute should be set to "syntactically incorrect GMS XCAP root URI".

If the <CMS-XCAP-root-URI> element of the <on-network> element does not conform to a valid URI as specified in IETF RFC 3986 [21], then the configuration management server shall return an HTTP 409 (Conflict) response including the XCAP error element <constraint-failure>. If included, the "phrase" attribute should be set to "syntactically incorrect CMS XCAP root URI".

If the <IPv6-Required> element of the <MCPTT-Service-Details> element of the <anyExt> element of the <on-network> element does not contain a value of "true" or "false", then the configuration management server shall return an HTTP 409 (Conflict) response including the XCAP error element <constraint-failure>. If included, the "phrase" attribute should be set to "semantic error".

If the <Server-URI> element of the <MCPTT-Service-Details> element of the <anyExt> element of the <on-network> element does not conform to a valid URI as specified in IETF RFC 3986 [21], then the configuration management server shall return an HTTP 409 (Conflict) response including the XCAP error element <constraint-failure>. If included, the "phrase" attribute should be set to "syntactically incorrect MCPTT server URI".

If the <IPv6-Required> element of the <MCVideo-Service-Details> element of the <anyExt> element of the <on-network> element does not contain a value of "true" or "false", then the configuration management server shall return an HTTP 409 (Conflict) response including the XCAP error element <constraint-failure>. If included, the "phrase" attribute should be set to "semantic error".

If the <Server-URI> element of the <MCVideo-Service-Details> element of the <anyExt> element of the <on-network> element does not conform to a valid URI as specified in IETF RFC 3986 [21], then the configuration management server shall return an HTTP 409 (Conflict) response including the XCAP error element <constraint-failure>. If included, the "phrase" attribute should be set to "syntactically incorrect MCVideo server URI".

If the <IPv6-Required> element of the <MCData-Service-Details> element of the <anyExt> element of the <on-network> element does not contain a value of "true" or "false", then the configuration management server shall return an HTTP 409 (Conflict) response including the XCAP error element <constraint-failure>. If included, the "phrase" attribute should be set to "semantic error".

If the <Server-URI> element of the <MCData-Service-Details> element of the <anyExt> element of the <on-network> element does not conform to a valid URI as specified in IETF RFC 3986 [21], then the configuration management server shall return an HTTP 409 (Conflict) response including the XCAP error element <constraint-failure>. If included, the "phrase" attribute should be set to "syntactically incorrect MCData server URI".

If the "PLMN" attribute of the <HPLMN> element of the <on-network> element does not conform to the syntax of a valid PLMN code as defined in 3GPP TS 23.003 [16] then the configuration management server shall return an HTTP 409 (Conflict) response including the XCAP error element <constraint-failure>. If included, the "phrase" attribute should be set to "syntactically incorrect HPLMN value".

If the "PLMN" attribute of a <VPLMN> element of the <HPLMN> element of the <on-network> element does not conform to the syntax of a valid PLMN code as defined in 3GPP TS 23.003 [16] then the configuration management server shall return an HTTP 409 (Conflict) response including the XCAP error element <constraint-failure>. If included, the "phrase" attribute should be set to "syntactically incorrect VPLMN value" and also contain the contents of the non-conformant "PLMN" attribute.

If the <PLMN-ID> attribute of the <HPLMN-DataNetworks-Info> element of the <DataNetworks-info> element of the <anyExt> element of the <on-network> element does not conform to the syntax of a valid PLMN code as defined in 3GPP TS 23.003 [16], then the configuration management server shall return an HTTP 409 (Conflict) response including the XCAP error element <constraint-failure>. If included, the "phrase" attribute should be set to "syntactically incorrect HPLMN value" and also contain the contents of the non-conformant <PLMN-ID> attribute.

If the <PLMN-ID> attribute of a <VPLMN-DataNetworks-Info> element of the <DataNetwork-info> element> of the <anyExt> element of the <on-network> element does not conform to the syntax of a valid PLMN code as defined in 3GPP TS 23.003 [16], then the configuration management server shall return an HTTP 409 (Conflict) response including the XCAP error element <constraint-failure>. If included, the "phrase" attribute should be set to "syntactically incorrect VPLMN value" and also contain the contents of the non-conformant <PLMN-ID> attribute.

