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**LTE;
5G;
Management Object (MO)
for Extensible Markup Language (XML)
Configuration Access Protocol (XCAP)
over the Ut interface for Manipulating
Supplementary Services (SS)
(3GPP TS 24.424 version 17.2.0 Release 17)**



Reference

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Foreword

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- y the second digit is incremented for all changes of substance, i.e. technical enhancements, corrections, updates, etc.
- z the third digit is incremented when editorial only changes have been incorporated in the document.

1 Scope

The present document defines the management object (MO) for extensible markup language (XML) configuration access protocol (XCAP) over the Ut interface for manipulating supplementary services (SS).

The MO for XCAP over Ut interface for manipulating SS is compatible with OMA device management protocol specifications, version 1.2 and upwards, and is defined using the OMA DM device description framework as described in the enabler release definition OMA-ERELED_DM-V1_2 [2].

The MO for XCAP over Ut interface for manipulating SS consists of relevant configuration parameters that can be managed for a UE supporting the UE role specified in 3GPP TS 24.623 [3].

2 References

The following documents contain provisions which, through reference in this text, constitute provisions of the present document.

- References are either specific (identified by date of publication, edition number, version number, etc.) or non-specific.
- For a specific reference, subsequent revisions do not apply.
- For a non-specific reference, the latest version applies. In the case of a reference to a 3GPP document (including a GSM document), a non-specific reference implicitly refers to the latest version of that document *in the same Release as the present document*.

- [1] 3GPP TR 21.905: "Vocabulary for 3GPP Specifications".
- [2] OMA OMA-ERELED-DM-V1_2-20070209-A: "Enabler Release Definition for OMA Device Management, Version 1.2".
- [3] 3GPP TS 24.623: "Extensible Markup Language (XML) Configuration Access Protocol (XCAP) over the Ut interface for Manipulating Supplementary Services".
- [4] OMA OMA-TS-XDM_MO-V1_1-20080627-A: "OMA Management Object for XML Document Management".
- [5] OMA OMA-TS-DM_Protocol-V1_2-20070209-A: "OMA Device Management Protocol".
- [6] 3GPP TS 22.011: "Service accessibility".
- [7] 3GPP TS 33.220: "Generic Authentication Architecture (GAA); Generic Bootstrapping Architecture (GBA)".
- [8] 3GPP TS 33.221: "Generic Authentication Architecture (GAA); Support for subscriber certificates".
- [9] Void.
- [10] IETF RFC 7616: "HTTP Digest Access Authentication".
- [11] 3GPP TS 23.003: "Numbering, addressing and identification".

3 Definitions, symbols and abbreviations

3.1 Definitions

For the purposes of the present document, the terms and definitions given in 3GPP TR 21.905 [1] and the following apply. A term defined in the present document takes precedence over the definition of the same term, if any, in 3GPP TR 21.905 [1].

For the purposes of the present document, the following terms and definitions given in 3GPP TS 22.011 [6] apply:

3GPP PS data off
3GPP PS data off exempt service

For the purposes of the present document, the following terms and definitions given in 3GPP TS 24.623 [3] apply:

SS configuration via XCAP

3.2 Abbreviations

For the purposes of the present document, the abbreviations given in 3GPP TR 21.905 [1] and the following apply. An abbreviation defined in the present document takes precedence over the definition of the same abbreviation, if any, in 3GPP TR 21.905 [1].

DDF	Device Description Framework
DM	Device Management
IP	Internet Protocol
IP-CAN	IP-Connectivity Access Network
MO	Management Object
OMA	Open Mobile Alliance
PS	Packet Switched
SNPN	Stand-alone Non-Public Network
SS	Supplementary Services
UE	User Equipment
XCAP	XML Configuration Access Protocol
XML	Extensible Markup Language

4 MO for XCAP over Ut interface for manipulating SS

The MO for XCAP over Ut interface for manipulating SS is used to manage settings of the UE for extensible markup language (XML) configuration access protocol (XCAP) over the Ut interface for manipulating supplementary services (SS). Figure 4-1 gives overview of the configuration parameters of the MO for XCAP over Ut interface for manipulating SS.

The MO for XCAP over Ut interface for manipulating SS covers configuration parameters for a UE supporting the UE role specified in 3GPP TS 24.623 [3].

The MO identifier is: urn:oma:mo:ext-3gpp-xcaputss:1.0.

