**3GPP TSG-CT3 Meeting #118e C3-215XXX**

**E-Meeting, 11th – 15th October 2021 (rev of C3-215122)**

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| *CR-Form-v12.1* | | | | | | | | |
| **CHANGE REQUEST** | | | | | | | | |
|  | | | | | | | | |
|  | **29.513** | **CR** | **0297** | **rev** | **1** | **Current version:** | **17.4.0** |  |
|  | | | | | | | | |
| *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:*** | NWDAF discovery by the PCF | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Source to WG:*** | Ericsson | | | | | | | | | |
| ***Source to TSG:*** | CT3 | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Work item code:*** | eNA\_Ph2 | | | | |  | ***Date:*** | | | 2021-09-09 |
|  |  | | | |  | |  | | |  |
| ***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:*** | | TS 23.503, clause 6.1.1.3, describes the discovery and selection mechanisms for the PCF to find the suitable NWDAF. This discovery can be based on NWDAF info provided by the AMF and SMF as part of the AM/SM Policy Association establishment and modification procedures or can be based on discovery at the NRF when the information for the required Analytics ID is not provided by the AMF and/or SMF.  These mechanisms need to be specified at stage 3 level. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Summary of change:*** | | NWDAF discovery and selection is introduced as part of clause 5.4. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Consequences if not approved:*** | | Misalignment with stage 2. NWDAF discovery based on the info provided by the AMF & SMF remains unspecified. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Clauses affected:*** | | 2; 5.4.1(new); 5.4.x(new). | | | | | | | | |
|  | |  | | | | | | | | |
|  | | **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:*** | |  | | | | | | | | |

\* \* \* First Change \* \* \* \*

# 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] 3GPP TS 23.501: "System Architecture for the 5G System; Stage 2".

[3] 3GPP TS 23.502: "Procedures for the 5G System; Stage 2".

[4] 3GPP TS 23.503: "Policy and Charging Control Framework for the 5G System; Stage 2".

[5] 3GPP TS 29.500: "5G System; Technical Realization of Service Based Architecture; Stage 3".

[6] 3GPP TS 29.501: "5G System; Principles and Guidelines for Services Definition; Stage 3".

[7] 3GPP TS 29.507: "5G System; Access and Mobility Policy Control Service; Stage 3".

[8] 3GPP TS 29.508: "5G System; Session Management Event Exposure Service; Stage 3".

[9] 3GPP TS 29.512: "5G System; Session Management Policy Control Service; Stage 3".

[10] 3GPP TS 29.514: "5G System; Policy Authorization Service; Stage 3".

[11] 3GPP TS 29.520: "5G System; Network Data Analytics Services; Stage 3".

[12] 3GPP TS 29.519: "5G System; Usage of the Unified Data Repository Service for Policy Data, Application Data and Structured Data for Exposure; Stage 3".

[13] Void

[14] 3GPP TS 26.114: "IP Multimedia Subsystem (IMS); Multimedia Telephony; Media handling and interaction".

[15] 3GPP TS 29.201: "Representational State Transfer (REST) reference point between Application Function (AF) and Protocol Converter (PC)".

[16] IETF RFC 4566: "SDP: Session Description Protocol".

[17] 3GPP TS 26.247: "Transparent end-to-end Packet-switched Streaming Service (PSS) Progressive Download and Dynamic Adaptive Streaming over HTTP (3GP-DASH)".

[18] 3GPP TS 29.214: "Policy and Charging Control over Rx reference point".

[19] 3GPP TS 26.234: "End-to-end transparent streaming service; Protocols and codecs".

[20] 3GPP2 C.S0046-0 v1.0: "3G Multimedia Streaming Services".

[21] 3GPP2 C.S0055-A v1.0: "Packet Switched Video Telephony Services (PSVT/MCS)".

[22] 3GPP TS 29.521: "5G System; Binding Support Management Service; Stage 3".

[23] 3GPP TS 29.594: "5G System; Spending Limit Control Service; Stage 3".

[24] 3GPP TS 29.522: "5G System; Network Exposure Function Northbound APIs; Stage 3".