If the <DN-AAA-server> attribute of a <DN-Info> element does not conform to a valid URI as specified in IETF RFC 3986 [21], then the configuration management server shall return an HTTP 409 (Conflict) response including the XCAP error element <constraint-failure>. If included, the "phrase" attribute should be set to "syntactically incorrect DN-AAA server URI".

If the <DN-PDU-sessiontype> element of a <DN-Info> element does not contain one of the enumerated values defined for <PDUsessionType>, then the configuration management server shall return an HTTP 409 (Conflict) response including the XCAP error element <constraint-failure>. If included, the "phrase" attribute should be set to "invalid PDU sessiontype".

If the <Apn-Name> element of one ore more of:

a) the <MCPTTPdn-Info> element of the <anyExt> element of the <MCPTT-Service-Details> element of the <anyExt> element of the <on-network> element;

b) the <MCVideoPdn-Info> element of the <anyExt> element of the <MCVideo-Service-Details> element of the <anyExt> element of the <on-network> element;

c) the <MCDataPdn-Info> element of the <anyExt> element of the <MCData-Service-Details> element of the <anyExt> element of the <on-network> element;

d) the <MCCommonCorePdn-Info> element of the <anyExt> element of the <on-network> element; or

e) the <MCIdMPdn-Info> element of the <anyExt> element of the <on-network> element;

does not contain a syntactically valid APN as specified in 3GPP TS 23.003 [16], then the configuration management server shall return an HTTP 409 (Conflict) response including the XCAP error element <constraint-failure>. If included, the "phrase" attribute should be set to "syntactically incorrect APN value" and also contain the contents of the non-conformant <Apn-Name> element.

If any of the following elements of the <Timers> element of the <off-network> element do not conform to the range of values specified below:

a) the <TFG1> element contains an integer value between 0 and 65535;

b) the <TFG2> element contains an integer value between 0 and 65535;

c) the <TFG3> element contains an integer value between 0 and 65535;

d) the <TFG4> element contains an integer value between 0 and 60;

e) the <TFG5> element contains an integer value between 0 and 255;

f) the <TFG11> element contains an integer value between 0 and 65535;

g) the <TFG12> element contains an integer value between 0 and 65535;

h) the <TFG13> element contains an integer value between 0 and 255;

i) the <TFG14> element contains an integer value between 0 and 255;

j) the <TFP1> element contains an integer value between 0 and 65535;

k) the <TFP2> element contains an integer value between 0 and 60;

l) the <TFP3> element contains an integer value between 0 and 65535;

m) the <TFP4> element contains an integer value between 0 and 65535;

n) the <TFP5> element contains an integer value between 0 and 600;

o) the <TFP6> element contains an integer value between 0 and 65535;

p) the <TFP7> element contains an integer value between 0 and 255;

q) the <TFB1> element contains an integer value between 0 and 600;

r) the <TFB2> element contains an integer value between 0 and 10;

s) the <TFB3> element contains an integer value between 0 and 60;

t) the <T201> element contains an integer value between 0 and 65535;

u) the <T203> element contains an integer value between 0 and 255;

v) the <T204> element contains an integer value between 0 and 255;

w) the <T205> element contains an integer value between 0 and 255;

x) the <T230> element contains an integer value between 0 and 255;

y) the <T233> element contains an integer value between 0 and 255;

z) the <TFE1> element contains an integer value between 0 and 65535;

za) the <TFE2> element contains an integer value between 0 and 10,

then the configuration management server shall return an HTTP 409 (Conflict) response including the XCAP error element <constraint-failure>. If included, the "phrase" attribute should be set to "syntactically incorrect timer value" and also contain the identity of the non-conformant timer (e.g. "TFG1").

If any of the following elements of the <Counters> element of the <off-network> element do not conform to the range of values specified below:

a) the <CFP1> element contains an integer value between 0 and 255;

b) the <CFP3> element contains an integer value between 0 and 255;

c) the <CFP4> element contains an integer value between 0 and 255;

d) the <CFP6> element contains an integer value between 0 and 255;

e) the <CFP11> element contains an integer value between 0 and 255;

f) the <CFP12> element contains an integer value between 0 and 255;

g) the <C201> element contains an integer value between 0 and 255;

h) the <C204> element contains an integer value between 0 and 255;

i) the <C205> element contains an integer value between 0 and 255,

then the configuration management server shall return an HTTP 409 (Conflict) response including the XCAP error element <constraint-failure>. If included, the "phrase" attribute should be set to "syntactically incorrect counter value" and also contain the identity of the non-conformant counter (e.g. "CFP1").