Protocol compatibility: This MO is compatible with OMA DM 1.2.

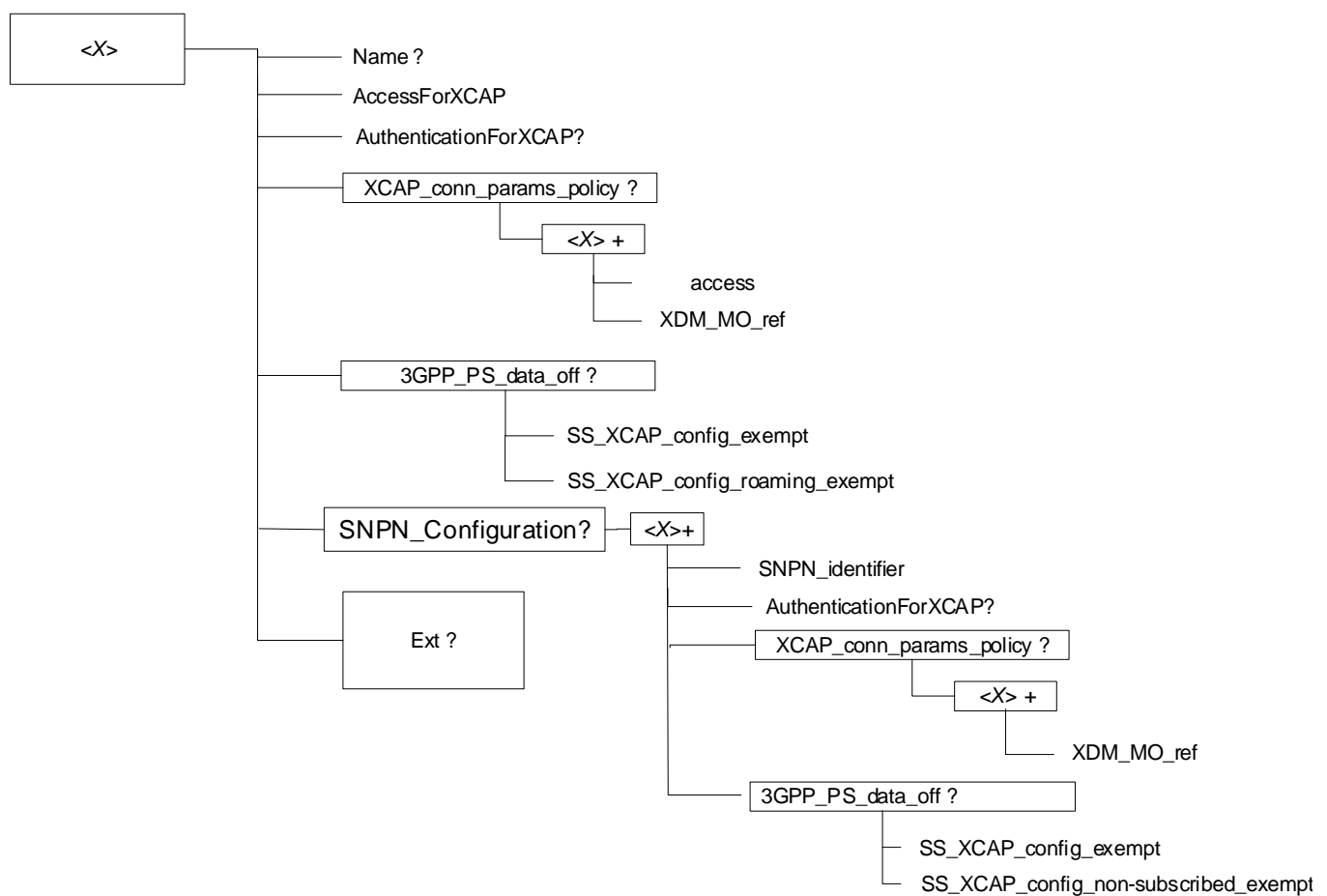


Figure 4-1: MO for XCAP over Ut interface for manipulating SS

5 MO configuration parameters

5.1 General

This clause describes the configuration parameters for the MO for XCAP over Ut interface for manipulating SS.

5.2 Node: /<X>

This interior node acts as a placeholder for one or more accounts for a fixed node.

- Occurrence: OneOrMore
- Format: node
- Access Types: Get, Replace
- Values: N/A

The interior node is mandatory for a UE supporting the UE role specified in 3GPP TS 24.623 [3].

