**3GPP TSG-CT WG3 Meeting #116e C3-213431**

**E-Meeting, 19th – 28th May 2021 (Revision of C3-213212)**

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| *CR-Form-v12.1* | | | | | | | | |
| **CHANGE REQUEST** | | | | | | | | |
|  | | | | | | | | |
|  | **29.061** | **CR** | **0538** | **rev** | **2** | **Current version:** | **17.2.0** |  |
|  | | | | | | | | |
| *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 |  | Radio Access Network |  | Core Network | **X** |

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|  | | | | | | | | | | |
| ***Title:*** | Updates to support L2TP in Diameter message flow | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Source to WG:*** | Ericsson | | | | | | | | | |
| ***Source to TSG:*** | CT3 | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Work item code:*** | BEPoP | | | | |  | ***Date:*** | | | 2021-05-06 |
|  |  | | | |  | |  | | |  |
| ***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-15 (Release 15) Rel-16 (Release 16) Rel-17 (Release 17) Rel-18 (Release 18)* | |
|  |  | | | | | | | | | |
| ***Reason for change:*** | | CT4 has been studied and agreed L2TP supporting for CUPS in WI BEPoP,  TR 29.820 has also concluded to support L2TP tunneling over N6/SGi for 5GC/EPS is to be standardized based on the solution#8 as described in 6.8 in Rel-17, and CT3 scope has been added in WI BEPoP.  Meanwhile, SA2 LS Reply on the support of L2TP with CUPS in rel-17 to support L2TP tunnelling over N6/SGi for 5GS and EPS, with TS 23.214 CR 0076 approved.  Hence the related L2TP support and attributes for Diameter messages need to be added. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Summary of change:*** | | Adding Diameter attributes within the grouped "Tunneling" AVP and the basic attributes in Diameter AAA message to support DN AAA server providing L2TP information. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Consequences if not approved:*** | | Missing the Diameter attributes in the related Diameter message to support L2TP in this specification, and cannot be referred by TS 29.561. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Clauses affected:*** | | 16a.4.2 | | | | | | | | |
|  | |  | | | | | | | | |
|  | | **Y** | **N** |  | | | |  | | |
| ***Other specs*** | | **X** |  | Other core specifications | | | | TS 23.214 CR 0076 | | |
| ***affected:*** | |  | **X** | Test specifications | | | |  | | |
| ***(show related CRs)*** | |  | **X** | O&M Specifications | | | |  | | |
|  | |  | | | | | | | | |
| ***Other comments:*** | |  | | | | | | | | |
|  | |  | | | | | | | | |
| ***This CR's revision history:*** | |  | | | | | | | | |

**Additional discussion(if needed):**

**Proposed changes:**

\*\*\* 1st Change \*\*\*

### 16a.4.2 AAA Command

The AAA command, defined in Diameter NASREQ (IETF RFC 4005 [67]), is indicated by the Command-Code field set to 265 and the ‘R’ bit cleared in the Command Flags field., It is sent by the Diameter server to the GGSN/P-GW in response to the AAR command.

The relevant AVPs that are of use for the Gi/Sgi interface are detailed in the ABNF description below. Other valid AVPs for this command are not used for Gi/Sgi purposes and should be ignored by the receiver or processed according to the relevant specifications.

The "Tunneling" AVP may include the "Tunnel-Type" with value 3 to represent L2TP tunnel type, "Tunnel-Medium-Type" and "Tunnel-Server-Endpoint" AVPs. If more than one set of these "Tunneling" AVPs are provided, the optional "Tunnel-Preference" AVP may be provided in each set to identify the relative preference. The Tunnel-Password AVP may be used to authenticate to a remote server.

NOTE: The other optional AVPs within the "Tunneling" AVPs can be referred to the IETF RFC 4005 [67] with implementation specific.

Editor’s Note: Whether the Tunnel-Password can be included will be confirmed by SA3.

The bold marked AVPs in the message format indicate optional AVPs for Gi/Sgi, or modified existing AVPs.

Message Format:

<AA-Answer> ::= < Diameter Header: 265, PXY >

< Session-Id >

{ Auth-Application-Id }

{ Auth-Request-Type }

{ Result-Code }

{ Origin-Host }

{ Origin-Realm }

[ User-Name ]

[ Service-Type ]

\* [ Class ]

[ Acct-Interim-Interval ]

[ Error-Message ]

[ Error-Reporting-Host ]

[ Failed-AVP ]

[ Idle-Timeout ]

[ Authorization-Lifetime ]

[ Auth-Grace-Period ]

[ Auth-Session-State ]

[ Re-Auth-Request-Type ]

[ Multi-Round-Time-Out ]

[ Session-Timeout ]

\* [ Reply-Message ]

[ Origin-State-Id ]

\* [ Filter-Id ]

[ Port-Limit ]

[ Prompt ]

[ Callback-Id ]

[ Callback-Number ]

\* [ Framed-Compression ]

[ Framed-Interface-Id ]

[ Framed-IP-Address ]

\* [ Framed-IPv6-Prefix ]

[ Framed-IPv6-Pool ]

\* [ Framed-IPv6-Route ]

\* [ Delegated-IPv6-Prefix ]

[ Framed-IP-Netmask ]

\* [ Framed-Route ]

[ Framed-Pool ]

[ Framed-IPX-Network ]

[ Framed-MTU ]

[ Framed-Protocol ]

[ Framed-Routing ]

\* [ Login-IP-Host ]

\* [ Login-IPv6-Host ]

[ Login-LAT-Group ]

[ Login-LAT-Node ]

[ Login-LAT-Port ]

[ Login-LAT-Service ]

[ Login-Service ]

[ Login-TCP-Port ]

\* [ NAS-Filter-Rule ]

\* [ QoS-Filter-Rule ]

\* [ Tunneling ]

\* [ Redirect-Host ]

[ Redirect-Host-Usage ]

[ Redirect-Max-Cache-Time ]

\* [ Proxy-Info ]

**[ 3GPP-IPv6-DNS-Servers ]**

\* **[ External-Identifier]**

\* [ AVP ]

\*\*\* End of Changes \*\*\*