**\* \* \* \* \* NEXT CHANGE \* \* \* \* \***

#### 7.2.2.7 Data Semantics

The "domain" attribute of the <mcptt-UE-initial-configuration> element contains the domain name of the mission critical organization.

The creator of the MCS UE initial configuration document may include an <mcptt-UE-id> element in the version of the MCS UE initial configuration document that is uploaded to the CMS and may also appear in the MCS UE initial configuration document when downloaded by the MCS administrator. The <mcptt-UE-id> element does not appear in the MCS UE initial configuration managed object specified in 3GPP TS 24.483 [4] that is configured to the MCS UE. If an <mcptt-UE-id> element is included then the MCS UE initial configuration document and corresponding MCS UE initial configuration management object applies only to the MCS UE(s) identified by the <mcptt-UE-id> element. If no <mcptt-UE-id> element is included then the MCS UE initial configuration document and corresponding MCS UE initial configuration management object applies to all the MCS UEs of the domain.

If one or more optional <Instance-ID-URN> elements is included in the <mcptt-UE-id> element then the MCS UE initial configuration document applies to the MCS UE with an instance ID equal to the instance ID contained in the <Instance-ID-URN> element.

The <TAC> element of the <IMEI-range> element contains the Type Allocation Code of the MCS UE.

The optional <SNR> element of the <IMEI-range> element contains the individual serial number uniquely identifying MCS UE within the Type Allocation Code contained in the <TAC> element that the MCS UE initial configuration document applies to.

If an optional <SNR-range> element is included within the <IMEI-range> element then the MCS UE initial configuration document applies to all MCS UEs within the Type Allocation Code contained in the <TAC> element with the serial number equal or greater than the serial number contained in the <Low-SNR> element and less than or equal to the serial number contained in the <High-SNR> element.

If no <SNR> element nor <SNR-range> element is included within the <IMEI-range> element then the MCS UE initial configuration document applies to all the MCS UE(s) with the Type Allocation Code contained within the <TAC> element of the <IMEI-range> element.

If no <mcptt-UE-id> element is included then the MCS UE initial configuration document applies to all MCS UEs of the mission critical organization identified in the "domain" attribute.

The <name> element of the <mcptt-UE-initial-configuration> element contains the user displayable name of the MCS UE initial configuration document and corresponds to the "Name" element of clause 8.2.3 in 3GPP TS 24.483 [4].

The "User-ID" attribute of the <Default-user-profile> element contains the XUI contained in the "XUI-URI" attribute of the MCPTT user profile that is intended to be used as default MCS user profile and corresponds to the "UserID" element of clause 8.2.6 in 3GPP TS 24.483 [4].

The "user-profile-index" attribute of the <Default-user-profile> element contains an indicator for a particular MCS user profile document when multiple MCS user profiles are defined for that MCS user and is of type "unsignedByte" and matches a value in a "user-profile-index" attribute of the MCS user profile that is intended to be used as default MCS user profile, and corresponds to the "UserProfileIndex" element of clause 8.2.7 in 3GPP TS 24.483 [4]

The <on-network> element contains MCS UE initial configuration data for on-network operation only.

The <off-network> element contains MCS UE initial configuration data for off-network operation only.

In the <on-network> element:

1) the <Timers> element;

a) the <T100> element contains the timer value in seconds for floor release as specified in 3GPP TS 24.380 [10] and corresponds to the "T100" element of clause 8.2.11 in 3GPP TS 24.483 [4];

b) the <T101> element contains the timer value in seconds for floor request as specified in 3GPP TS 24.380 [10] and corresponds to the "T101" element of clause 8.2.12 in 3GPP TS 24.483 [4];

c) the <T103> element contains the timer value in seconds for end of RTP media as specified in 3GPP TS 24.380 [10] and corresponds to the "T103" element of clause 8.2.13 in 3GPP TS 24.483 [4];

d) the <T104> element contains the timer value in seconds for floor queue position request as specified in 3GPP TS 24.380 [10] and corresponds to the "T104" element of clause 8.2.14 in 3GPP TS 24.483 [4]; and

e) the <T132> element contains the timer value in seconds for queued request granted MCPTT user action as specified in 3GPP TS 24.380 [10] and corresponds to the "T132" element of clause 8.2.15 in 3GPP TS 24.483 [4].