NOTE: One node is normally used. More nodes are only used in case the terminal supports multiple UICCs.

Child nodes of this interior node which are not defined in this version of the present document are ignored.

5.3 /<X>/Name

This leaf is a name for the settings for the XCAP over the Ut interface for manipulating the SS.

- Occurrence: ZeroOrOne
- Format: chr
- Access Types: Get, Replace
- Values: <User displayable name>

5.4 /<X>/Ext

The Ext is an interior node for where the vendor specific information about the management of the XCAP over the Ut interface for manipulating the SS is being placed (vendor meaning application vendor, device vendor etc.). Usually the vendor extension is identified by vendor specific name under the ext node. The tree structure under the vendor identified is not defined and can therefore include one or more un-standardized sub-trees.

- Occurrence: ZeroOrOne
- Format: node
- Access Types: Get
- Values: N/A

5.5 /<X>/AccessForXCAP

This leaf is the policy on access type used for XCAP.

- Occurrence: One
- Format: int
- Access Types: Get, Replace
- Values: one of the values specified in table 5.5-1.

Table 5.5-1: Possible values for the AccessForXCAP leaf

Value	Description
0	any access type
1	3GPP accesses only
2	EPC or 5GCN via WLAN IP-CAN only
3	Non-seamless WLAN offload only
4	3GPP accesses preferred, non-seamless WLAN offload as secondary
5	3GPP accesses preferred, EPC or 5GCN via WLAN IP-CAN as secondary
6-255	not assigned

A "not assigned" value is interpreted as "any access type" value.

5.5a /<X>/AuthenticationForXCAP

The AuthenticationForXCAP leaf provides a means to define the authentication mechanism for Ut reference point.

- Occurrence: ZeroOrOne
 - Format: int
 - Access Types: Get, Replace
 - Values: 0, 1, 2, 3, 4
- 0 – Indicates that the authentication mechanism for Ut reference point is GBA_ME as defined in 3GPP TS 33.220 [7].
- 1 – Indicates that the authentication mechanism for Ut reference point is GBA_U as defined in 3GPP TS 33.220 [7].
- 2 – Indicates that the authentication mechanism for Ut reference point is GBA_Digest as defined in 3GPP TS 33.220 [7].
- 3 – Indicates that the authentication mechanism for Ut reference point is SSC (support for subscriber certificates) as defined in 3GPP TS 33.221 [8].
- 4 – Indicates that the authentication mechanism for Ut reference point is Digest Access Authentication as defined in IETF RFC 7616 [10].

5.6 /<X>/XCAP_conn_params_policy

This interior node contains the XCAP connection parameters policy.

- Occurrence: ZeroOrOne
- Format: node
- Access Types: Get, Replace
- Values: N/A

If this interior node contains a child node not defined in this version of the present document, the child node is ignored.

5.7 /<X>/XCAP_conn_params_policy/<X>

This interior node contains one XCAP connection parameters policy part.

- Occurrence: OneOrMore
- Format: node

- Access Types: Get, Replace
- Values: N/A

If this interior node contains a child node not defined in this version of the present document, this interior node is ignored.

If a descendant node of this interior node contains a value not defined in this version of the present document, this interior node is ignored.

5.8 /<X>/XCAP_conn_params_policy/<X>/access

This leaf contains an access identifier, with values shown in table 5.8-1

- Occurrence: One
- Format: int
- Access Types: Get, Replace
- Values: N/A

Table 5.8-1: Possible values for the access leaf

Value	Description
1	3GPP accesses
2	Evolved Packet Core (EPC) via Wireless Local Access Network (WLAN) IP-CAN (see NOTE 1)
3	Evolved Packet Core (EPC) via trusted Wireless Local Access Network (WLAN) IP-CAN
4	Evolved Packet Core (EPC) via untrusted Wireless Local Access Network (WLAN) IP-CAN
5	5G Core Network (5GCN) via Wireless Local Access Network (WLAN) IP-CAN (see NOTE 2)
6	5G Core Network (5GCN) via untrusted Wireless Local Access Network (WLAN) IP-CAN
7	5G Core Network (5GCN) via trusted Wireless Local Access Network (WLAN) IP-CAN
8	Non-seamless WLAN offload only
0, 9-255	Not assigned
NOTE 1: Evolved Packet Core (EPC) via Wireless Local Access Network (WLAN) IP-CAN encompasses both the Evolved Packet Core (EPC) via trusted Wireless Local Access Network (WLAN) IP-CAN and the Evolved Packet Core (EPC) via untrusted Wireless Local Access Network (WLAN) IP-CAN.	
NOTE 2: 5G Core Network (5GCN) via Wireless Local Access Network (WLAN) IP-CAN encompasses both the 5G Core Network (5GCN) via trusted Wireless Local Access Network (WLAN) IP-CAN and the 5G Core Network (5GCN) via untrusted Wireless Local Access Network (WLAN) IP-CAN.	