[25] 3GPP TS 29.551: "5G System; Packet Flow Description Management Service; Stage 3".

[26] 3GPP TS 29.554: "5G System; Background Data Transfer Policy Control Service; Stage 3".

[27] 3GPP TS 29.504: "5G System; Unified Data Repository Services; Stage 3".

[28] 3GPP TS 32.240: "Charging management; Charging architecture and principles".

[29] IETF RFC 6733: "Diameter Base Protocol".

[30] 3GPP TS 29.213: "Policy and charging control signalling flows and Quality of Service (QoS) parameter mapping".

[31] 3GPP TS 29.525: "UE Policy Control Service; Stage 3".

[32] 3GPP TS 29.518: "Access and Mobility Management Services; Stage 3".

[33] 3GPP TS 24.501: "Non-Access-Stratum (NAS) protocol for 5G System (5GS); Stage 3".

[34] 3GPP TS 29.122: "T8 reference point for northbound Application Programming Interfaces (APIs)".Non-Access-Stratum (NAS) protocol for 5G System (5GS); Stage 3".

[35] 3GPP TS 24.292: "IP Multimedia (IM) Core Network (CN) subsystem Centralized Services (ICS); Stage 3".

[36] IETF RFC 3556: "Session Description Protocol (SDP) Bandwidth Modifiers for RTP Control Protocol (RTCP) Bandwidth".

[37] IETF RFC 3890: "A Transport Independent Bandwidth Modifier for the Session Description Protocol (SDP)".

[38] IETF RFC 5761: "Multiplexing RTP Data and Control Packets on a Single Port".

[39] IETF RFC 4145: "TCP-Based Media Transport in the Session Description Protocol (SDP)".

[40] IETF RFC 4975: "The Message Session Relay Protocol (MSRP)".

[41] 3GPP TS 24.229: " IP multimedia call control protocol based on Session Initiation Protocol (SIP) and Session Description Protocol (SDP); Stage 3".

[42] IETF RFC 4412: "Communications Resource Priority for the Session Initiation Protocol (SIP)".

[43] IETF RFC 3264: "An Offer/Answer model with the Session Description Protocol (SDP)".

[44] 3GPP TS 23.216: “Single Radio Voice Call Continuity (SRVCC); Stage 2”.

[45] 3GPP TS 23.380: "IMS Restoration Procedures".

[46] 3GPP TS 23.221: "Architectural requirements".

[47] 3GPP TS 29.505: "5G System; Usage of the Unified Data Repository Service for Subscription Data; Stage 3".

[48] 3GPP TS 29.552: "5G System; Network Data Analytics signalling follows; Stage 3".

[49] 3GPP TS 29.523: "5G System; Policy Control Event Exposure Service; Stage 3".

[50] 3GPP TS 29.534: "5G System; Access and Mobility Policy Authorization Service; Stage 3".

[xx] 3GPP TS 29.510: "5G System; Network function repository services; Stage 3".

\* \* \* Second Change \* \* \* \*

## 5.4 Network Data Analytics Procedures

### 5.4.1 General

The PCF may interact with the NWDAF to make PCC decisions based on analytics information as described in 3GPP TS 29.552 [48].

### 5.4.x NWDAF Discovery and Selection by the PCF

The PCF performs discovery and selection of NWDAF as follows:

* When the "EneNA" feature is supported as described in 3GPP TS 29.507 [7], the PCF for the UE may select the list of NWDAF instance IDs used for the UE and their associated Analytic ID(s) based on the NWDAF information provided by the AMF as part of the AM Policy Association Establishment and/or Modification procedures as described in 3GPP TS 29.507 [7].
* When the "EneNA" feature is supported as described in 3GPP TS 29.512 [9], the PCF for the PDU Session may select the list of NWDAF instance IDs used for the PDU Session and their associated Analytic ID(s) based on the NWDAF information provided by the SMF as part of the SM Policy Association Establishment and/or Modification procedures as described in 3GPP TS 29.512 [9].
* When the NWDAF instance IDs provided by the AMF or SMF do not relate to the Analytics ID(s) required by the PCF, the PCF may perform NWDAF discovery as described in 3GPP TS 29.510 [xx].

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