2) the "PLMN" attribute of the <HPLMN> element contains the PLMN code of the HPLMN as defined in 3GPP TS 23.003 [16] and corresponds to the "PLMN" element of clause 8.2.18 in 3GPP TS 24.483 [4];

3) the "PLMN" attribute of the <VPLMN> element contains the PLMN code of a VPLMN as defined in 3GPP TS 23.003 [16] and corresponds to the "PLMN element of clause 8.2.30 in 3GPP TS 24.483 [4];

4) the <App-Server-Info> element:

a) the <idms-auth-endpoint> element contains the URI used to contact the identity management server and corresponds to the "IDMSAuthEndpoint" element of clause 8.2.41 in 3GPP TS 24.483 [4];

b) the <idms-token-endpoint> element contains the URI used to contact the identity management server and corresponds to the "IDMSTokenEndpoint" element of clause 8.2.41A in 3GPP TS 24.483 [4];

c) the <http-proxy> element contains the URI used to contact the HTTP proxy and corresponds to the "HTTPProxy" element of clause 8.2.41B in 3GPP TS 24.383 [4];

d) the <gms> element contains the URI used to contact the group management server and corresponds to the "GMS" element of clause 8.2.42 in 3GPP TS 24.483 [4];

e) the <cms> element contains the URI used to contact the configuration management server and corresponds to the "CMS" element of clause 8.2.43 in 3GPP TS 24.483 [4];

f) the <kms> element contains the URI used to contact the key management server and corresponds to the "KMS" element of clause 8.2.44 in 3GPP TS 24.483 [4]; and

g) the <tls-tunnel-auth-method> element that contains the<mutual-authentication-element> that corresponds to the "Mutual" element of clause 8.2.44B in 3GPP TS 24.383 [4] and when set to "true" indicates that mutual authentication is used for the TLS tunnel authentication. The <x509> element when present contains the X.509 certificate for mutual authentication for the TLS tunnel authentication and corresponds to the "X509" element of clause 8.2.44C in 3GPP TS 24.383 [4]. The <key> element when present contains the pre-shared key for mutual authentication for the TLS tunnel authentication and corresponds to the "X509" element of clause 8.2.44D in 3GPP TS 24.383 [4].

5) the <GMS-URI> element contains the group management service URI information to enable hiding of MCS identities, the group management service URI information contains the public service identity for performing subscription proxy function of the GMS and corresponds to the "GMSURI" element of clause 8.2.9 in 3GPP TS 24.483 [4];

6) the <group-creation-XUI> element contains the group management server XCAP Root URI information and corresponds to the "GroupCreationXUI" element of clause 8.2.9A in 3GPP TS 24.483 [4];

7) the <GMS-XCAP-root-URI> element contains the group management server XCAP Root URI and corresponds to the "GMSXCAPRootURI" element of clause 8.2.9B in 3GPP TS 24.483 [4];

8) the < CMS-XCAP-root-URI> element contains the configuration management server XCAP Root URI and corresponds to the "CMSXCAPRootURI" element of clause 8.2.9C in 3GPP TS 24.483 [4];

9) the <IPv6-Required> element of the <MCPTT-Service-Details> element of the <anyExt> element of the <on-network> element indicates whether IPv6 shall be used to access the MCPTT service.

10) the <Server-URI> element of the < MCPTT-Service-Details> element of the <anyExt> element of the <on-network> element contains the URI used to contact the MCPTT service server;

11) the <IPv6-Required> element of the <MCVideo-Service-Details> element of the <anyExt> element of the <on-network> element indicates whether IPv6 shall be used to access the MCVideo service.

12) the <Server-URI> element of the <MCVideo-Service-Details> element of the <anyExt> element of the <on-network> element contains the URI used to contact the MCVideo service server;

13) the <IPv6-Required> element of the <MCData-Service-Details> element of the <anyExt> element of the <on-network> element indicates whether IPv6 shall be used to access the MCData service.