5.9 /<X>/XCAP_conn_params_policy/<X>/XDM_MO_ref

This leaf contains an XCAP connection parameters reference.

The value of this leaf is a full device URI as specified in OMA-TS-DM_Protocol-V1_2 [5], identifying the <X> interior node specified in OMA-TS-XDM_MO-V1_1 [4] in the UE management tree.

- Occurrence: One
- Format: chr
- Access Types: Get, Replace
- Values: N/A

5.10 /<X>/3GPP_PS_data_off

The interior node contains configuration parameters for 3GPP PS data off.

- Occurrence: ZeroOrOne

- Format: node
- Access Types: Get, Replace
- Values: N/A

5.11 /<X>/3GPP_PS_data_off/SS_XCAP_config_exempt

The leaf indicates whether the manipulation of supplementary services (SS) settings using XCAP over Ut interface is a 3GPP PS data off exempt service.

- Occurrence: One
 - Format: bool
 - Access Types: Get, Replace
 - Values: 0, 1
- 0 - Indicates that the SS configuration via XCAP is not a 3GPP PS data off exempt service.
- 1 - Indicates that the SS configuration via XCAP is a 3GPP PS data off exempt service.

5.12 /<X>/3GPP_PS_data_off/ SS_XCAP_config_roaming_exempt

The leaf indicates whether the manipulation of supplementary services (SS) settings using XCAP over Ut interface is a 3GPP PS data off roaming exempt service.

- Occurrence: One
 - Format: bool
 - Access Types: Get, Replace
 - Values: 0, 1
- 0 - Indicates that the SS configuration via XCAP is not a 3GPP PS data off roaming exempt service.
- 1 - Indicates that the SS configuration via XCAP is a 3GPP PS data off roaming exempt service.

5.13 /<X>/SNPN_Configuration

This interior node contains configuration parameters regarding a UE operating in SNPN access operation mode.

- Occurrence: ZeroOrOne
- Format: node
- Access Types: Get, Replace
- Values: N/A

5.13a /<X>/SNPN_Configuration/<X>

This interior node acts as a placeholder for a list of:

- a) SNPN identity; and
- b) configuration parameters.

NOTE: For each of the elements in the list, a) must be present and at least one parameter of b) needs to appear.

A configuration parameter in an /<X>/SNPN_Configuration/<X> node other than the SNPN_identifier, is applicable when the UE selects an entry of "list of subscriber data" with the SNPN identity of the subscribed SNPN which is the same as the SNPN identity in the SNPN_identifier leaf.

- Occurrence: OneOrMore
- Format: node
- Access Types: Get, Replace
- Values: N/A

5.13b /<X>/SNPN_Configuration/<X>/SNPN_identifier

This leaf indicates the SNPN identity of the subscribed SNPN for which the list of configuration parameters are applicable.

- Occurrence: One
- Format: chr
- Access Types: Get, Replace
- Values: <PLMN><NID>

The PLMN and NID are in the format defined by 3GPP TS 23.003 [11], with each digit of the MCC and MNC of the PLMN and each digit of the assignment mode and NID value of the NID encoded as an ASCII character.

5.13c /<X>/SNPN_Configuration/<X>/AuthenticationForXCAP

The AuthenticationForXCAP leaf provides a means to define the authentication mechanism for Ut reference point.

- Occurrence: ZeroOrOne
 - Format: int
 - Access Types: Get, Replace
 - Values: 0, 1, 2, 3, 4
- 0 – Indicates that the authentication mechanism for Ut reference point is GBA_ME as defined in 3GPP TS 33.220 [7].
- 1 – Indicates that the authentication mechanism for Ut reference point is GBA_U as defined in 3GPP TS 33.220 [7].
- 2 – Indicates that the authentication mechanism for Ut reference point is GBA_Digest as defined in 3GPP TS 33.220 [7].
- 3 – Indicates that the authentication mechanism for Ut reference point is SSC (support for subscriber certificates) as defined in 3GPP TS 33.221 [8].
- 4 – Indicates that the authentication mechanism for Ut reference point is Digest Access Authentication as defined in IETF RFC 7616 [10].

