**3GPP SA WG4#123-e**

**Online,**

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| *CR-Form-v12.2* |
| **CHANGE REQUEST** |
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|  |  | **CR** | **0006** | **rev** | **-** | **Current version:** |  |  |
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| *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:***  |  |
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| ***Source to WG:*** | , BBC, AT&T |
| ***Source to TSG:*** | S4 |
|  |  |
| ***Work item code:*** | EVEX |  | ***Date:*** |  |
|  |  |  |  |  |
| ***Category:*** | F |  | ***Release:*** |  |
|  | *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 canbe 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)* |
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| ***Reason for change:*** | Normative text is missing in TS 26.531 for dictating precedence between rules specified by the Application Service Provider (ASP) vs. the mobile operator, with regards to UE data collection and reporting to be performed by data collection clients. Similarly, normative text is missing for dictating precedence between ASP and MNO specified rules on UE data related event exposure by the Data Collection AF to the NWDAF.  |
|  |  |
| ***Summary of change:*** | * Clause 4.1: proposed additional of text regarding ownership of UE data domains associated with the data for collection, reporting and event exposure, and on precedence for resolving conflicts between provisioning, preconfiguration and subscription information pertaining to UE data collection, reporting and exposure.
* Clause 4.2:
	+ Addition of sentence to the end of the paragraph immediately before NOTE 3, pointing to presence of precedence rules elsewhere in the specification on provisioining and subscription information regarding data collection, reporting and event exposure.
* Proposed new clause 4.5.4 which defines precedence rules regarding data exposure restrictions.
* Proposed new Annex B on UE data domain ownership.
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| ***Consequences if not approved:*** | Absence of precedence rules in TS 26.531 for resolving potential conflicts in the information specified by the ASP vs. the MNO/NWDAF for determining appropriate behavior by data collection clients regarding UE data collection and reporting, and appropriate behavior by the Data Collection AF regarding UE data related event exposure. |
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| ***Clauses affected:*** | 4.1, 4.2, new clause 4.5.4 and new Annex B |
|  |  |
|  | **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 ...  |
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| ***Other comments:*** |  |
|  |  |
| ***This CR's revision history:*** |  |

FIRST CHANGE

## 3.1 Terms

For the purposes of the present document, the terms given in 3GPP TR 21.905 [1], TS 23.501 [2], TS 23.502 [3], TS 23.288 [4], TS 29.517 [5] 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].

**data collection client:** functional entity that collects data and reports it to the Data Collection AF, *viz.* Direct Data Collection Client, Indirect Data Collection Client or AS

**direct reporting:** method of sending a data report from the Direct Data Collection Client to the Data Collection AF

**event consumer:** a subscriber to event data at the Data Collection AF, used synonymously with the terms NF consumer in TS 23.502 [3] and NF service consumers in TS 29.517 [5]

**event data:** data exposed by the Data Collection AF to event consumers, used synonymously with the term event reporting information in TS 23.502 [3] and TS 29.517 [5]

**indirect reporting:** method of sending a data report from a UE Application to the Data Collection AF via an Indirect Data Collection Client function of an Application Service Provider

**MNO-managed event consumer:** An event consumer instance that is managed by the MNO

NEXT CHANGE

## 4.1 General

Clause 6.2.8 of TS 23.288 [4] envisages a set of high-level procedures by which data is collected by a Network Data Analytics Function (NWDAF) from UE Application(s) via an intermediary Application Function. This clause defines a generic reference architecture for data collection and reporting that satisfies those procedures, including the logical functions involved and the logical reference points between them. The intermediary Application Function envisaged in [4] is here named the *Data Collection AF*.

It is intended that this reference architecture be instantiated in domain-specific ways to suit the needs of different features of the 5G System. The reference architecture may be instantiated separately in different slices of a network.

Each type of UE data subject to collection, reporting and subsequent event exposure in the 5G System is associated with a logical *UE data domain*. Each such UE data domain is associated with a *domain owner* – either the 5G System itself (embodied in a particular deployment by an MNO) or the Application Service Provider (ASP). Ownership of particular UE data domains is specified in annex B.

Precedence rules on the exposure (and consequent collection and reporting) of UE data vis-à-vis conflicts between ASP provisioning information and system preconfiguration by the MNO or subscription by MNO-managed event consumers are defined in clause 4.5.4.

The services defined in the present document may be exposed to parties outside the trusted domain via the NEF, as defined in clause 4.7.1.