14) the <Server-URI> element of the <MCData-Service-Details> element of the <anyExt> element of the <on-network> element contains the URI used to contact the MCData service server;

15) the <integrity-protection-enabled> element indicates whether integrity protection is enabled and corresponds to the "IntegrityProtection" element of clause 8.2.44E in 3GPP TS 24.383 [4];

16) the <confidentiality-protection-enabled> element indicates whether integrity protection is enabled and corresponds to the "ConfidentialityProtection" element of clause 8.2.44F in 3GPP TS 24.383 [4];

17) the <MCPTTPdn-Info> element of the <anyExt> element of the < MCPTT-Service-Details> element of the <anyExt> element of the <on-network> element contains an APN name in the <Apn-Name> subelement, may contain a PAP user name and a PAP password in the <user-name> and <password> elements of the <Pap-parameters> element and may contain a CHAP user name and a CHAP password in the <user-name> and <password> elements of the <Chap-parameters> element;

18) the <MCVideoPdn-Info> element of the <anyExt> element of the < MCVideo-Service-Details> element of the <anyExt> element of the <on-network> element contains an APN name in the <Apn-Name> subelement, may contain a PAP user name and a PAP password in the <user-name> and <password> elements of the <Pap-parameters> element and may contain a CHAP user name and a CHAP password in the <user-name> and <password> elements of the <Chap-parameters> element;

19) the <MCDataPdn-Info> element of the <anyExt> element of the < MCData-Service-Details> element of the <anyExt> element of the <on-network> element contains an APN name in the <Apn-Name> subelement, may contain a PAP user name and a PAP password in the <user-name> and <password> elements of the <Pap-parameters> element and may contain a CHAP user name and a CHAP password in the <user-name> and <password> elements of the <Chap-parameters> element;

20) the <MCCommonCorePdn-Info> element of the <anyExt> element of the <on-network> element contains an APN name in the <Apn-Name> subelement, may contain a PAP user name and a PAP password in the <user-name> and <password> elements of the <Pap-parameters> element and may contain a CHAP user name and a CHAP password in the <user-name> and <password> elements of the <Chap-parameters> element;

21) the <MCIdMPdn-Info> element of the <anyExt> element of the <on-network> element contains an APN name in the <Apn-Name> subelement, may contain a PAP user name and a PAP password in the <user-name> and <password> elements of the <Pap-parameters> element and may contain a CHAP user name and a CHAP password in the <user-name> and <password> elements of the <Chap-parameters> element;

NOTE: To support continuity of service in handovers from EUTRAN to a 5G or later RAN, when a <DN-Info> element occurs as a sub-element of an <MCPTTDN-Info> element, an <MCVideoDN-Info> element, an <MCDataDN-Info> element, an <MCCommonCoreDN-Info> element, or an <MCIdMDN-Info> element, it is an indication that the same services accessed by using the APN name given by the applicable <Apn-name> element can be accessed on a 5G or later network using that APN name as the data network name (DNN).

22) the <DN-Name> attribute of the <PLMN-DN-info> element of the <HPLMN-DataNetworks-Info> element of the <anyExt> element of the <on-network> element contains a Data Network Name of a data network to be used within the HPLMN and corresponds to the "DNName" element of clause 8.2.27A4 in 3GPP TS 24.483 [4];

23) the <DN-Name> attribute of the <PLMN-DN-info> element of a <VPLMN-DataNetworks-Info> element of the <anyExt> element of the <on-network> element contains a Data Network Name of a data network to be used within a VPLMN and corresponds to the "DNName" element of clause 8.2.39A4 in 3GPP TS 24.483 [4];

24) the <DN-Name> attribute of the <PLMN-DN-info> element of the <MCCommonCoreDN-Info> element of the <anyExt> element of the <on-network> element contains a Data Network Name of a data network to be used for MC Common Core services and corresponds to the "DNName" element of clause 8.2.44G17A2 in 3GPP TS 24.483 [4];

25) the <DN-Name> attribute of the <PLMN-DN-info> element of the <MCPTTDN-Info> element of the <anyExt> element of the <on-network> element contains a Data Network Name of a data network to be used for MCPTT services and corresponds to the "DNName" element of clause 8.2.44G3B2 in 3GPP TS 24.483 [4];

26) the <DN-Name> attribute of the <PLMN-DN-info> element of the <MCVideoDN-Info> element of the <anyExt> element of the <on-network> element contains a Data Network Name of a data network to be used for MCVideo services and corresponds to the "DNName" element of clause 8.2.44G6B2 in 3GPP TS 24.483 [4];

27) the <DN-Name> attribute of the <PLMN-DN-info> element of the <MCVDataDN-Info> element of the <anyExt> element of the <on-network> element contains a Data Network Name of a data network to be used for MCData services and corresponds to the "DNName" element of clause 8.2.44G9B2 in 3GPP TS 24.483 [4];