5.13d /<X>/SNPN_Configuration/<X>/ XCAP_conn_params_policy

This interior node contains the XCAP connection parameters policy.

- Occurrence: ZeroOrOne
- Format: node
- Access Types: Get, Replace
- Values: N/A

If this interior node contains a child node not defined in this version of the present document, the child node is ignored.

5.13e /<X>/SNPN_Configuration/<X>/ XCAP_conn_params_policy/<X>

This interior node contains one XCAP connection parameters policy part.

- Occurrence: OneOrMore
- Format: node
- Access Types: Get, Replace
- Values: N/A

If this interior node contains a child node not defined in this version of the present document, this interior node is ignored.

If a descendant node of this interior node contains a value not defined in this version of the present document, this interior node is ignored.

5.13f /<X>/SNPN_Configuration/<X>/ XCAP_conn_params_policy/<X>/XDM_MO_ref

This leaf contains an XCAP connection parameters reference.

The value of this leaf is a full device URI as specified in OMA-TS-DM_Protocol-V1_2 [5], identifying the <X> interior node specified in OMA-TS-XDM_MO-V1_1 [4] in the UE management tree.

- Occurrence: One
- Format: chr
- Access Types: Get, Replace
- Values: N/A

5.13g /<X>/SNPN_Configuration/<X>/3GPP_PS_data_off

The interior node contains configuration parameters for 3GPP PS data off.

- Occurrence: ZeroOrOne
- Format: node
- Access Types: Get, Replace
- Values: N/A

5.13h /<X>/SNPN_Configuration/<X>/3GPP_PS_data_off/ SS_XCAP_config_exempt

The leaf indicates whether the manipulation of supplementary services (SS) settings using XCAP over Ut interface is a 3GPP PS data off exempt service.

- Occurrence: One
- Format: bool
- Access Types: Get, Replace
- Values: 0, 1

0 - Indicates that the SS configuration via XCAP is not a 3GPP PS data off exempt service.

1 - Indicates that the SS configuration via XCAP is a 3GPP PS data off exempt service.

5.13i /<X>/SNPN_Configuration/<X>/3GPP_PS_data_off/ SS_XCAP_config_non-subscribed_exempt

The leaf indicates whether the manipulation of supplementary services (SS) settings using XCAP over Ut interface is a 3GPP PS data off non-subscribed exempt service.

- Occurrence: One
- Format: bool
- Access Types: Get, Replace
- Values: 0, 1

0 - Indicates that the SS configuration via XCAP is not a 3GPP PS data off non-subscribed exempt service.

1 - Indicates that the SS configuration via XCAP is a 3GPP PS data off non-subscribed exempt service.

Annex A (informative): DDF of MO for XCAP over Ut interface for manipulating SS

This DDF is the standardized minimal set. A vendor can define its own DDF for the complete device. This DDF can include more features than this minimal standardized version.

```

<?xml version="1.0" encoding="UTF-8"?>
<!DOCTYPE MgmtTree PUBLIC "-//OMA//DTD-DM-DDF 1.2//EN"
"http://www.openmobilealliance.org/tech/DTD/DM_DDF-V1_2.dtd">
<MgmtTree>
  <VerDTD>1.2</VerDTD>
  <Man>--The device manufacturer--</Man>
  <Mod>--The device model--</Mod>
  <Node>
    <NodeName/>
    <DFProperties>
      <AccessType>
        <Get/>
        <Replace/>
      </AccessType>
      <Description>Configuration parameters for the XCAP over the Ut interface for
manipulating the SS</Description>
      <DFFormat>
        <node/>
      </DFFormat>
      <Occurrence>
        <OneOrMore/>
      </Occurrence>
      <Scope>
        <Permanent/>
      </Scope>
      <DFTitle>The Management Object (MO) for Extensible Markup Language (XML) Configuration
Access Protocol (XCAP) over the Ut interface for Manipulating Supplementary Services (SS).</DFTitle>
      <DFType>
        <DDFName>urn:oma:mo:ext-3gpp-xcaputss:1.0</DDFName>
      </DFType>
    </DFProperties>

    <Node>
      <NodeName>Name</NodeName>
      <DFProperties>
        <AccessType>
          <Get/>
          <Replace/>
        </AccessType>
        <DFFormat>
          <chr/>
        </DFFormat>
        <Occurrence>
          <ZeroOrOne/>
        </Occurrence>
        <Scope>
          <Dynamic/>
        </Scope>
        <DFTitle>The name for the settings for the XCAP over the Ut interface for
manipulating the SS.</DFTitle>
        <DFType>
          <MIME>text/plain</MIME>
        </DFType>
      </DFProperties>
    </Node>

    <Node>
      <NodeName>AccessForXCAP</NodeName>
      <DFProperties>
        <AccessType>
          <Get/>
          <Replace/>
        </AccessType>
        <DFFormat>
          <int/>
        </DFFormat>
        <Occurrence>

