**3GPP TSG- Meeting #120-e *S4-220943***

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| *CR-Form-v12.2* | | | | | | | | |
| **CHANGE REQUEST** | | | | | | | | |
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|  | **26.531** | **CR** | **0002** | **rev** |  | **Current version:** | **17.0.0** |  |
|  | | | | | | | | |
| *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:*** | [EVEX] TS 26.531 Clarifications on Data Access Profile description in clause 4.5.2 | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Source to WG:*** | Qualcomm Incorporated | | | | | | | | | |
| ***Source to TSG:*** | S4 | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Work item code:*** | EVEX | | | | |  | ***Date:*** | | | 2022-08-10 |
|  |  | | | |  | |  | | |  |
| ***Category:*** | F |  | | | | | ***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-16 (Release 16) Rel-17 (Release 17) Rel-18 (Release 18) Rel-19 (Release 19)* | |
|  |  | | | | | | | | | |
| ***Reason for change:*** | | Existing description text regarding the Data Access Profile in clause 4.5.2 I is somewhat bare and lacking in specificity. Additional clarifications/details on the definable access restrictions along the time, user and location dimensions would improve understanding of the potential settings. The current absence of sufficient explanations/details in that section may have led to the request for more explanation by CT3 on “restriction dimensions” in their May 2022 outgoing LS to SA4. | | | | | | | | |
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| ***Summary of change:*** | | Proposed changes to the text in the three sub-bullet items in clause 4.5.2 regarding the time, user, and location restrictions dimensions associated with the Data Access Profile. | | | | | | | | |
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| ***Consequences if not approved:*** | | Insufficent clarity and details in the specification that could lead to incorrect and/or non-interoperable implementations. | | | | | | | | |
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| ***Clauses affected:*** | | 4.5.2 | | | | | | | | |
|  | |  | | | | | | | | |
|  | | **Y** | **N** |  | | | |  | | |
| ***Other specs*** | | **Y** |  | Other core specifications | | | | TS 29.517 | | |
| ***affected:*** | |  | **X** | Test specifications | | | |  | | |
| ***(show related CRs)*** | |  | **X** | O&M Specifications | | | |  | | |
|  | |  | | | | | | | | |
| ***Other comments:*** | |  | | | | | | | | |
|  | |  | | | | | | | | |
| ***This CR's revision history:*** | |  | | | | | | | | |

START OF CHANGES

### 4.5.2 Data exposure restriction model

The Provisioning AF restricts the exposure of UE data over reference points R5 and R6 by configuring a set of Data Access Profiles for each Event ID to be exposed. A Data Access Profile specifies a set of data processing operations that need to be performed by the Data Collection AF on the collected UE data in order to synthesize the event data that will be exposed to the NWDAF and/or Event Consumer AF.

When subscribing to event exposure notifications for a particular Event ID, an NWDAF or Event Consumer AF goes through an authorisation procedure (see clause 5.8) with an Authorisation AS that determines the level of access the event subscriber is allowed to have by selecting one of the provisioned Data Access Profiles for the Event ID in question. If successful, the Authorisation AS supplies an access token to the subscriber which is presented to and validated by the Data Collection AF as part of the event subscription procedure.

NOTE: The procedure for selecting an appropriate Data Access Profile is not specified in the present document.

Figure 4.5.2-1 depicts the static data model for the data collection provisioning with Data Access Profiles to restrict data exposure access.



Figure 4.5.2-1: Data exposure restriction domain model

The Data Access Profile defines restrictions along the time, user, and location dimensions:

- Restrictions along the time dimension determine the granularity of access to UE data, contained in event notifications, along the time axis. Fine granularity allows access to event data as they take place in time, i.e., no aggregation function is applied along the time dimension. Medium granularity allows access to the collected event data over a specified time period after processing by one or more aggregation functions. Coarse level of access results from the processing of all event data collected over the entire time period covered by an event notification to produce a single aggregated value for each of the one or more aggregation functions.

- Restrictions along the user dimension determine the granularity of access to UE data, contained in event notifications, by user grouping. Fine granularity allows the event consumer to access event data related to a single user, i.e., no aggregation function is applied along the user dimension. Medium granularity allows access to the collected event data of user group(s) after processing by one or more aggregation functions. Coarse granularity of access results from the processing of all event data collected for all users, over the entire time period covered by an event notification, to produce a single aggregated value for each of the one or more aggregation functions.

- Restrictions along the location dimension determine the granularity of access to UE data, contained in event notifications, by geographical location of the UE. Fine granularity allows the event consumer to access events individually, irrespective of the location, i.e., no aggregation function is applied along the location dimension. Medium granularity allows access to the collected event data grouped by geographical area, after processing by one or more aggregation functions of the data of each geographical area. Coarse level of access results from the processing of the all event data collected across all geographical locations, over the entire time period covered by an event notification, to produce a single aggregated value for each of the one or more aggregation functions.

NOTE: The application of none, one, or multiple aggregation functions in performing aggregation of UE data for event exposure to event consumers depends on whether functionally-equivalent aggregation functionality is requested in event subscription data. For example, should all three dimensions of time, user and location be present in aggregation functionality requested by the event consumer to be performed by the Data Collection AF, then the corresponding aggregation functions present in the Data Access Profile should be performed in determining the level of access restriction, which may override the sought granularity of the data in event notifications. On the other hand, if none of the three dimensions are present in the event subscription data, then even if the aggregation functions in the Data Access Profile would permit a certain granularity of event data access by those dimensions, none would be granted by the Data Collection AF due to the absence of such being requested.

The baseline set of aggregation functions is listed in table 4.5.2‑1:

Table 4.5.2‑1: Baseline aggregation functions

|  |  |
| --- | --- |
| Aggregation function | Description |
| None | No aggregation is applied, and all reported data records are exposed as individual events. |
| Count | The number of reported data records is exposed to event consumers. |
| Mean | The mean average of the values in reported data records is exposed to event consumers. |
| Maximum | The maximal observed value in reported data records is exposed to event consumers. |
| Minimum | The minimal observed value in reported data records is exposed to event consumers. |
| Sum | The sum of the values in reported data records is exposed to event consumers. |

The authorization URL, if present in the data exposure restrictions, is used to redirect subscription requests without a valid access token to an authorization server, which will perform the authorization for the requested Data Access Profile.

Upon successful authorization, the consumer entity obtains an access token, which contains an identifier of the Data Access Profile that is allowed for the event consumer. Upon successful subscription, the Data Collection AF shall apply the indicated aggregation functions of the corresponding Data Access Profile on the collected UE data along the time, user and/or location dimensions prior to exposing it to the event consumer.

END OF CHANGES