28) the <DN-AAA-server> attribute of the <DN-info> element of the <PLMN-DN-info> element of the <HPLMN-DataNetworks-Info> element of the <anyExt> element of the <on-network> element contains the URI of the DN-AAA server associated with the data network and corresponds to the "DNAAAServer" element of clause 8.2.27A7 in 3GPP TS 24.483 [4];

29) the <DN-AAA-server> attribute of the <DN-info> element of a <VPLMN-DN-Info> element of the of the <VPLMN-DataNetworks-Info> element <anyExt> element of the <on-network> element contains the URI of the DN-AAA server associated with the data network and corresponds to the "DNAAAServer" element of clause 8.2.39A7 in 3GPP TS 24.483 [4];

30) the <DN-AAA-server> attribute of the <DN-info> element of the <MCCommonCoreDN-Info> element of the <anyExt> element of the <on-network> element contains the URI of the DN-AAA server associated with the data network for MC Common Core services and corresponds to the "DNAAAServer" element of clause 8.2.44G17A5 in 3GPP TS 24.483 [4];

31) the <DN-AAA-server> attribute of the <DN-info> element of the <MCPTTDN-Info> element of the <anyExt> element of the <on-network> element contains the URI of the DN-AAA server associated with the data network for MCPTT services and corresponds to the "DNAAAServer" element of clause 8.2.44G3B5 in 3GPP TS 24.483 [4];

32) the <DN-AAA-server> attribute of the <DN-info> element of the <MCVideoDN-Info> element of the <anyExt> element of the <on-network> element contains the URI of the DN-AAA server associated with the data network for MCVideo services and corresponds to the "DNAAAServer" element of clause 8.2.44G6B5 in 3GPP TS 24.483 [4];

33) the <DN-AAA-server> attribute of the <DN-info> element of the <MCDataDN-Info> element of the <anyExt> element of the <on-network> element contains the URI of the DN-AAA server associated with the data network for MCData services and corresponds to the "DNAAAServer" element of clause 8.2.44G9B5 in 3GPP TS 24.483 [4];

34) the <DN-AAA-server> attribute of the <DN-info> element of the <MCIdMDN-Info> element of the <anyExt> element of the <on-network> element contains the URI of the DN-AAA server associated with the data network for MC Identity Manager services and corresponds to the "DNAAAServer" element of clause 8.2.44G25A5 in 3GPP TS 24.483 [4];

35) the <DN-PDU-Sessiontype> element of the <DN-info> element of the <PLMN-DN-info> element of the <HPLMN-DataNetworks-Info> element of the <anyExt> element of the <on-network> element contains the type of connection to be used with the data network and corresponds to the "DNPDUSessiontype" element of clause 8.2.27A6 in 3GPP TS 24.483 [4];

36) the <DN-PDU-Sessiontype> element of the <DN-info> element of the <PLMN-DN-info> element of a <VPLMN-DataNetworks-Info> element of the <anyExt> element of the <on-network> element contains the type of connection to be used with the data network and corresponds to the "DNPDUSessiontype" element of clause 8.2.39A6 in 3GPP TS 24.483 [4];

37) the <DN-PDU-Sessiontype> element of the <DN-info> element of the <MCCommonCoreDN-Info> element of the <anyExt> element of the <on-network> element contains the type of connection to be used with the MC Common Core services and corresponds to the "DNPDUSessiontype" element of clause 8.2.44G17A4 in 3GPP TS 24.483 [4];

38) the <DN-PDU-Sessiontype> element of the <DN-info> element of the <MCPTTDN-Info> element of the <anyExt> element of the <on-network> element contains the type of connection to be used with the MCPTT services and corresponds to the "DNPDUSessiontype" element of clause 8.2.44G3B4 in 3GPP TS 24.483 [4];

39) the <DN-PDU-Sessiontype> element of the <DN-info> element of the <MCVideoDN-Info> element of the <anyExt> element of the <on-network> element contains the type of connection to be used with the MCVideo services and corresponds to the "DNPDUSessiontype" element of clause 8.2.44G6B4 in 3GPP TS 24.483 [4];

40) the <DN-PDU-Sessiontype> element of the <DN-info> element of the <MCDataDN-Info> element of the <anyExt> element of the <on-network> element contains the type of connection to be used with the MCData services and corresponds to the "DNPDUSessiontype" element of clause 8.2.44G9B4 in 3GPP TS 24.483 [4]; and

41) the <DN-PDU-Sessiontype> element of the <DN-info> element of the <MCIdMDN-Info> element of the <anyExt> element of the <on-network> element contains the type of connection to be used with the MC Identity Manager services and corresponds to the "DNPDUSessiontype" element of clause 8.2.44G25A4 in 3GPP TS 24.483 [4].