```

```

        <One/>
      </Occurrence>
    <Scope>
      <Permanent/>
    </Scope>
    <DFTitle>The policy on access type used for XCAP</DFTitle>
    <DFType>
      <MIME>text/plain</MIME>
    </DFType>
  </DFProperties>
</Node>

<Node>
  <NodeName>AuthenticationForXCAP</NodeName>
  <DFProperties>
    <AccessType>
      <Get/>
      <Replace/>
    </AccessType>
    <DFFormat>
      <int/>
    </DFFormat>
    <Occurrence>
      <ZeroOrOne/>
    </Occurrence>
    <Scope>
      <Permanent/>
    </Scope>
    <DFTitle>Mechanism used for performing authentication for Ut reference
point</DFTitle>
    <DFType>
      <MIME>text/plain</MIME>
    </DFType>
  </DFProperties>
</Node>

<Node>
  <NodeName>XCAP_conn_params_policy</NodeName>
  <DFProperties>
    <AccessType>
      <Get/>
      <Replace/>
    </AccessType>
    <DFFormat>
      <node/>
    </DFFormat>
    <Occurrence>
      <ZeroOrOne/>
    </Occurrence>
    <Scope>
      <Dynamic/>
    </Scope>
    <DFTitle>XCAP connection parameters policy.</DFTitle>
    <DFType>
      <DDFName/>
    </DFType>
  </DFProperties>
  <Node>
    <NodeName/>
    <DFProperties>
      <AccessType>
        <Get/>
        <Replace/>
      </AccessType>
      <DFFormat>
        <node/>
      </DFFormat>
      <Occurrence>
        <OneOrMore/>
      </Occurrence>
      <Scope>
        <Dynamic/>
      </Scope>
      <DFTitle>XCAP connection parameters policy part</DFTitle>
      <DFType>
        <DDFName/>
      </DFType>
    </DFProperties>
  </Node>

```

```

<Node>
  <NodeName>access</NodeName>
  <DFProperties>
    <AccessType>
      <Get/>
      <Replace/>
    </AccessType>
    <DFFormat>
      <int/>
    </DFFormat>
    <Occurrence>
      <One/>
    </Occurrence>
    <Scope>
      <Dynamic/>
    </Scope>
    <DFTitle>An access identifier.</DFTitle>
    <DFType>
      <MIME>text/plain</MIME>
    </DFType>
  </DFProperties>
</Node>
<Node>
  <NodeName>XDM_MO_ref</NodeName>
  <DFProperties>
    <AccessType>
      <Get/>
      <Replace/>
    </AccessType>
    <DFFormat>
      <chr/>
    </DFFormat>
    <Occurrence>
      <One/>
    </Occurrence>
    <Scope>
      <Dynamic/>
    </Scope>
    <DFTitle>An XCAP connection parameters reference.</DFTitle>
    <DFType>
      <MIME>text/plain</MIME>
    </DFType>
  </DFProperties>
</Node>
</Node>
</Node>
<Node>
  <NodeName>3GPP_PS_data_off</NodeName>
  <DFProperties>
    <AccessType>
      <Get/>
      <Replace/>
    </AccessType>
    <DFFormat>
      <node/>
    </DFFormat>
    <Occurrence>
      <ZeroOrOne/>
    </Occurrence>
    <Scope>
      <Dynamic/>
    </Scope>
    <DFTitle>Configuration parameters for 3GPP PS data off.</DFTitle>
    <DFType>
      <DDFName/>
    </DFType>
  </DFProperties>
<Node>
  <NodeName>SS_XCAP_config_exempt</NodeName>
  <DFProperties>
    <AccessType>
      <Get/>
      <Replace/>
    </AccessType>
    <DFFormat>
      <bool/>
    </DFFormat>
  </DFProperties>