The Data Collection AF may support CAPIF [8] to provide APIs to other applications (i.e. API invokers), as defined in clause 4.7.2.

NEXT CHANGE

## 4.2 Functional entities for data collection and reporting

(SNIPPED)

The set of UE data to be collected and exposed by the Data Collection AF is determined by the intersection between its provisioning state provided at R1 and the current set of subscriptions. This is reflected in the data collection and reporting configuration exposed at reference points R2, R3 and R4, and the subscription-driven event notifications sent to consumer entities such as the NWDAF or Event Consumer AF of an Application Service Provider over reference points R5 and R6. The Data Collection AF is responsible for ensuring that access to UE data is controlled according to the rules indicated in its provisioning state, as specified in clause 4.5.2. Where these data exposure restrictions conflict with system preconfiguration by the MNO or event subscriptions by MNO-managed event consumers, the precedence rules defined in clause 4.5.4 shall apply.

(SNIPPED)

NEXT CHANGE

### 4.5.4 Precedence rules

#### 4.5.4.1 General

Where there is a conflict between data exposure restrictions provisioned by the ASP at reference point R1 and preconfiguration of the Data Collection AF and/or data collection clients by the MNO, or event subscriptions by MNO-managed event consumers (as defined in clause 3.1) such as the NWDAF, precedence is based on ownership of the UE data domain of concern, with specific rules as described in clauses 4.5.4.2 and 4.5.4.3.

In this context, ownership of specific UE data domains is as specified in annex B.

#### 4.5.4.2 UE data domains owned by the 5G System (MNO)

The following rules shall apply to UE data domains that are owned by the 5G System (MNO):

1. For determining data collection and reporting behaviour, any preconfiguration of the Data Collection AF and/or data collection clients by the 5G System operator shall take precedence over similar ASP-defined provisioninginformation.

a) Any attempt by the ASP to provision data collection and reporting rules that are either more lax or more restrictive than allowed by the preconfiguration may be rejected by the Data Collection AF, subject to MNO policy.

2. For determining permissible access to event data exposed by the Data Collection AF to MNO-managed event consumers such as the NWDAF, MNO policies on event exposure (for example, regarding anonymization and aggregation) shall take precedence over any data exposure restrictions provisioned by the ASP as part of a Data Access Profile.

a) Any attempt by the ASP to provision data exposure rules affecting an MNO-managed event consumer that are either more lax or more restrictive than allowed by MNO policy shall be rejected by the Data Collection AF.

b) Any event subscription request by the ASP's Event Consumer AF to the Data Collection AF that would relax the data exposure restrictions provisioned on the Data Collection AF by the 5G System operator for that event consumer shall be rejected by the Data Collection AF.

#### 4.5.4.3 UE data domains owned by the ASP

The following rules shall apply to UE data domains that are owned by the ASP:

1. For determining data collection and reporting behaviour, ASP-defined provisioning information shall take precedence over any similar preconfiguration of the Data Collection AF and/or data collection clients by the 5G System operator.

a) Any preconfiguration by the 5G System operator of UE data collection and reporting behaviour that is either more lax or more restrictive than similar ASP-defined provisioning information should be ignored by the Data Collection AF and/or data collection clients.

2. For determining permissible access to event data exposed by the Data Collection AF to MNO-managed event consumers such as the NWDAF, data exposure restrictions provisioned by the ASP as part of a Data Access Profile shall take precedence over MNO policies on event exposure (for example, regarding anonymization and aggregation).

a) Any event subscription request by an MNO-managed event consumer to the Data Collection AF that would relax the data exposure restrictions provisioned on the Data Collection AF by the ASP for that event consumer shall be rejected by the Data Collection AF.

NEXT CHANGE

Annex B (normative):
UE data domain ownership

# B.1 General

Ownership of any UE data domain not listed in this annex shall be specified in the document defining that domain.

# B.2 Baseline UE data domains

Table B.1-1 specifies ownership of the baseline UE data domains defined in TS 23.288 [4].

Table B.2-1: Ownership of baseline UE data domains

|  |  |
| --- | --- |
| UE data domain | Owner |
| Service Experience | 5G System (MNO) |
| UE Location | 5G System (MNO) |
| Communication | 5G System (MNO) |
| Performance | 5G System (MNO) |
| Planned Trips | 5G System (MNO) |

Application-specific UE data domains shall be owned by the ASP.

END OF CHANGES