In the <off-network> element:

1) the <Timers> element:

a) the <TFG1> element contains the timer value in milliseconds for wait for call announcement as specified in 3GPP TS 24.379 [9] and corresponds to the "TFG1" element of clause 8.2.47 in 3GPP TS 24.483 [4];

b) the <TFG2> element contains the timer value in milliseconds for call announcement as specified in 3GPP TS 24.379 [9] and corresponds to the "TFG2" element of clause 8.2.48 in 3GPP TS 24.483 [4];

c) the <TFG3> element contains the timer value in milliseconds for call probe retransmission as specified in 3GPP TS 24.379 [9]; and corresponds to the "TFG3" element of clause 8.2.49 in 3GPP TS 24.483 [4]

d) the <TFG4> element contains the timer value in seconds for waiting for the MCPTT user as specified in 3GPP TS 24.379 [9] and corresponds to the "TFG4" element of clause 8.2.50 in 3GPP TS 24.483 [4];

e) the <TFG5> element contains the timer value in seconds for not present incoming call announcements as specified in 3GPP TS 24.379 [9] and corresponds to the "TFG5" element of clause 8.2.51 in 3GPP TS 24.483 [4];

f) the <TFG11> element contains the timer value in milliseconds for MCPTT emergency end retransmission as specified in 3GPP TS 24.379 [9] and corresponds to the "TFG11" element of clause 8.2.52 in 3GPP TS 24.483 [4];

g) the <TFG12> element contains the timer value in milliseconds for MCPTT imminent peril end retransmission as specified in 3GPP TS 24.379 [9] and corresponds to the "TFG12" element of clause 8.2.53 in 3GPP TS 24.483 [4];

h) the <TFG13> element contains the timer value in seconds for timer for implicit priority downgrade (emergency) as specified in 3GPP TS 24.379 [9] and corresponds to the "TFG13" element of clause 8.2.54 in 3GPP TS 24.483 [4];

i) the <TFG14> element contains the timer value in seconds for timer for implicit priority downgrade (imminent peril) as specified in 3GPP TS 24.379 [9] and corresponds to the "TFG14" element of clause 8.2.54A in 3GPP TS 24.483 [4];

j) the <TFP1> element contains the timer value in milliseconds for private call request retransmission as specified in 3GPP TS 24.379 [9] and corresponds to the "TFP1" element of clause 8.2.55 in 3GPP TS 24.483 [4];

k) the <TFP2> element contains the timer value in seconds for waiting for call response message as specified in 3GPP TS 24.379 [9] and corresponds to the "TFP2" element of clause 8.2.56 in 3GPP TS 24.483 [4];

l) the <TFP3> element contains the timer value in milliseconds for private call release retransmission as specified in 3GPP TS 24.379 [9] and corresponds to the "TFP3" element of clause 8.2.57 in 3GPP TS 24.483 [4];

m) the <TFP4> element contains the timer value in milliseconds for private call accept retransmission as specified in 3GPP TS 24.379 [9] and corresponds to the "TFP4" element of clause 8.2.58 in 3GPP TS 24.483 [4];

n) the <TFP5> element contains the timer value in seconds for call release as specified in 3GPP TS 24.379 [9] and corresponds to the "TFP5" element of clause 8.2.59 in 3GPP TS 24.483 [4];

o) the <TFP6> element contains the timer value in milliseconds for MCPTT emergency private call cancel retransmission as specified as specified in 3GPP TS 24.379 [9] and corresponds to the "TFP6" element of clause 8.2.60 in 3GPP TS 24.483 [4];

p) the <TFP7> element contains the timer value in seconds for waiting for any message with same call identifier as specified in 3GPP TS 24.379 [9] and corresponds to the "TFP7" element of clause 8.2.61 in 3GPP TS 24.483 [4];

