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

**E-Meeting, 11th – 15th October 2021 (rev of C3-215123)**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| *CR-Form-v12.1* | | | | | | | | |
| **CHANGE REQUEST** | | | | | | | | |
|  | | | | | | | | |
|  |  | **CR** | **0324** | **rev** | **1** | **Current version:** |  |  |
|  | | | | | | | | |
| *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)*.* | | | | | | | | |
|  | | | | | | | | |

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| ***Proposed change affects:*** | UICC apps |  | ME |  | Radio Access Network |  | Core Network | **x** |

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | | | | | | | | | | |
| ***Title:*** | Addition of network analytics for the PCF | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Source to WG:*** |  | | | | | | | | | |
| ***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 Analytics IDs that are relevant for Policy decisions: "Load level information", "Service Experience", "Network Performance", "Abnormal behaviour", "UE Mobility", "UE Communication", "User Data Congestion", "Data Dispersion" and "WLAN performance".  However, TS 29.520 is only considering "Load level information", "Service Experience", "Network Performance" and "Abnormal behaviour".  The TS needs to be updated to include the missing Analytics IDs. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Summary of change:*** | | Clause 4.2.1.3.2 in TS 29.520 is completed to include the (un)subscription and notification of the missing analytics information. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Consequences if not approved:*** | | Misalignment with stage 2. Relevant analytics information cannot be reported. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Clauses affected:*** | | 4.2.1.3.2 | | | | | | | | |
|  | |  | | | | | | | | |
|  | | **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 does not have any impact in the OpenAPI specifications. | | | | | | | | |
|  | |  | | | | | | | | |
| ***This CR's revision history:*** | |  | | | | | | | | |

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

##### 4.2.1.3.2 NF Service Consumers

The Policy Control Function (PCF):

- supports (un)subscription to the notification of analytics information for slice load level information load level information from the NWDAF;

- supports (un)subscription to the notification of analytics information for service experience related network data from the NWDAF;

- supports (un)subscription to the notification of analytics information for network performance from the NWDAF;

- supports (un)subscription to the notification of analytics information for abnormal UE behaviour from the NWDAF;

- supports (un)subscription to the notification of analytics information for QoS sustainability from NWDAF;

- supports (un)subscription to the notification of analytics information for UE mobility from the NWDAF;

- supports (un)subscription to the notification of analytics information for UE communication from the NWDAF;

- supports (un)subscription to the notification of analytics information for user data congestion from the NWDAF;

- supports (un)subscription to the notification of analytics information for data dispersion from the NWDAF;

- supports (un)subscription to the notification of analytics information for WLAN performance from the NWDAF;

- supports taking one or more above input from NWDAF into consideration for policies on assignment of network resources and/or for traffic steering policies.

NOTE: How this information is used by the PCF is not standardized in this release of the specification.

The Network Slice Selection Function (NSSF):

- supports (un)subscription to the notification of analytics information for slice load level information or network slice instance load level information from NWDAF to determine slice selection.

- supports (un)subscription to the notification of analytics information for service experience related network data from the NWDAF;

The Access and Mobility Management Function (AMF):

- supports (un)subscription to the notification of analytics information for SMF load information from NWDAF to determine SMF selection;

- supports (un)subscription to the notification of analytics information for expected UE behavioural information (UE mobility and/or UE communication) from NWDAF to monitor UE behaviour;

- supports (un)subscription to the notification of analytics information for abnormal UE behaviour information from NWDAF to determine adjustment of UE mobility related network parameters to solve the abnormal risk.

The Session Management Function (SMF):

- supports (un)subscription to the notification of analytics information for UPF load information from NWDAF to determine UPF selection;

- supports (un)subscription to the notification of analytics information for expected UE behavioural information (UE mobility and/or UE communication) from NWDAF to monitor UE behaviour;

- supports (un)subscription to the notification of analytics information for abnormal UE behaviour information from NWDAF to determine adjustment of UE communicationrelated network parameters to solve the abnormal risk.

- supports (un)subscription to the notification of analytics information for slice load level information or network slice instance load level information from NWDAF to determine slice selection.

- supports (un)subscription to the notification of analytics information for service experience related network data from the NWDAF;

The Network Exposure Function (NEF):

- supports forwarding UE mobility information from NWDAF to the AF when it is untrusted;

- supports forwarding UE communication information from NWDAF to the AF when it is untrusted;

- supports forwarding expected UE behavioural information (UE mobility and/or UE communication) from NWDAF to the AF when it is untrusted;

- supports forwarding abnormal behaviour information from NWDAF to the AF when it is untrusted;

- supports forwarding user data congestion information from NWDAF to the AF when it is untrusted;

- supports forwarding network performance information from NWDAF to the AF when it is untrusted;

- supports forwarding QoS Sustainability information from NWDAF to the AF when it is untrusted.

The Unified Data Management (UDM):

- supports taking expected UE behaviour information (UE mobility and/or UE communication) from NWDAF into consideration for monitoring UE behaviour.

The Application Function (AF):

- supports receiving UE mobility information from NWDAF or via the NEF;

- supports receiving UE communication information from NWDAF or via the NEF;

- supports receiving expected UE behavioural information (UE mobility and/or UE communication) from NWDAF or via the NEF;

- supports receiving abnormal behaviour information from NWDAF or via the NEF;

- supports receiving user data congestion information from NWDAF or via the NEF;

- supports receiving network performance information from NWDAF or via the NEF;

- supports receiving QoS Sustainability information from NWDAF or via the NEF.

The Operation, Administration, and Maintenance (OAM):

- supports receiving observed service experience from NWDAF;

- supports receiving NF load information from NWDAF;

- supports receiving network performance information from NWDAF;

- supports receiving UE mobility information from NWDAF;

- supports receiving UE communication information from NWDAF;

- supports receiving expected UE behaviour information (UE mobility and/or UE communication) from NWDAF;

- supports receiving abnormal UE behaviour information from NWDAF.

The Charging Enablement Function (CEF):

- supports (un)subscription to the notification of analytics information for slice load level information from the NWDAF;

- supports (un)subscription to the notification of analytics information for service experience statistics information from the NWDAF.

The Network Data Analytics Function (NWDAF):

- supports (un)subscription to the notification of analytics information for all types of network analytics from the NWDAF.

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