```

```

        <Occurrence>
          <One/>
        </Occurrence>
      </Scope>
    </Dynamic/>
  </Scope>
  <DFTitle>Whether the SS configuration via XCAP is a 3GPP PS data off exempt
service.</DFTitle>
  <DFType>
    <MIME>text/plain</MIME>
  </DFType>
</DFProperties>
</Node>
<Node>
  <NodeName>SS_XCAP_config_roaming_exempt</NodeName>
  <DFProperties>
    <AccessType>
      <Get/>
      <Replace/>
    </AccessType>
    <DFFormat>
      <bool/>
    </DFFormat>
    <Occurrence>
      <One/>
    </Occurrence>
    <Scope>
      <Dynamic/>
    </Scope>
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service for roaming.</DFTitle>
  <DFType>
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  </DFType>
</DFProperties>
</Node>
</Node>
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  <DFProperties>
    <AccessType>
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      <Replace/>
    </AccessType>
    <DFFormat>
      <node/>
    </DFFormat>
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      <ZeroOrOne/>
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  </DFType>
</DFProperties>
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  <NodeName/>
  <DFProperties>
    <AccessType>
      <Get/>
    </AccessType>
    <DFFormat>
      <node/>
    </DFFormat>
    <Occurrence>
      <OneOrMore/>
    </Occurrence>
    <Scope>
      <Dynamic/>
    </Scope>
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    <MIME>text/plain</MIME>
  </DFType>
</DFProperties>

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  <DFProperties>
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      <Get />
      <Replace />
    </AccessType>
    <DFFormat>
      <chr />
    </DFFormat>
    <Occurrence>
      <One />
    </Occurrence>
    <Scope>
      <Permanent />
    </Scope>
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    <DFType>
      <MIME>text/plain</MIME>
    </DFType>
  </DFProperties>
</Node>
<Node>
  <NodeName>AuthenticationForXCAP</NodeName>
  <DFProperties>
    <AccessType>
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      <Replace />
    </AccessType>
    <DFFormat>
      <int />
    </DFFormat>
    <Occurrence>
      <ZeroOrOne />
    </Occurrence>
    <Scope>
      <Permanent />
    </Scope>
    <DFTitle>Mechanism used for performing authentication for Ut reference
point</DFTitle>
    <DFType>
      <MIME>text/plain</MIME>
    </DFType>
  </DFProperties>
</Node>
<Node>
  <NodeName>XCAP_conn_params_policy</NodeName>
  <DFProperties>
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      <Replace />
    </AccessType>
    <DFFormat>
      <node />
    </DFFormat>
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      <ZeroOrOne />
    </Occurrence>
    <Scope>
      <Dynamic />
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    <DFType>
      <DDFName />
    </DFType>
  </DFProperties>
  <Node>
    <NodeName />
    <DFProperties>
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        <Get />
        <Replace />
      </AccessType>
      <DFFormat>
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      </Occurrence>
    </DFProperties>
  </Node>

```

```

        </Occurrence>
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            <Dynamic/>
        </Scope>
        <DFTitle>XCAP connection parameters policy part</DFTitle>
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            <DDFName/>
        </DFType>
    </DFProperties>
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        <DFProperties>
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                <Get/>
                <Replace/>
            </AccessType>
            <DFFormat>
                <chr/>
            </DFFormat>
            <Occurrence>
                <One/>
            </Occurrence>
            <Scope>
                <Dynamic/>
            </Scope>
            <DFTitle>An XCAP connection parameters reference.</DFTitle>
            <DFType>
                <MIME>text/plain</MIME>
            </DFType>
        </DFProperties>
    </Node>
</Node>
</Node>
<Node>
    <NodeName>3GPP_PS_data_off</NodeName>
    <DFProperties>
        <AccessType>
            <Get/>
            <Replace/>
        </AccessType>
        <DFFormat>
            <node/>
        </DFFormat>
        <Occurrence>
            <ZeroOrOne/>
        </Occurrence>
        <Scope>
            <Dynamic/>
        </Scope>
        <DFTitle>Configuration parameters for 3GPP PS data off.</DFTitle>
        <DFType>
            <DDFName/>
        </DFType>
    </DFProperties>
    <Node>
        <NodeName>SS_XCAP_config_exempt</NodeName>
        <DFProperties>
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                <Get/>
                <Replace/>
            </AccessType>
            <DFFormat>
                <bool/>
            </DFFormat>
            <Occurrence>
                <One/>
            </Occurrence>
            <Scope>
                <Dynamic/>
            </Scope>
            <DFTitle>Whether the SS configuration via XCAP is a 3GPP PS data off
exempt service.</DFTitle>
            <DFType>
                <MIME>text/plain</MIME>
            </DFType>
        </DFProperties>
    </Node>
</Node>