q) the <TFB1> element contains the timer value in seconds for max duration as specified in 3GPP TS 24.379 [9] and corresponds to the "TFB1" element of clause 8.2.62 in 3GPP TS 24.483 [4];

r) the <TFB2> element contains the timer value in seconds for broadcast retransmission as specified in 3GPP TS 24.379 [9] and corresponds to the "TFB2" element of clause 8.2.63 in 3GPP TS 24.483 [4];

s) the <TFB3> element contains the timer value in seconds for waiting for the MCPTT user as specified in 3GPP TS 24.379 [9] and corresponds to the "TFB3" element of clause 8.2.64 in 3GPP TS 24.483 [4];

t) the <T201> element contains the timer value in milliseconds for floor request as specified in 3GPP TS 24.380 [10] and corresponds to the "T201" element of clause 8.2.65 in 3GPP TS 24.483 [4];

u) the <T203> element contains the timer value in seconds for end of RTP media as specified in 3GPP TS 24.380 [10] and corresponds to the "T203" element of clause 8.2.66 in 3GPP TS 24.483 [4];

v) the <T204> element contains the timer value in seconds for floor queue position request as specified in 3GPP TS 24.380 [10] and corresponds to the "T204" element of clause 8.2.67 in 3GPP TS 24.483 [4];

w) the <T205> element contains the timer value in seconds for floor granted request as specified in 3GPP TS 24.380 [10] and corresponds to the "T205" element of clause 8.2.68 in 3GPP TS 24.483 [4];

x) the <T230> element contains the timer value in seconds for during silence as specified in 3GPP TS 24.380 [10] and corresponds to the "T230" element of clause 8.2.69 in 3GPP TS 24.483 [4];

y) the <T233> element contains the timer value in seconds for pending user action as specified in 3GPP TS 24.380 [10] and corresponds to the "T233" element of clause 8.2.70 in 3GPP TS 24.483 [4];

z) the <TFE1> element contains the timer value in seconds for MCPTT emergency alert as specified in 3GPP TS 24.380 [10] and corresponds to the "TFE1" element of clause 8.2.71 in 3GPP TS 24.483 [4]; and

za) the <TFE2> element contains the timer value in seconds for MCPTT emergency alert retransmission as specified in 3GPP TS 24.380 [10] and corresponds to the "TFE2" element of clause 8.2.72 in 3GPP TS 24.483 [4]; and

2) the <Counters> element.

a) the <CFP1> element contains the counter value for private call request retransmission as specified in 3GPP TS 24.379 [9] and corresponds to the "CFP1" element of clause 8.2.74 in 3GPP TS 24.483 [4];

b) the <CFP3> element contains the counter value for private call release retransmission as specified in 3GPP TS 24.379 [9] and corresponds to the "CFP3" element of clause 8.2.75 in 3GPP TS 24.483 [4];

c) the <CFP4> element contains the counter value for private call accept retransmission as specified in 3GPP TS 24.379 [9] and corresponds to the "CFP4" element of clause 8.2.76 in 3GPP TS 24.483 [4];

d) the <CFP6> element contains the counter value for private call accept retransmission t as specified in 3GPP TS 24.379 [9] and corresponds to the "CFP6" element of clause 8.2.77 in 3GPP TS 24.483 [4];

e) the <CFP11> element contains the counter value for MCPTT group call emergency end retransmission ia as specified in 3GPP TS 24.379 [9] and corresponds to the "CFP11" element of clause 8.2.78 in 3GPP TS 24.483 [4];

f) the <CFP12> element contains the counter value for MCPTT imminent peril call emergency end retransmission as specified in 3GPP TS 24.379 [9] and corresponds to the "CFP12" element of clause 8.2.79 in 3GPP TS 24.483 [4];

g) the <C201> element contains the counter value for floor request as specified in 3GPP TS 24.380 [10] and corresponds to the "C201" element of clause 8.2.80 in 3GPP TS 24.483 [4];

h) the <C204> element contains the counter value for floor queue position request as specified in 3GPP TS 24.380 [10] and corresponds to the "C204" element of clause 8.2.81 in 3GPP TS 24.483 [4]; and

i) the <C205> element contains the counter valuefor floor granted request as specified in 3GPP TS 24.380 [10] and corresponds to the "C205" element of clause 8.2.82 in 3GPP TS 24.483 [4].

**\* \* \* \* \* END CHANGES \* \* \* \* \***