```

```

        <NodeName>SS_XCAP_config_non-subscribed_exempt</NodeName>
        <DFProperties>
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                <Get/>
                <Replace/>
            </AccessType>
            <DFFormat>
                <bool/>
            </DFFormat>
            <Occurrence>
                <One/>
            </Occurrence>
            <Scope>
                <Dynamic/>
            </Scope>
            <DFTitle>Whether the SS configuration via XCAP is a 3GPP PS data off
non-subscribed exempt service.</DFTitle>
            <DFType>
                <MIME>text/plain</MIME>
            </DFType>
        </DFProperties>
    </Node>
</Node>
</Node>
<Node>
    <NodeName>Ext</NodeName>
    <!-- The Extension node starts here. -->
    <DFProperties>
        <AccessType>
            <Get/>
        </AccessType>
        <DFFormat>
            <node/>
        </DFFormat>
        <Occurrence>
            <ZeroOrOne/>
        </Occurrence>
        <Scope>
            <Dynamic/>
        </Scope>
        <DFTitle>A collection of all Extension objects.</DFTitle>
        <DFType>
            <DDFName/>
        </DFType>
    </DFProperties>
</Node>
</Node>
</MgmtTree>

```

Annex B (informative): Change history

Change history							
Date	Meeting	TDoc	CR	Rev	Cat	Subject/Comment	New version
2016-08						Incorporating C1-163574, C1-163575, C1-163576. "inteface" corrected to "interface".	0.1.0
2016-10						Incorporating C1-164693, C1-164697. Editorial changes. OMA-TS-DM_Protocol-V1_2 made version specific.	0.2.0
2016-10						Editorial changes.	0.2.1
2016-11	CT-74	CP-160707				Version 1.0.0 created for presentation for information to CT plenary	1.0.0
2017-01						Incorporating C1-170001, C1-170002, C1-170005. Correcting title of OMA OMA-TS-XDM_MO-V1_1-20080627-A.	1.1.0
2017-02						Incorporating C1-170571.	1.2.0
2017-02	CT-75	CP-170163				Version 2.0.0 created for presentation for approval to CT plenary	2.0.0
2017-03	CT-75					Version 14.0.0 created after approval	14.0.0
2017-06	CT-76	CP-171085	0001	1	B	3GPP PS Data Off and Ut/XCAP services configuration MO	14.1.0
2017-12	CT-78	CP-173062	0002		F	Correction of a data format	14.2.0
2018-06	SA-80	-	-	-	-	Update to Rel-15 version (MCC)	15.0.0
2018-09	CT-81	CP-182156	0003	3	F	3GPP data off in roaming and Ut/XCAP services configuration MO	15.1.0
2018-12	CT-82	CP-183077	0004		F	Addition of the object identifier in the DDF of the 3GPP Management Object	16.0.0
2018-12	CT-82	CP-183077	0005	1	B	Authentication mechanisms for Ut reference point	16.0.0
2019-06	CT-84	CP-191126	0007	1	A	Correct policy for XCAP when access type involves 5G	16.1.0
2019-06	CT-84	CP-191126	0009	1	A	Correct enforcement of access specific configuration for XCAP when using 5Gx	16.1.0
2021-03	CT-91e	CP-210134	0010		F	Adding non-seamless wifi access type to XCAP_conn_params_policy	17.0.0
2021-03	CT-91e	CP-210170	0011	1	F	Adding Digest Access authentication mechanism in AuthenticationForXCAP leaf node	17.0.0
2021-12	CT#94e	CP-213031	0012		B	Update of HTTP Digest Access Authentication	17.1.0
2022-03	CT#95e	CP-220238	0013	1	B	SNPN configuration in XCAP MO	17.2.0

History

Document history		
V17.2.0	May 2022	Publication